

# 전남대학교 영문전자요람

## 2019-2020

Chonnam National University Bulletin







## **CONTENTS**

· 368

I. History of CNU	
II. Academic Calendar	
III. Statistics	
IV. CNU Organizations	
V. Basic Educational Facility & University Facilities	21
VI. Research Centers at CNU	
VII. Graduate Schools	
VIII. Professional Graduate Schools	
<ul> <li>Graduate School of Business</li> <li>Graduate School of Culture</li> <li>Law School</li> </ul>	

## 

## IX. Special Graduate Schools

Graduate	School	of	Education	369
Graduate	School	of	Industry & Technology	377
Graduate	School	of	Industry-University Cooperation	385
Graduate	School	of	Fisheries and Ocean Sciences	399
Graduate S	School of	f P	ublic Policy	415

### X. Undergraduate Schools 418

College of Nursing	419
College of Business Administration	423
College of Engineering	430
College of Engineering Science	471
College of Agriculture and Life Sciences	495
College of Culture and Social Sciences	525
College of Education	
College of Social Sciences	578
College of Human Ecology	598
College of Fisheries and Ocean Sciences	606
College of Veterinary Medicine	625
College of Pharmacy	630
College of Arts	635
Medical School	650
College of Humanities	700
College of Natural Sciences	722
College of AI Convergenc	746
Faculty of Interdisciplinary Studies School	755

## XI. Admissions and Campus Life ------

Admissions	759
International Affairs	761
International Student Support Program	762
Academic Affairs	764
Facilities and Services	769



## I. History of CNU



#### 1. History of CNU

#### The Establishment of CNU

The Honam region has long cherished its tradition of valuing justice (義) and artistry (藝). Based on this tradition, Jeonnam National University (CNU) set sail in Gwanjgu, at the center of the Honam region on June 9, 1952. The university emerged from the ashes of the Korean War with the support of local citizens who wanted to foster talented students. Even though CNU was established only about 60 years ago, it is celebrating more than 100 years of tradition because of the schools that were merged under CNU.

Before CNU came into existence, Honam was a home to several colleges and schools: Gwangju Agricultural College, for instance, which had been changed from Gwangju Agricultural School founded in 1909; Provincial Mokpo Commercial College, which evolved from Mokpo Commercial School founded in 1920; Provincial Gwangju Medical College, which developed from Gwangju Medical Professional School established in 1944; and Private Daesung College, which emerged from Daesung Boarding School founded in 1951. After the foundation of South Korea, the demand for competent and educated citizens escalated rapidly. Against this backdrop, local residents of Gwangju and Jeollanam-do yearned to establish a systematic institute for higher education. Their efforts bore fruit on September 16, 1951, with the creation of the Supporting Association for Establishing CNU.

To establish the university, the Association started by raising funds from local citizens. On October 6, 1951, it acquired the authorization to establish CNU as a national university. On January 1, 1952, CNU with five colleges was established: The College of Agriculture (formerly Gwangju Agricultural College), College of Business (formerly Mokpo Commercial College), College of Humanities (formerly Private Daesung College), College of Medicine (formerly Provincial Gwangju Medical College), and a newly opened College of Engineering. On June 1, 1952, the appointment of Dr. Choi Sang-chae as the first President, as well as eight Deans, superintendents, and a chief of the offices, gave CNU the structure and functions of a university. Finally, on June 9, 1952, the citizens of Gwangju witnessed CNU's historic opening ceremony.

- 5 -

When it started, CNU consisted of 2 administration offices (the Office of Academic Affairs and Student Affairs, and Office of Administrative Affairs), the five aforementioned colleges, and the Graduate School of Medicine, which had been authorized in May 1950 as the Provincial Gwangju Medical College.

#### The Development of CNU

CNU quickly established itself as a reputable university. It enacted school regulations and a school press, built libraries, and founded the College of Law in 1954. However, in the 1960s, CNU became involved in political turmoil, such as the April Revolution in April 1960, which shook South Korea, and permanently changed the country's history. CNU was at the center of forming and leading public opinions, through the May 16 Coup (1961), the enforcement of theLaw for National Reconstruction (1961), and the protest against the summit meeting between South Korea and Japan (1964). Meanwhile, the Colleges of Agriculture and Business and the Department of Chemical Engineering were forced to shut down. They were revived between 1961 and 1965. Despite the chaos, CNU continued its efforts to stabilize itself. It founded the internship program at the medical college in 1960. The Language Research Center, Students' Guidance Institution, Honam Culture Institution, and other research centers opened in 1963. Furthermore, on July 6, 1965, the Professors' Committee came into existence. It actively participated in campaigns to achieve better conditions for faculty members, requesting a renovation in the system for research professors and more financial support for the local national universities from the government. The Graduate School of Business was established in 1969.

Throughout the 1970s and 1980s, CNU experienced not only rapid physical growth but also hardship due to the political upheaval. The administrative system, which consisted in 1969 of one office, one bureau, two centers, and six colleges with 28 departments, had grown to include one more office, two more centers, and two more colleges with 35 more departments. Around this time, the Experimental College System was introduced in 1972 with the aim of renovating higher education in Korea by recruiting freshmen according to their areas of study, decreasing the number of compulsory credits, and allowing the early graduation of elite students. At this time, the campus was energetic with the sound of construction as new classrooms and faculty buildings were constructed. Private residences on campus were eliminated and

Yongji, the artificial pond on campus, was created to add beauty to the study environment.

In the 1980s, CNU faced a period of utmost political turbulence as the May 18 Democratization movement broke out at the CNU Main Gate. The national government's oppressive military regime brought about a widespread civil resistance. CNU students and professors rose up against the dictatorship and sacrificed themselves to restore the democracy in the country. In spite of the turmoil, which caused great casualties among students, CNU continued to push toward a competent system as an institution for higher education with autonomy in separate academic fields. The College of Humanities was divided into the College of Humanities and Social Studies and the College of Natural Sciences in 1979. In 1987, the College of Humanities and Social Studies was divided into the College of Humanities and the College of Social Studies. The Colleges of Dental Medicine, Pharmacy, and Art were established in 1980, 1981, and 1981, respectively. The College of Veterinary Medicine was spun off from the College of Agriculture and Life Sciences in 1988, the College of Human Ecology from the College of Natural Science in 1989, and the College of Nursing from the Medical School in 2005. The Graduate School of Education opened in 1975, the Graduate School of Public Administration in 1979, and the Graduate School of Industry and Technology in 1989.

For the 21st century, CNU has gathered momentum to leap forward as a prestigious higher educational institution that fosters professional manpower required by the age of knowledge and information through systemized education and contributes to regional development. On March 1, 2006, CNU combined with Yeosu National University, which had been a local college with 90-year history. As of 2019, CNU maintains full-fledged administrative organizations with four departments, one bureau, and four headquarters. It also has sixteen colleges, a general graduate school, five special graduate schools, and five specialized graduate schools. In addition, CNU has one basic educational facility, fourteen subsidiary facilities, six presidential organizations, and two legal bodies. CNU also operates a Human Rights Center and a Legal Clinic, which are dedicated to human rights within the school, to promote welfare and protect human rights for both students and faculty.

#### With Pride & Hope, CNU Sheds Light on the World that Cherishes Truth

CNU is leaping forward in great spirits to establish itself as a university that stands up for the country and community in difficulties and dedicates itself to liberty, peace, democracy and human rights. To secure its name as a first-class university with global competence, CNU put forward the slogans of 'Pride & Hope.' It is with 'Shedding light on the World that Cherishes Truth' as its mission and 'Multidisciplinary Education, Prosperous Research, and Happy Community' as its ultimate goal.

CNU came up with 100 essential tasks under five main goals to fulfill the university's social obligations: (1) in Education: "CNU Members with Readiness and Long-term Perspectives" (2) in Research: "CNU as a Sincere Companion for Scholars" (3) for Local Community: "University in Progress with Respect from Local Residents" (4) in Welfare: "CNU as a supportive ground for accompaniment" (5) in Administration: "CNU dreaming for the future with reasonable decisions based on commons sense." With these goals, CNU is striving to enhance the competence in education through multidisciplinary curricula to foster students with imaginative power with humanities education and creativity with engineering studies. CNU also aims to raise its pride and trust as a leading national university with excellent research accomplishments by supporting scholars on campus. In addition, to inherit the glorious tradition and history of CNU as a prestigious university in the Honam area, CNU will never cease its efforts to provide a locus for discourses of local communities, build a basis for the development of the local economy, and provide opportunities for life time education for local residents. Furthermore, CNU will encourage its members to form a sound and harmonious community on campus for students to form and share sound and desirable culture, and for faculty members to build an environment for coexistence in various tasks and duties. These efforts will ultimately lead CNU to becoming a prestigious national flagship university with respect for diversity and autonomy, and steadfast principles for innovation.

Welcoming its 67th anniversary in 2019, CNU became a truly global university that is connected with 477 universities across 59 countries around the world with 2,000 international students. In addition, more than 2,700 research projects have been undertaken per annum in this research-oriented university, which received the largest

amount of research funding among national universities. Furthermore, CNU has provided various programs for employment, start-ups, and the regeneration of student culture, and also further extended the benefits of programs with local communities for mutual development. This is the CNU of Gwangju and Yeosu in 2019.



## **II.** Academic Calendar

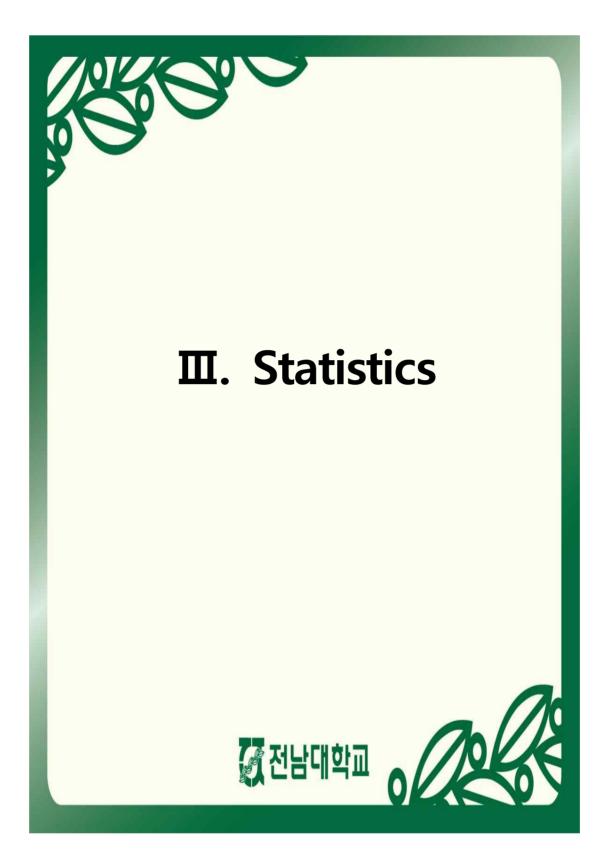


## 2. Academic Calendar

Events	Date
Start of Spring Semester	2019. 3. 4.
Course Add/Drop for Spring Semester	2019. 3. 4 2019. 3. 8.
Submission of printed drafts of doctoral dissertations for degrees conferred in August 2018	2019. 3. 25 2019. 3. 29.
First quarter of Spring Semester ends	2019. 3. 28.
Submission of printed drafts of Master's theses for degrees conferred in August 2018	2019. 4. 1 2019. 4. 5.
Submission of thesis proposals for graduation in February 2019	2019. 4. 8 2019. 4. 12.
Mid-term Examinations for Spring Semester	2019. 4. 22 2019. 4. 26.
Second quarter of Spring Semester ends	2019. 4. 24.
Third quarter of Spring Semester ends	2019. 5. 22.
Make-up Class Day for Substitute Holiday (May 6)	2019. 6. 10.
Make-up Class Day for Memorial Day (June 6)	2019. 6. 11.
Course evaluation	2019. 6. 11 2019. 6. 24.
Final Examination for Spring Semester	2019. 6. 12 2019. 6. 18.
End of Spring Semester Classes	2019. 6. 18.
Submission of Evaluations of Master's theses and doctoral dissertations for expected graduation in August 2018	2019. 6. 24 2019. 6. 28.
Summer School	2019. 6. 24 2019. 7. 18.
Last day for the Announcement of Grades for Spring Semester	2019. 6. 25.
Last day for the Revision of Grades for Spring Semester	2019. 7. 1.
Last day for the Submission of Grades for Spring Semester	2019. 7. 2.
Submission of Syllabi for Fall 2019	2019. 7. 15 2019. 7. 29.
Enrollment period for Research Students	2019. 7. 15 2019. 8. 2.
Last day for the Submission of Grades for Summer School	2019. 7. 25.
Graduate School Comprehensive Examination	2019. 7. 31.
Graduate School Foreign Language Examination	2019. 8. 1.
Announcement of the submission procedure for theses for Spring 2019	2019. 8. 5.
Course registration/Class Preferences	2019. 8. 5 2019. 8. 6.

Events	Date
Course enrollment (Seniors: Aug. 8 / Juniors: Aug. 9 / Sophomores: Aug. 12 / Freshmen: Aug. 13, Common Registration: Aug. 14, 16	2019. 8. 8 2019. 8. 16.
Allocation of Tutors/Thesis Supervisors for Graduate students in Fall 2019	2019. 8. 19 2019. 9. 6.
Graduation ceremony	2019. 8. 26.
Enrollment period for the Fall Semester	2019. 8. 26 2019. 8. 29.
Fall Semester begins	2019. 9. 2.
Course Add/Drop for Fall Semester	2019. 9. 2 2019. 9. 6.
First quarter of Fall Semester ends	2019. 9. 30.
Submission of printed drafts of doctoral dissertations for degrees conferred in February 2019	2019. 9. 30 2019. 10. 4.
Submission of printed drafts of Master's theses for degrees conferred in February 2019	2019. 10. 7 2019. 10. 11.
Submission of Master's/Doctoral Theses plans for expected graduation in Fall 2019	2019. 10. 14 2019. 10. 18.
Mid-term examination period	2019. 10. 28 2019. 11. 1.
Second quarter of Fall Semester ends	2019. 10. 29.
Third quarter of Fall Semester ends	2019. 11. 25.
Make-up Class Day	2019. 12. 9.
Make-up Class Day for Chuseok (Sep. 12)	2019. 12. 10.
Make-up Class Day for Chuseok (Sep. 13)	2019. 12. 11.
Make-up Class Day for Memorial Day (Oct. 3)	2019. 12. 12.
Make-up Class Day for Hangul Nal (Oct. 9)	2019. 12. 13.
Course evaluation	2019. 12. 13 2019. 12. 26.
Final exam period	2019. 12. 16 2019. 12. 20.
End of Fall Semester Classes	2019. 12. 20.
Submission of Evaluations of Master's theses and doctoral dissertations for expected graduation in Fall 2019	2019. 12. 23 2019. 12. 27.
Winter School	2019. 12. 26 2020. 1. 20.
Last day for the Announcement of Grades for Fall Semester	2019. 12. 27.
Last day for the Revision of Grades for Fall Semester	2020. 1. 2.

Events	Date
Last day for the Submission of Grades for Fall Semester	2020. 1. 3.
Submission of Syllabi for Spring 2020	2020. 1. 6 2020. 1. 20.
Enrollment period for Research Students	2020. 1. 20 2020. 1. 31.
Last day for the Announcement of Grades for Winter School	2020. 1. 28.
Graduate School Comprehensive Examination	2020. 1. 29.
Graduate School Foreign Language Examination	2020. 1. 30.
Course registration/Class Preferences	2020. 2. 6 2020. 2. 7.
Course enrollment (Seniors: Feb. 12 / Juniors: Feb. 13 / Sophomores: Feb. 14 / Freshmen: Feb. 17, Common enrollment: Feb. 18–19	2020. 2. 12 2020. 2. 19.
Announcement of thesis submission procedure for Fall 2019	2020. 2. 10.
Allocation of Tutors/Thesis Supervisors for Graduate students in Spring 2020	2020. 2. 17 2020. 3. 6.
Enrollment period for Spring Semester	2020. 2. 24 2020. 2. 27.
Graduation ceremony	2020. 2. 26.
Entrance ceremony	2020. 2. 28.



### **School Classification**

#### (As of April 1, 2019)

	Classification College/Graduate School	Faculty	Enrolled Students	Attending Students	Degrees Awarded
	College of Nursing		391	338	996
	College of Business Administration		2,912	2,045	17,854
	College of Engineering		5,631	3,761	31,129
	College of Engineering Sciences		1,813	1,101	2,894
	College of Agriculture and Life Sciences		2,676	1,904	18,760
	College of Culture and Social Sciences		1,177	787	3,007
	College of Law		1	1	7,780
	College of Education		1,778	1,422	16,836
	College of Social Sciences		1,672	1,129	7,687
College	College of Human Ecology		836	670	4,359
	College of Fisheries and Ocean Sciences		1,198	780	2,624
	College of Veterinary Medicine		343	330	1,438
	College of Pharmacy		263	262	2,078
	College of Arts		954	800	6,064
	College of Medicine		761	748	9,044
	College of Humanities		2,279	1,671	17,261
	College of Natural Sciences		1,997	1,255	14,757
	College of Dentistry				1,775
	college of divisions governed		367	249	870
	Total (Colleges)		27,049	19,253	167,213

	Classification College/Graduate S		Faculty	Enrolled Students	Attending Students	Degrees Awarded
		Master's Degrees		1,963	1,596	20,844
	Graduate Programs	Doctoral Degrees		1,474	1,160	7,680
	Graduate School of	Business		67	63	519
	Graduate School of	Culture		77	51	126
	Law School			414	391	885
	School of Medicine			2	2	371
	School of Dental Me	edicine		388	372	734
		Graduate School of Business				1,273
	of Gra of De Gra of Te Special Graduate Programs Gra of -U Coor (Ya Gra of Gra of Gra of Gra of Gra of Gra of -U Coor (Special Graduate Gra of Gra of Gra of Te	Graduate School of Education		415	350	5,425
Special Graduate Programs		Graduate School of Agricultural Development				73
		Graduate School of Industry and Technology		185	156	1,463
		Graduate School of Industry -University Cooperation (Yeosu Campus)		50	47	71
		Graduate School of Fisheries and Ocean Sciences		11	11	21
		Graduate School of Public Administration		1	1	1,624
		Graduate School of Public Policy		213	171	128
Institute of	Institute of Liberal Education					
Innovation Center for Engineering Education						
Institute of	Institute of Honam Studies					
	Total (Graduate School)			5,260	4,371	41,237
	Total (All)			32,309	23,624	208,450

\* Excluding the following members: the President of university (1), Institute of Liberal Education (4), Institute of Honam Studies (1), Innovation Center for Engineering Education (1).

### **Degrees Granted**

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(As of April 1, 2019)

Bachelor's	Master's	Doctorate	Honorary Doctorate	Total
183,051	33,627	7,610	71	224,359

#### **Faculty and Staff Members**

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(As of April 1, 2019)

	Positions	Number of Staff Members	
	President	1	
	Professors	852	
Faculty	Associate Professors	199	
	Assistant Professors	118	
	Total	1,169	
	Assistants	247	
Staff		806	
	Total	3,392	

### Current Status of Plots and Buildings on Respective Campuses

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(As of April 1, 2019)

				Buildi		
	Classification			Number of Buildings	Floor Space	Remarks
		Yongbong Campus	988,309	153	527,791	
	Gwangju	Hakdong Campus	27,849	9	30,060	Excluding CNU Hospital
		Sub Total	1,017,218	163	557,851	
Campus		Dundeok Campus	398,625	28	130,072	
	Yeosu	Geukdong Campus and Others Facilities	61,639	9	20,862	
		Sub Total	460,264	37	150,934	
		Total	1,477,164	200	708,785	
	Gwangju	Jangseong Experimental Farm land	9,181,274	6	2,966	
		Naju Bonghwang District	295,259	12	4,195	
		Bogildo Experimental Farm land	17,468	2	447	
		Ora District, Jeju Province	16,529	_	_	
		Hwasun Hospital District	121,352	1	33,196	
Other Lands		Jindo Natural Education Site	_	1	2,026	JNU Foundation Land (93,376 m <sup>2</sup> )
Danas		Cheomdan District	41,253	2	5,974	
		Sub Total	9,673,148	24	48,804	
		Dolsan Geumbong District	15,720	3	6,466	
	Yeosu	Dolsan Training Center District	457	1	242	
	reosu	Sado Training Center	5,853	4	202	
		Sub Total	22,030	8	6,910	
		Total	9,695,178	32	55,714	
		Total	11,172,342	232	764,499	



## **IV. CNU Organizations**



### 4. CNU Organizations

President Vice President (Gwangju/Yeosu)

Registrar's Office Office of Academic Affairs Curriculum Development (for the College of Education) Office of Student Affairs Student Affairs Industry-University Liaison Division Research Supporting Office for Research Affairs Service Administration Industry-University Headquarter Liaison Support Office Planning and Coordination Office of Planning and Coordination Public Relations General Affairs Office of Administrative Affairs Accounting and Finance Facilities Management Office of Admissions Admissions Office of International Affairs International Affairs Yeosu Campus Headquarters Planning Division Administrative Head Office Administrative Support

Academic Affairs

Consultation Board	Faculty Council Academic Affairs General Council
Graduate Schools	General Graduate Schools
	Business Administration
	Culture
	Law School
	Medicine
	Dental Medicine
	Education
	Industry and Technology
	Industrial Cooperation
	Fisheries and Ocean Sciences
	Public Policy
	Nursing
Colleges	Business Administration
	Engineering
	Engineering Sciences
	Agriculture and Life Sciences
	Culture and Social Sciences
	Education
	Social Sciences
	Human Ecology
	Fisheries and Ocean Sciences
	Veterinary Medicine
	Pharmacy
	Arts
	Medical
	Humanities
	National Sciences
	College of AI Convergence
	Faculty of Interdisciplinary Studies
Research Insti	tutes

Institute for Adaptable Interdisciplinary Education Center for Research Facilities Veterinary Teaching Hospital The CNU Museum Health Service Center Continuing Education Center Institute for Agricultural Practice Education Language Education Center The institute of Liberal Education University Computing Center Student Residence Halls Press and Broadcasting Center
Interdisciplinary Education Center for Research Facilities Veterinary Teaching Hospital The CNU Museum Health Service Center Continuing Education Center Institute for Agricultural Practice Education Language Education Center The institute of Liberal Education University Computing Center Student Residence Halls
Veterinary Teaching Hospital The CNU Museum Health Service Center Continuing Education Center Institute for Agricultural Practice Education Language Education Center The institute of Liberal Education University Computing Center Student Residence Halls
The CNU Museum Health Service Center Continuing Education Center Institute for Agricultural Practice Education Language Education Center The institute of Liberal Education University Computing Center Student Residence Halls
Health Service Center Continuing Education Center Institute for Agricultural Practice Education Language Education Center The institute of Liberal Education University Computing Center Student Residence Halls
Continuing Education Center Institute for Agricultural Practice Education Language Education Center The institute of Liberal Education University Computing Center Student Residence Halls
Institute for Agricultural Practice Education Language Education Center The institute of Liberal Education University Computing Center Student Residence Halls
Education Language Education Center The institute of Liberal Education University Computing Center Student Residence Halls
The institute of Liberal Education University Computing Center Student Residence Halls
University Computing Center Student Residence Halls
Student Residence Halls
Press and Broadcasting Center
Sports Center
Laboratory Safety Management Center
Global Education Center
Legal Clinic
CNU Teacher Training Center
Ship Training Operation Center
Institute of Arts and Culture
Education
CNU Middle School
CNU High School
LINC+ Initiative
Institutional Review Board
Human Rights Center
Committee for the Future of CN
ROTC
University Job Center
CNU Foundation
University-Industry Liaison

- 20 -



## V. Basic Educational Facility & University Facilities



### 5. Basic Educational Facility & University Facilities

#### Library

The Chonnam National University Library (CNUL) was established in 1953 with the aim of building comprehensive collections in all research areas. Having established the digital library system in 1991, the Library provides support to university members and local residents.

Today, the CNUL comprises the main Yongbong campus library, the annex library, the Yeosu campus library, and three branch libraries (Legal, Dental & medical). The entire combined floor space of the library facilities totals an area of 30,178 m<sup>2</sup>. It currently holds more than 4,900 seats, 1,900,000 books, and 114,000 journals and periodicals. In addition to its strong domestic and overseas multimedia resources, online databases, e-journals and eBooks, CNUL also provides access to other organizations' resources for its users.

As a world-class university, CNUL is now making strides towards becoming a global research-oriented university library.

#### Services

- Book Loan / Return / Renewal / Reservation
- Inquiry Ill-DDS: As a service to users, CNUL will provide upon request materials not currently in possession, from domestic or overseas other university libraries or institutions.

- Book requests

\* Please refer to the library website for further details.

#### Opening Hours

- Central Yongbong library
  - Weekdays: 09:00~20:00

Saturdays: 09:00~13:00

- Yeosu campus & branch libraries: 09:00~18:00 on weekdays
- Websites: http://lib.jnu.ac.kr/ (Central Yongbong library)

http://yosulib.jnu.ac.kr/ (Yeosu campus library)

■ Contact (062)530 - 3571~2 (Central library), (061)659-6601 (Yeosu campus library)

#### Institute for Adaptable Interdisciplinary Education

The Institute for Adaptable Interdisciplinary Education ("IAIE") supports and nurtures CNU students to acquire the interdisciplinary talents needed for promising jobs. It guides the students to plan their futures, offers job information, and operates job placement programs. The IAIE has three centers to pursue these objectives: the Center for Career Development, the Center for Future Planning, and the Center for Gender Equality.

The Center for Career Development offers job counseling and recommendation, distributes job information, and operates industry convergence programs such as internship and externship programs. The Center for Future Planning performs career counseling, supports future planning, and offers job-related curriculum and competitiveness enhancement programs. The Center for Gender Equality develops and operates job programs based on gender-specific needs.

#### **Center for Research Facilities**

The education and research activities for science and technology of the university require well-managed high performance facilities and equipment. To satisfy the needs of the university members, two organizations, the Educational Equipment Service Center (established in 1993) and Public Experiment Center (established in 1997), were merged to form the Chonnam National University Center for Research Facilities (CCRF) in 2001. Currently, the CCRF is located both at Gwangju and Yeosu campuses to provide specialized services to researchers of each campus. More than 80 kinds of the expensive and sophisticated equipment in the CCRF is operated and maintained by highly-trained staff, and the output of the analyses is supplied to the researchers. The CCRF also provides maintenance services for the educational equipment in individual laboratories.

#### **Contact Information**

Website: http://jcrf.jnu.ac.kr/ (Gwangju campus, Yeosu campus) Phone: 82-62-530-1371~2 (Gwangju campus); 82-61-659-6680 (Yeosu campus)

#### **Animal Hospital**

The Animal Hospital was established in 1957 and provides medical services for animals in clinical areas such as internal medicine, surgery, obstetrics, radiology, and clinical examination. The Hospital has also contributed to the research and training of veterinary students and faculty members. Contact Information

Phone: +82-62-530-2882, 2883 Fax: +82-62-530-2881 / Opening Hours\_Weekdays: 09:30~17:00 E-mail: cnu06806@jnu.ac.kr

URL: http://cnuvmth.jnu.ac.kr/

#### THE UNIVERSITY MUSEUM

The University Museum was opened in the Geumho Building (university library) in May 1957 with collections of calligraphy, paintings, and pottery donated by Dr. Choi Sang-chae, the first president of the university. The museum moved to the enlarged space of Yongbong Cultural Center in June 2002 and has been developed as a key museum the Gwangju region.

The University Museum has a collection of more than 6,400 relics and over 20,000 excavated cultural assets, the main antiquities of which are exhibited in the seven permanent exhibition halls (Prehistory, Mahan Dynasty, Ceramics, Buddhist Art, Paintings, Folklore, and Dinosaurs. The University Museum operates a Special Exhibition Hall and Learning Experience Center as well. It also hosts a series of lectures on culture and art for students and the general public.

In addition, on June 27th, 2012, the Museum of University History was opened to mark the university's 60th anniversary. More than 450 items from the historical relics of university were selected from a collection of 4,500 to be displayed. The Special Collection Hall, Democratic Movement Hall, and Multimedia rooms are also open to visitors.

As an attached and affiliated organization, the Dinosaur Research Center was established in 2001.

#### Health Service Center

The Health Center has actively provided health & medical services to faculty members, staff, and students since its establishment in 1957. The services include yearly physical check-ups for students, as well as non-credit courses on preventive medicine, health management, and campus environment management. It also offers mandatory insurance to students. (T. 062-530-3603)

#### Lifelong Education Center

#### 1. Establishment

The center was established in 1997.

#### 2. Purpose

The main aim of the center is to contribute to the improvement of the quality of life and to the national development by providing open education to residents of the regional and local community.

#### 3. Educational goals

- Providing specialized education that meets the demands of the era characterized by information and communication technology and specialization
- Nurturing civilized citizens who can inherit and further develop the reputation of this region as the

home of arts

- Offering human-oriented and community-centered education that contributes to bringing together all human beings with the spirit of love for humankind
- Providing open education that guarantees equal educational opportunities for everyone regardless of age, gender, race, educational background, social status, and culture
- · Offering civic education that strengthens the democratic capabilities of the regional community
- · Providing learner-centered education that helps materialize the lifelong learning society

#### 4. 2019 first semester courses (current)

- Gwangju Campus : 52 courses
- Yeosu Campus : 44 courses
- Jindo commissioned education : 10 courses
- Wando commissioned education : 34 courses
- Academic Credit Bank System : 1 course

#### 5. Future Plans

- · Offering programs in partnership with local governments and expansion of lifelong education networks
- Pursuit of relevance and excellence in the partnership programs and enhancement of participation by local residents
- · Enhancement of student satisfaction through quality control improvement
- Development of new specialized programs
- · Provision of community-based lifelong learning opportunities and social participation activities

#### 5. Contact Us

Tel : (062) 530-3873~6 (Gwangju Campus)

(061) 659-6551~3 (Yeosu Campus)

Website : http://sle.jnu.ac.kr (Gwangju Campus) http://yosu.chonnam.ac.kr (Yeosu Campus)

#### Institute for Agricultural Pratice Education

#### Plant Resources Section

The agricultural farm encompasses 45,199 m<sup>2</sup> of rice and dry fields, four greenhouses measuring 1,538 m<sup>2</sup> respectively on the Yongbong campus, as well as a farm measuring 187,506 m<sup>2</sup> in Naju. Together with its agricultural machinery, the farm provides experimental opportunities for both students and faculty members.

#### Forest Resources Section

The Experimental Forest station consists of the Arboretum on the Yongbong campus  $(1,704 \text{ m}^2)$ , the Jangseong  $(9,175,461 \text{ m}^2)$ , and Bogildo  $(11,047,384 \text{ m}^2)$  Forest Experimental stations, each providing students and faculty with natural resources for experimentation and their related research.

#### **Animal Resources Section**

The Animal Farm located on the Yongbong campus (7,307 m<sup>2</sup>) and Naju (81,854 m<sup>2</sup>) have contributed not only to research, experiments, and student training but also to the development of the local livestock industry.

Website: http://agric.jnu.ac.kr/user/indexMain.action?siteId=agrobio

#### Language Education Center

The Language Education Center (the LEC) of Chonnam National University is one of the leading institutions in the field of language education and research in Korea. For over fifty years, the LEC has worked towards developing the foreign language abilities of university students, as well as the general public, by providing a broad range of language courses and conducting comprehensive research in the field of second language acquisition.

The LEC provides practical English and Korean language courses and programs, offers English and Korean language teacher training programs, and administers a variety of language proficiency examinations for a number of major languages. Among its broad range of facilities for students are multimedia rooms, a recording studio, two student lounges, and an auditorium.

#### **Contact Information**

Phone: +82-62-530-3631, 3633 Fax: +82-62-530-3629 E-mail: language@jnu.ac.kr URL: http://lec.jnu.ac.kr

#### The Institute of Liberal Education

The Institute of Liberal Education (ILE) aims to contribute to the local, national, and world community with the vision of fulfilling the essence of teaching and learning. The ILE has three centers: The Center for General Education, The Center for Teaching & Learning, The Center for e-Learning. The ILE will do its best to enable all the members of the university to discover and maximize their personal and organizational potential. In recent years, the ILE has worked on researching and developing various educational programs, focusing on the primary goals given to each center as follows:

#### CENTER for GENERAL EDUCATION

- Operating general education curriculum and supporting academic affairs
- Developing and operating program related to general education
- Researching general education

http://cge.jnu.ac.kr +82-62-530-0916 CENTER for TEACHING & LEARNING

- Enhancing professors' competence in class delivery
- Developing the learning abilities of students

#### CENTER for e-LEARNING

- Developing K-MOOC and e-learning contents for high quality education
- Credit exchange with Falgship National Universities
- Running CNU's highly regarded e-learning lectures(CELL)

http://eclass.jnu.ac.kr +82-62-530-0355

### University Computing Center

The University Computing Center provides the following services to its members:

http://ctl.jnu.ac.kr

+82-62-530-0929

#### **Communication Services**

- E-mail, Web mail, messenger
- Web Portals
- Internet Access
- Telephone service
- Group communication

#### Computing Resources Providing Services

- Web storage / cloud-based storage
- Storage for a group or organization homepage
- PC repair center
- PC rooms

#### **Education Services**

- Help with how to use campus information services such as the portal, E-mail, Internet and Web storage.
- Help with how to use office automation tools such as word processors, PowerPoint and spreadsheets program.
- Help with how to carry out administrative work using information services such as course registration and viewing course results.

#### Software Provisioning Services

- Academic software
- Research software
- Administrative software
- Security software

The University Computing Center operates a help desk for users. Any user can ask about usage of the computing services by calling, e-mailing or using the portal interface.

#### **Contact Information**

Phone: 82-62-530-3681~3682 (Help Desk),

PC Repair Center (82-62-530-3673, 82-61-659-6703 for Yeo-su Campus)

E-mail: help@jnu.ac.kr; sangdam@jnu.ac.kr

Homepage: http://ucc.jnu.ac.kr | Portal Service Desk: http://portal.jnu.ac.kr

#### Student Residence Halls

#### Gwang-ju Campus

Seven student residence halls can accommodate up to 4,043 people with single and double rooms. Housing is assigned at the beginning of each academic semester (also including the summer and winter sessions).

Each unit of the student residence halls is equipped with a shower room with access to laundry rooms, reading rooms, lounges, and a central heating system. Rooms are also furnished with desks, chairs, bookshelves, beds and wardrobes. International students can also reside in the halls along with domestic students. International

students will be given priority over Korean students in the CNU Gwang-ju campus dormitories.

#### Yeosu Campus

Three student residence halls (Pureun, Yeolin, and Mirae hall) at CNU Yeosu campus can accommodate up to 966 persons with single and double occupancy cells (534 males and 432 females).

Housing is assigned at the start of each semester (including summer and winter school).

Meals are served inexpensively for residence halls students.

Housing rooms in the dormitory are equipped with desks, chairs, bookshelves, beds, wardrobes and shower rooms. The halls have communal facilities such as laundry rooms with washing and drying machines, reading rooms, convenience stores, lounges

with cable TVs, vending machines, hot & cold water purifiers, PCs and printing rooms, refrigerators, heating systems, meeting rooms, kitchens, halal food kitchens, and fitness rooms/gyms.

International students and freshmen will be given priority of housing over other students in the CNU Yeosu campus dormitories.

Hwa-sun Campus

The student residence hall located at Hwa-sun is for medical students of CNU.

The residence hall can accommodate up to 350 people with either single or double rooms. Housing is assigned at the beginning of the medical school's academic semester for a period of 1 year including summer and winter vacations.

Housing units in the dormitory are equipped with desks, chairs, bookshelves, beds, wardrobes, shower rooms, and refrigerators.

The hall also has amenities such as laundry rooms, study rooms, communal kitchens, lounges (with cable TVs and hot-cold water purifiers), stores, and gyms.

#### Press and Broadcasting Center

Established in 1995, the Press and Broadcasting Center (PBC) has continued to work towards promoting communication and generate public opinion on campus issues through the consolidation of three existing forms of campus media: The Chondae Shinmun, Chonnam Tribune, and Chonnam National University Broadcasting. The PBC also operates its website under the name "CNU Media" (www.cnumedia.com) to better communicate and respond to its audiences.

The Chondae Shinmun, a Korean newspaper, has been in circulation since 1954 and has held a literary contest every year since 1970. The Chonnam Tribune, an English magazine, has been published since 1968 and has hosted an annual English Essay Contest to enhance students' English proficiency. Chonnam National University Broadcasting has produced a variety of programs such as campus news and music since 1967 and has held the Yongbong Song Festival annually since 1972. The Yeosu Campus Branch was founded as a result of the integration of CNU and Yeosu National University on March 1, 2006.

As of 2019, the PBC contributes to the University and local communities and plays an essential role in providing accurate, reliable news and useful information, initiating common agendas, and promoting open dialogue within the communities.

#### **Contact Information**

Phone: +82-62-530-0520~0529 (Gwangju) /+82-61-659-6655 (Yeosu) Fax: +82-62-530-0522 URL: http://www.cnumedia.com

#### SPORTS CENTER

#### **OPEN DATE**

2006. 08. 23.

#### courses

FITNESS, BADMINTON, BAND STRETCHING, BALLET STRETCHING, YOGA, JAZZ DANCE, PILATES, TENNIS, SPINNING CYCLE, PHYSICAL STRENGTH MEASUREMENT, CIRCLE TRAINING, ZUMBA DANCE, INFANT BALLET.

#### **CONTACT IMFORMATION**

TEL: (062) 530-2581-4 FAX: (062) 530-2585 URL: www.sports.jnu.ac.kr

#### Foundation Purpose

Chonnam University Sports Center is located in Yong bong-dong, Buk-Ku in a densely populated residential area and commercial buildings.

This center aims at meeting the needs of local citizens by offering regular exercise programs to improve their health and fitness.

This center will provide high-end service to customers and is expected to contribute to elevating the image of Chonnam University.

#### Goals

- to build a space which can contribute to expand the population who participate in daily exercise
- to provide systematic and various programs
- to satisfy customers with quality service and facilities
- to stabilize independent management through normalizing the center organization

#### Laboratory Safety Management Center

The Laboratory Safety Management Center at Chonnam National University works to prevent accidents and ensure the safety of laboratories on campus according to the Act on Establishment of Safe Laboratory Environments

The main business responsibilities are as follows:

- 1. Establish plans for creating a safe laboratory environment
- 2. Offer safety management training and health screening for researchers
- 3. Provide accident prevention and handling measures in case of accidents
- 4. Ensure laboratory safety checks and precise safety inspection
- 5. Manage wastewater and related facilities as well as pollution control facilities

6. Safety management service such as monitoring radiation levels, health & safety education, and health check-ups.

#### **Contact Information**

- Tel. 82-62-530-3884~7, 3908, 3768
- Location: Building #D15, Yongbong

#### **Global Education Center**

The Global Education Center (GEC) is located on the Yeosu campus of Chonnam National University (CNU). The center aims to educate university students as well as the general public and to support international students from various countries. The center has three departments: Language Education, International Affairs, and Liberal Education. The Language Education department provides English, Japanese and Chinese language courses for CNU students to improve their foreign language proficiency. From 2018, it also started the Korean language intensive program as a credit course for international students. The department of International Affairs is in charge of international students' successful study abroad and settlement support. The Liberal Education department offers various curricula to cultivate talent with humanistic imagination and science and engineering creativity.

To help students learn better, the GEC is equipped with modern classrooms, multimedia classrooms, and a Global Zone for international students. Many kinds of convenient facilities for students to enjoy their daily lives at the Yeosu campus are affered.

#### **Contact Information**

Language Education Department: +82-62-659-7022, 7021 International Affairs Department: +82-62-659-7023, 7024 Liberal Education Department: +82-62-659-7026 Fax: +82-62-659-7029 E-mail: language@jnu.ac.kr URL: http://lec.jnu.ac.kr/yeosu/



## **VL Research Centers at CNU**



#### 6. Research Centers at CNU

#### 1. Research Institute of Nursing Science

Phone: +82-62-530-4939 URL: http://crins530.jnuac.kr/ The purpose of the Research Institute of Nursing Science of Chonnam National University is to promote sustainable growth of nursing discipline by systematically integrating nursing education, research and practice associated with the academic advance of nursing science, the development and support of nursing educational programs fused and integrated with other relevant disciplines, mental health and general health promotion projects of communities, advisory services for health care policies, and research and development projects for health care. Therefore, the Research Institute of Nursing Science focuses on the activities of reinforcement of research by multidisciplinary collaboration of the nursing faculty, clinical nurses, and other healthcare providers for community health, development and support of grant proposals for research funding from domestic and international organizations, maintenance of the accredited nursing educational program and development and support of educational services differentiated from the competition, while supporting the nurturing of nursing research manpower with global competitiveness.

The Research Institute of Nursing Science has held scholarly conferences and seminars every year on a nationwide scale since it was established in 1996. The  $\[\]NHI$  :Nursing & Health Issues], that is the nursing scholarly journal affiliated to the Research Institute, has been published twice a year from 2019 in order to be indexed in the National Research Foundation of Korea. Thus, the Research Institute of Nursing Science is on the verge of a new leap forward.

#### 2. Management Research Institute

Phone: +82-62-530-1427 URL: https://www.facebook.com/cnubizresearch/ Since its establishment in 1974, the Institute has contributed to the development of business and community through training programs, practical research related to administration of public or private organizations, and through international academic exchanges with prestigious universities in China and in Japan. The Institute takes the initiative in discovering and applying new management theories, and in developing business strategies to meet the changes in business administration while conducting various tasks such as international conferences, business consulting, training, and collaboration with industry and other research organizations.

This Institute has full time researchers, research assistants, and a permanent research team composed of world-renowned professors. Through the work of the Advisory Committee, Steering Committee, and Editorial Committee, the Institute fulfills its missions of business consultation at 9 research centers.

The Business Research Institute will continue to support the community and bring higher competitiveness of this community through in-depth study on raising the competiveness of corporations, win-win relations between large corporations and small businesses, harmonious relationships between corporations and labor unions, strategic development of social enterprises, and multi-talented business leader development.

#### 3. Institute for Public Affairs

Phone: 82-62-530-2289

The purpose of the Institute for Public Affairs is to contribute to the development of studies and practice of public administration through the study and research of these fields.

The following are the projects of the Institute for Public Affairs for the accomplishment of its purpose.

- Studying and conducting research in public administration and its practice
- Conducting paid research projects and services
- The publication of academic books and theses collections
- Hosting research announcement sessions, seminars, and lectures
- Exchange with domestic and international information on public affairs

#### 4. Engineering Research Institute

Phone: +82-62-530-1990

Established in 1965, the Engineering Research Institute is dedicated to advancing engineering technology in Gwangju and the Jeonnam region. Utilizing eminent faculty members, researchers and cutting-edge research labs, the Institute is actively engaging in academic research as well as technical projects involving engineering examination, design, estimation, and training in the region. The Engineering Research Institute is composed of a director, steering committee, administration office, and the following research parts:

- Research Part 1 (Architecture)
- Research Part 2 (Civil, Geosystems, and Environmental Engineering)
- Research Part 3 (Materials Science and Engineering)
- Research Part 4 (Mechanical Systems Engineering)
- Research Part 5 (Electronics and Computer Engineering)
- Research Part 6 (Applied Chemical Engineering)
- Research Part 7 (Industrial and Electrical Engineering)
- Research Part 8 (Administerial Affairs of the Institute)

#### 5. The Innovation Center for Engineering Education

Phone: +82-62-530-1626 URL: http://icee.jnu.ac.kr/ The ICEE serves as an innovative institute for engineering education in general with a future-oriented focus on generating and implementing innovative ideas for education programs, systems, environments, and teaching methodologies. It is directing improvements to creative and integrated education systems, strengthening Korea's ability to do international business, improving practical business skills in the workplace, and introducing excellence in engineering education. In addition, the ICEE delivers accredited engineering education to produce distinguished engineers who are qualified to meet the demands of international business. Its work is focused on producing creative and multi-skilled engineers who are equipped to compete in the field of global engineering education.

#### 6. Optoelectronics Convergence Research Center

Phone: +82-62-530-4904

Optoelectronics Convergence Research Center (OCRC) was established for the successful development of new materials and devices focusing on optoelectronics convergence.

#### 1. Purpose

- Worldwide climate change and energy problems are arising
- Responsible environmental and climate protection with energy management is an important issue
- Needs for sustainable and abundant alternative energy sources are high
- Energy conversion, stable supply of energy, next-generation light source/display devices are the core techniques for the creation of added value in the country
- A new research center is needed for the fulfillment on the source technology development on optoelectronics

#### 2. Current condition

- Director: Professor Jin Hyeok Kim (Department of Materials Science and Engineering)
- Date of establishment: March 1, 2015

#### 3. Research areas and features

- 1) Materials Development & Characterization
  - New type of materials with specific function/properties
  - Graphene, complex oxides and sulfides, etc
  - Establish the new analysis tools and their applications

#### 2) Photoenergy

- New type of flexible and energy conversion devices
- Supplementation for mobile accessibility
- Establish the new analysis tools and their application

#### 3) Luminescence/Display

- New type of growth techniques for III-V materials and phosphors
- Extremely high-efficiency luminescence devices

Establish the physical background for the new process and device platform

#### 7. Educational Issues Research Center

#### Phone: +82-62-530-2342 URL: ier.jnu.ac.kr

The Educational Issues Research Center is dedicated to enhancing the quality of education and teacher training, promoting research and development in theory, methods and technology of teaching, and improving the education of the local community.

Since its establishment in 1973, the center has sought ways to improve communication between teaching theory and practice.

The center is based on the theories of pedagogy, which is the foundation of subject matter education. Raising issues related to theories in education is another role that the center is playing.

The journal Educational Research is published annually. For students pursuing teacher's certificates, the center offers special lecture services.

- Research on university education: general culture courses, curriculum, class assessment
- Academic conferences for regional development of education, focusing on reducing costs of private education
- Publication of Educational Research
- Research on regional education
- Domestic and international symposia on education

#### 8. Center for Transportation and Logistics

#### Phone: +82-61-659-7340

The Center for Transportation and Logistics was established to meet the needs of the Jeonnam region for specialized research in transportation and logistics. The goal of the Center is to analyze issues in transportation and logistics of the community and nation, provide policy alternatives, and establish an efficient transportation and logistics system. Major activities of the Center for Transportation and Logistics include analysis of transportation and logistics issues, provision of policy alternatives, research of leading technology, education and cooperative work on industry and academia on transportation and logistics, policy research and technology consulting, hosting lectures and seminars, and publication of research reports and papers.

#### 9. The Research Center for Overseas Korean Business and Culture

Phone: +82 - 62 - 530-2701~3 Homepage: http://www.hansang.or.kr/ The Research Center for Overseas Korean Business & Culture was established in 2002 to examine overseas Koreans and extend the research field through various activities. The main activities of the research center are holding domestic and international academic conferences, publishing books and articles, international cooperation with universities and institutes, training graduate students for future generations, and operating research projects.

In particular, the research center has been carrying out a research project on "Ethnic Disperses and Cultural Territories" granted by National Research Foundation of Korea since 2010 that will continue until 2018. The objectives of this project are to analyze the characteristics of diasporas not only of overseas Koreans, overseas Japanese, and overseas Chinese, but also other diasporas in the world. Furthermore, we develop the analysis framework and develop the archives to preserve the database.

# 10. Kumho Life Science Laboratory

Phone: +82-62-530-4780 URL: http://kumho.chonnam.ac.kr The goal of the Kumho Life Science Laboratory is to contribute to the advancement of life sciences by conducting research in plant science and biotechnology.

The laboratory was originally established as a part of the Kumho Group at the will of the late Park Seongyong, honorary chairman of the conglomerate, for the advancement of life sciences and public interest.

However, with several recent structural shifts, the research center became a part of the university and is rebuilding a sound foundation.

Environmental stress, light signaling, enzymology, proteomics, and other botany-related subjects are some of the current research areas of Kumho Life Science Laboratory.

#### 11. Research Institute for Basic Sciences

Phone: +82-62-530-3480

The Research Institute for Basic Sciences was established to enhance basic sciences by conducting research on the qualitative improvement of basic sciences. To this end, the Institute carries out the following activities:

- Conducting world-class research activities in each field thanks to basic science financial support from the Ministry of Education and Human Resources.
- Holding domestic and international academic conferences and discussion sessions on basic science issues.
- Conducting research requested by external parties, and joint studies between industry and the University

The Institute was established as a CNU-attached Applied Physics Institute in 1967, and changed its system and name to the Science and Chemistry Institute in 1970. In 1983, the CNU-attached Research Institute for Basic Sciences was born by incorporating the Marine, Science/Chemistry and Chemistry Institutes. It was designated as a central institute in Gwangju and the Jeonnam region in 1994, and is now actively working on research projects in Hydraulics, Physics, Chemistry, Biology/Environment and the global environment.

# 12. AgriBio Institute of Climate Change Management

#### Phone: +82-62-530-2181

The goal of the AgriBio Institute of Climate Change Management is to contribute to the development of agriculture and sustainable environments by conducting various research projects and studies on agriculture, forestry and landscape, and ecosystems. In particular, the institute aims to play a leading role in developing new ideas and technologies to solve regional and international problems related to climate change in the Honam district and Northeast Asia.

Experts from diverse research areas, such as crop production and environmental management, forestry and landscape, and natural disaster and ecology, are participating in the climate change-related research and education.

# 13. Institute of Aging Science

Phone: +82-62-220-6710 URL: aiagingscience.com The Advanced Institute of Aging Science of Chonnam National University was established in April 2017 to lead the aging science and technologies through multidisciplinary convergence researches for active and smart healthy aging in the aging society. The research institute consists of an anti-aging/aging hormone research unit, a clinical aging research unit, an ICT healthcare research unit, and a management support unit. Professors and researchers from the College of Medicine, College of Engineering, College of Engineering Sciences, College of Natural Sciences, College of Nursing, and College of Human Ecology have been participating in multi-disciplinary researches.

In order to solve the problem of the aged society, we aim to lead the future aging science technologies through clinical and basic researches such as the Korean Centenarian cohort study, Artificial Intelligence (AI) in healthcare, ICT health convergence research, anti-aging and aging hormone research, and training programs for specialists in the field of age-friendly and wellness industries.

#### **Field of Research**

Anti-aging and Aging Hormones Korean Centenarian Cohort Study Age-Friendly Healthcare Devices ICT Health Convergence AI in Healthcare

#### 14. Institute of Agricultural Science and Technology

Phone: +82-62-530-2029 URL: http://asat.jnu.ac.kr/ The Institute of Agricultural Science and Technology's goal is to contribute to the development of agriculture by conducting various research projects and studies to develop agricultural technology and resources, and look for ways to increase profitability. The Institute was originally launched as the College of Agriculture, Farm and Fishing Village Development Institute back in 1963, which changed its name to the Institute of Agricultural Science and Technology in 1991. It now performs studies on agricultural and science technology, agro-economy and agro-administration to maximize the income generated by the agricultural and fishing community. Currently the Institute has eight research departments, carrying out vigorous research activities.

#### 15. Multi-cultural Society Center

#### Phone: +82-62-530-5132

The Center was established with the mission to seek proper paradigms for a multi-cultural society and to build a healthy multi-cultural community through education, support, and research activities. The Center is composed of a research department, education department, support department, and cooperation department.

The research department conducts research to re-establish traditional studies of humanities and social sciences with more accepting paradigms towards multiculturalism.

The education department develops multi-cultural learning models and expands multi-cultural education (which focus on immigrants only) to the education of local Korean residents.

The support department strengthens the ties between immigrants and local residents, guides immigrants to create a proper identity, and resolves conflicts between immigrants and local residents. To support immigrants and their families more effectively, the department runs a counseling program for multi-cultural families.

The cooperation department builds networks with related organizations for cooperation and joint research systems.

#### 16. Dental 4D Research Institute

#### Tel: +82-62-530-5850, 5656

The Dental 4D Research Institute was established in 2012, for improvement of national health care services and welfare through accomplishments in digital-based research, education, publication, and developments about convergence and application in the field of dentistry. The Institute reflects requirements in the current era of computerization and leads the digitalization in dentistry.

The Dental 4D Research Institute has set its mission on global research and production of new industries and pioneering digitalization in dentistry. The Institute has visions about convergence of digital technology with medical science related to dental clinics. Annual symposiums and exceptional seminars are held monthly.

The Dental 4D Research Institute categorized the Department of Digital Image, Department of Advanced Materials Development, and Department of Educational Publication, and also carries out efficient missions.

# 17. Veterinary Medicine Research Institute

#### Phone: +82-62-530-2805 URL: http://anis2med.jnu.ac.kr/

The Veterinary Medicine Research Institute was established in 1997 to conduct basic and applied research that can contribute to development in the field of veterinary medicine. It tries to improve the productivity of local hog raising and stock breeding, and to enrich the quality of life of the general public. To this end, it promotes the local industry utilizing livestock, and conducts research requested by external or national organizations on pets, companion animals, special, wild animals, and animals that need preserving such as Korea's Jindo dog. The Institute strives to seek practical ways to cure diseases and prevent epidemics, a main concern in related industries and livestock-breeding farms. It conducts various academic activities including holding seminars and publishing journals.

#### 18. Institute for East Asian Studies

Phone: +82-61-659-7580 URL: http://www.east-asia.re.kr Established in 2003, the Institute for East Asian Studies conducts academic research on issues related to the Korean Peninsula and the East Asian region.

The Institute, composed of a Director, and Divisions of Planning, Research, and Education, is engaged in the following activities:

- Research on East Asian countries
- Research on South and North Korea and unification of the two Koreas
- Academic symposiums, seminars, and lectures
- Publication of research papers
- Cooperation and exchange with other research institutes

# 19. Asian Pear Research Institute

Phone: +82-62-530-2106 URL: http://www.kpear.kr/

#### A. Introduction

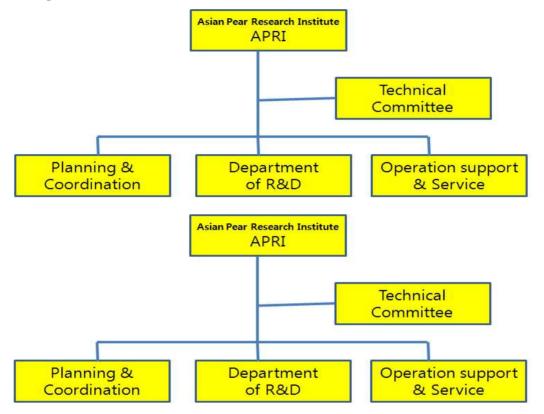
The Asian Pear Research Institute (APRI) strivers to research this fruit thoroughly with a special focus in developing the local pear industry through advanced techniques while balancing yield and sustainability.

#### **B.** Related Research Fields

- High quality Asian pear cultivation and advanced breeding technology
- Breeding new varieties of Asian pears-containing functional compounds;. Dveloping molecular markers related to fruit quality, disease and insect resistance; colors and taste.
- Environment friendly production system to ensure safe production & production cost saving with establishing high density cultivation system using dwarf rootstock and Y-shape pear production system.
- Expanding integrated fruit production management programs

- Postharvest technology to enhance pear marketability establishing optimum fruit shipping standards.
- Preventing physiological disorder and damage by disease during distribution
- Development of functional and medicinal products to promote consumption and value

#### C. Organization Chart



# 20. Robot Research Initiative

Phone: +82-62-530-0268

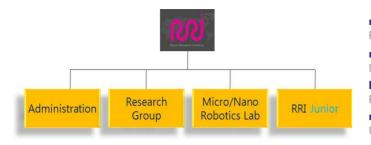
The Robot Research Initiative aims to represent the Honam area as well as Korea, and to become one of the top 5 robot centers in the world.

#### [Missions]

- Develop national robot projects (research and development/building foundation/develop human resources)
- Conduct large scale projects for government/local government/corporations
- Specialize in robots and become the center of excellence

#### [Current Conditions]

- Director: Professor Jong-oh Park (Department of Mechanical Systems Engineering)
- Date of establishment: March 31, 2008
- Organization chart



rri.re.kr RRI portal microrobot.re.kr Intravascular microrobot program bacteriobot.re.kr Pioneer research center micronanorobot.re.kr Uni Lab

- \* 32 adjunct/fellow researchers, 11 full-time researchers, 30 research assistants
- Address: Chonnam National University, Yongbong-ro 77, Bukgu Gwangju
  - Administrative office, Nano Robotics Lab: College of Engineering 1
  - Bacterobot, service/medical robotics Lab: University-industry Collaboration Center 3

#### [Areas of research]

Micro/Nano Robotics, Medical Robotics, Intelligent Robotics, Space Robotics

#### [History of the Center]

Date	Content	
March 31, 2008	Established as an affiliated research center	
June 4, 2008	Chosen as a leading research center (CNU-XRC)	
June 13, 2008	Signed an MOU with KIST Europe (Germany)	
July 18, 2008	Held opening ceremonies for CNU-XRC	
October 15, 2008	Hosted ISR 2008 conference	
October 16, 2008	Participated in 2008 Robot World	
October 20, 2008	Signed MOU with Scuola Superiore Sant`Anna (Italy)	
October 21, 2008	Signed MOU with Carnegie Mellon University (USA)	
January 29, 2010	Signed MOU with FUKUDA Lab (Japan)	
May 13, 2010	Presented world's first microbot for blood vessel surgery	
June 3, 2010	Held opening ceremonies for Bacte-robot Fusion Research Organization	
July 20, 2010	Held opening ceremonies for Space Robotics Research	
October 28, 2010	Participated in 2010 Robot World	
November 25, 2010	Participated in Robot Expo	
February 17, 2011	Hosted 1st International Space Robotics Symposium	

# 21. Culture Technology Institute

Tel:+82-62-530-0360 URL:http://ct.jnu.ac.kr

In the 21st century, the Cultural Industry Institute receives a lot of attention as one of the highest value-added industries. Therefore, Culture Technology, as a result of supporting this industry, is being

globally developed in advanced countries due to the importance of the technology. In Korea, the region of Gwang-ju city and Jeollanamdo-do is well known for maintaining the value of cultural items and their original forms. As a result, the Culture Technology Institute is more critical than any industrial things in this area.

This Institute was established to develop core technologies of the culture industry by combining advanced sensors, imaging, and interface technology in the IT field, as well as design, human sensibility, and cultural properties in various fields. The main purpose of the institute is to contribute to the promotion of the national cultural contents industry by developing new technology which can be applied to future high-tech cultural industry through interdisciplinary fusion of engineering, humanities, sociology, culture, and art research. This institute conducts the various research activities as follows:

- Recovering traditional cultural original form and development of digital archiving technology
  - Excavation of tangible and intangible cultural original form related to traditional culture
  - High-level technology for digital archiving
  - Digital technology of converting cultural original form to digital contents
- Development of culture technology based on high-level technology
  - High-tech contents and expression technology with combination of image processing, signal processing, sensor engineering, and software programing technology
  - Intelligent interface technology for mobile and network games
  - Contents utilizing technology using the intelligent search function of web linkage
  - Contents utilization technology using the SNS and the cloud computing system
  - Production of large-scale play system by combination of gesture recognition, pattern recognition, and animation technology
  - Exhibition and education system using the tabletop display
- Supporting cultural content planning, creation, and marketing
  - Supporting expert groups for cultural content planning, creation, and marketing
  - Contract and implementation of business planning related to cultural events supporting various content creation and commercialization activities based on cultural technology
- Developing human training and commercialization technology related to cultural industry
  - Supporting cooperation-network of internal graduated researcher to cultural industry
  - Proposing national projects related to cultural industry
  - Holding seminars on culture technology
  - Maintaining industry-university collaboration for developing new cultural items

- Development of cultural industry technology with interdisciplinary co-work of humanities, sociology, culture art, design, and engineering
  - Supporting the cooperating system with culture technology institute, which will be established in the near future
  - Finding new research areas with interdisciplinary co-work
  - Developing new application technology using culture technology

#### 22. Cultural Heritage Research Institute

Phone: +82-62-530-1336

The Cultural Heritage Research Institute is established under the R & DB Foundation of CNU to reinvent the value of cultural heritage based on the interdisciplinary program of cultural heritage in order to preserve the varieties of culture, to find sustainable values through the survey, conduct further research, and promote education of the cultural heritage. Furthermore, the Research Institute has increased its activities at the University and with Industry and Research Institutes to help revitalize the cultural industries This institute conducts the various research activities as follows:

- 1. Conducting academic research for domestic and international cultural heritages
- 2. Collecting, recording, and preserving of research data of domestic and international cultural heritages
- 3. Publishing academic journals and research results
- 4. Holding academic conferences
- 5. Developing contents using cultural heritage and servicing academic information
- 6. Developing an educational program for training professionals about cultural heritage
- 7. Networking with other research institutes, public institution, and related organization

#### 23. Bio-energy Research Center

Phone: +82-62-530-0266 URL: http://www.bri.or.kr/ The Bio-energy research center has been established for the purpose of research and development of sustainable and environmentally-friendly cellulosic bioenergy production. Research activities of the Bio-energy research center span a range of biological and chemical disciplines, bringing together technical and scientific expertise and instrumentation from chemistry, molecular biology, and plant science and wood sciences. The collaborative efforts are proving successful in achieving rapid advances in technologies for maximizing biofuel production from lignocellulosic biomass.

The research center is planning to become a global research center by acquiring fundamental technologies through active research collaboration with domestic and foreign research centers and companies.

 Chemistry Process Research Division: Specializes in the development of biomaterial and research on chemical procedures

- Biotechnology Research Division: Specializes in the development of new biotechnology by utilizing advanced biotechnology
- Protein Research Division: Specializes in research on enzyme gene cloning and genetic engineering techniques
- Plant Tissue Culture Research Division
- Commercialization Research Division: Specializes in the conveyance of developed technologies to the industry
- Administration: Overall operations and international cooperation

#### 24. Biohousing Research Institute

Tel. +82-62-530-1914, Web: http://www.biohousing.kr The biohousing research institute aims to develop and commercialize core technologies on biohousing for the low-carbon green growth.

Role of biohousing research institute

- Operation of Korea Laboratory Accreditation Scheme (KOLAS)
- Operation of biohousing research facilities (Structural lab and unit lab)
- Research on biohousing technology
- Cooperation and collaboration with other industries, governments, and academies on research and policy
- Other task relevant to the purpose of the institute

The biohousing research institute is operationg the biohousing research facilities (structural lab and unit lab) that were established through the regional base research institute fostering program funded by the Ministry of Education and Science Technology (MEST) and also operating KOLAS system for specialty, internationalization, and self-reliance.

# 25. Institute for Legal Studies

Phone: +82-62-530-2292 URL: http://cnuils.jams.or.kr/ The Institute for Legal Studies (ILS) was established in February 2009. ILS was derived from the Institute of Law and Public Administration. The present ILS is enlisted under the Law School and consists of several centers: the Center for Public Interest and Human Rights Law, the Center for East Asian Law, the Center for Health & Medical Law, the Center for Intellectual Property Law, the Center for Trust Industry Law, the Center for Uniform of Private Law, the Center for Information Law Center, the Center for Criminal Justice Law, the Center for Law & Literature, the Center for Consumer law.

The subjects we touch upon are not only domestic law but also foreign law. Moreover, Chonnam Law

Review, which is run by the institute, is famous as a journal of law.

ILS carries out the following activities:

- Holding research seminars and academic conferences.
- Publishing Chonnam Law Review and special thesis collections
- Conducting research and studies by external request
- Cooperating and forming exchanges with academic institutes at home and abroad
- Performing activities for law school research

#### 26. Research Institute for North Korean Agriculture

Phone: +82-62-530-2177

The North Korean Agricultural Research Institute pioneers customized agricultural cooperation projects that enhance the effectiveness and sustainability of agricultural development cooperation projects in North Korea, and researches related effective measures.

The mission of the research institute is to develop customized technologies that can lead North Korea's agricultural development cooperation projects and to foster experts in North Korea for potential reunification.

The major research areas are as follows.

- 1. Promote North Korea's major crop production and develop pest control technology based on environmentally-friendly agriculture
- 2. Development of on-site practical technology for producing customized crops in North Korea
- 3. The restoration of North Korea's devastated forests and herb cultivation technology development
- 4. Nurturing North Korean agricultural specialists to promote agricultural exchange cooperation between the two Koreas.
- 5. Providing effective and sustainable customized agricultural cooperation models

# 27. Institute of Social Sciences

Phone: +82-62-530-2700 URL: http://jnuiss.jnuac.kr/ The Institute of Social Sciences aims to contribute to the development of social sciences. To achieve this goal, the Institute has performed various academic research activities on the political, economic, social and cultural issues in Korean society as well as in foreign countries. The Institute conducts various research projects on the Gwangju-Jeonnam region of South Korea, publishes the Journal of Modern Social Science, and holds academic conferences and seminars.

# 28. Biotechnology Research Center

Phone: +82-62-530-2030

The Biotechnology Research Center was established on May 8, 1985 in order to lead the development of basic and creative studies in this field of study, establish the cooperative system between industry and academia, and foster talented personnel by gathering and utilizing scholars from various fields of study.

The Center has acquired more than 3.3 billion won of research funds on 147 research projects from the Ministry of Education and Human Resources Development and the Korea Research Foundation, thereby securing about sixty kinds of experimental tools. It has hosted 12 research presentations on genetic engineering and 18 local and international symposia and 125 seminars, and published about 213 theses.

The Center is currently playing a key role in biotechnology-nurturing projects and BT industry-nurturing projects with 34 full-time and part-time researchers. It hosts national and international academic conferences, publishes newsletters every year, and promotes itself through regular updates of information posted on its website. It actively participates in research projects such as NRL, a frontier project promoted by the Ministry of Science and Technology, and research projects sponsored by the Korea Research Foundation and the Korea Science and Engineering Foundation. In addition, it does its best to develop local industries through cooperation with academia.

#### 29. Research Institute for Human Ecology

Phone: +82-62-530-1315 URL: http://rihe.jnuac.kr/ Human ecology seeking the value and quality of individuals and families through the improvement of living conditions is becoming a more significant field of study in the modern society of globalization, informatization, and industrialization. Since it was established in 1991, the Research Institute for Human Ecology has functioned as a comprehensive research center for humanities, social sciences, and natural sciences through international cooperation and collaborative work with Korean organizations.

The Research Institute for Human Ecology annually publishes the Journal of Human Ecology, and hosts academic conferences at least 6 times a year. Also, it has been conducting comprehensive research projects to meet human desires for a quality life, changes in society that demand industrialization of households, and welfare policies of Korea. To name a few, the Research Institute has completed the T-gate Product Information Project, the Aging-friendly Product Test and Display Project, the Multi-cultural Family Survey, the Low-income Single Parent Family Survey, the Human Resources Development Project for Senior Industry, the Welfare Policy Moderation Project, Changes in Korean Body Type Project and Fashion Culture Product Development.

#### 30. Equipment Diagnosis Design Engineering Research Center

Phone: +82-61-659-6937 URL: http://sdt.jnu.ac.kr The Equipment Diagnosis design Engineering Research Center was established to improve human welfare by insuring a safe industrial working environment by securing the safety of industrial equipment through research on credibility evaluation, inspection, and design related to industrial equipment.

The center will contribute to the development of Chonnam National University and the local community through the release of leading research results, as well as diagnosing and developing prevention measures for problems with industrial equipment.

#### 31. Sexual Health Research Center

#### Phone: +82-62-530-6710

The purpose of this institute is to analyze the physiology and pathology of sexual functions of males and females through basic and clinical research. It also serves to analyze, diagnose, and ultimately prevent the causes of diseases that lead to sexual dysfunction. By doing so, the center aims to establish leading research results, as well as exchange and conduct cooperative studies with domestic and foreign research organizations to contribute to the development of the university and the local community. It strives to do this through the following:

- 1. Research on prevalence rates of sexual disorder-related diseases
- 2. Analysis on causes of sexual disorders and research on related preventive measures
- 3. Basic research on the physiology and the pathology of sexual functions
- 4. Development of animal models on respective sexual disorders
- 5. Analysis on sexual psychology and the development of cures
- 6. Video research on sexual functions and central nervous systems that cause sexual disorders
- 7. Development of sexual disorder testing equipment
- 8. Development and commercialization of cures for sexual disorders
- 9. Clinical research on sexual function-related medicine
- 10. Research activities on sexual health, exchanges with foreign research organizations for educational purposes, and the formation of cooperative structures.

#### 32. The Fisheries Science Institute

#### Phone: +82-61-644-4941~2, URL: http://jnufsi.jnu.ac.kr/

The purpose of The Fisheries Science Institute is to contribute to the development of the Korean fisheries industry through the development of science technology in the fisheries and marine industries.

The following are the major activities of the institute:

- The development of technology and basic research on fisheries and marine science
- Conducting planned research projects to promote businesses specializing in fisheries and marine industries
- Training highly competitive man power
- Cooperative research with government organizations and businesses, and international exchange
- Providing technology training for fishers and businesses
- Data gathering and sorting for the development of fisheries, marine science, and industrial technology
- Holding conferences, symposia and seminars, and publications
- Collection and exhibition of educational material, models, and specimens

• Fund gathering and other projects related to the purpose of the institute

#### 33. Aquatic Animal Hospital

#### Phone: +82-61-659-7177

Intensive culture practices rapid environmental changes and increased international trades of aquatic animals cause high chances of widespread diseases these days. In order to control the spread of aquatic animal diseases, the Aquatic Animal Disease Control Act has been reinforced since December 2008 in the Republic of Korea. The Aquatic Animal Hospital of Chonnam National University has been certified as a pathogen appraisal institute in accordance with the Act.

In addition, the Aquatic Animal Hospital of Chonnam National University was registered as the University's research institute, and primarily focuses on the diagnosis (or detection) of fish and shellfish diseases and recommends proper control and treatment methods. The institute accepts fish and shellfish samples showing clinical signs of disease (parasite, bacteria, virus, fungus, etc.) diagnosis by licensed fish doctors. A nominal fee is charged for this service. In addition, we develop diagnostic techniques, immunization boosters, and try to build systems producing safe fisheries products. The Aquatic Animal Hospital also conducts research projects through collaboration with other research organizations and companies.

#### Services

- 1. Detection of pathogens following manual of the Aquatic Animal Disease Control Act
- 2. Diagnosis of fish and shellfish diseases and recommendation of proper treatment
- 3. Antibiotic susceptibility test
- 4. Parasites, bacteria, and virus identification

#### 34. System Security Research Center

Phone: +82-62-530-3714 Homepage: http://ssrc.jnu.ac.kr With the development of information and communication technology, people and people, people and things, and things and things are closely connected based on the Internet. At the same time, as cyber -attacks that threaten the security of personal information and information networks are increasing, a system for predicting and responding to cyber threats is required.

In response to these demands, the System Security Research Center conducts security research on computer network security technology and the Internet of Things devices using Artificial Intelligence algorithms. In particular, it is working with the information security industry and national security organizations to advance the Artificial Intelligence security technology.

In 2019, the center was selected as the Graduate School of Convergence Security by the Ministry of Science and ICT. The center will train security expert who specialize in the new energy industry over the next six years. Eleven companies and organizations including KEPCO, KEPCO Knowledge, Data & Network, Korea Power Exchange, AhnLab and Wins Technet will participate in the project. The center

develops training courses and operates industry-academic cooperation projects with partner organizations in order to cultivate human resources in the field of energy security.

#### 35. Asian Culture Research Center

Phone: +82-62-530-0907 URL: http://asia.jnu.ac.kr/

The Asian Culture Research Center was established for successful national projects and the development of the community through research on Asian culture and on central cities in Asia. The Center carries out the following projects:

- Areas of research
  - Policy making related to Asian culture
  - Developing and administering education systems related to Asian culture
  - Planning research on Asian culture in school systems
  - Collaborating with other organizations and industries related to Asian culture
  - Studying business opportunities for Asian culture
  - Other research activities
- The Research Center is composed of the Planning Department, Research Department, Education Department, Cultural Industry Department, Cultural Space Department, Cultural Art Department, and Cultural Tourism Department under the director of the Center.

### 36. Fishing Technology Institute

Phone: +82-61-659-7120 URL: http://marine.chonnam.ac.kr Yeosu is a major fishing port, containing 30% of the fish caught in South Korea. Set nets, anchovy boat seines, and lift nets are some of the more popular fishing methods or tools in the Yeosu coastal waters.

The Fishing Technology Institute, located in Yeosu, trained human resources needed for far sea fishing during the 60's, 70's and 80's together with Chonnam National University. Recently, the Institute has been focusing on developing fishing technologies for coastal fisheries, especially the Southern coast of South Korea.

Electronic engineering and machine control technologies have recently been applied to fishing gears for more productivity and sustainability in the fishing industry.

#### 37. Institute of Women's Studies

Phone: +82-62-530-2615 URL: http://altair.chonnam.ac.kr/~women/ The Institute of Women's Studies aims to bring about ways to prompt gender equality, developing potential female talent, and improving women's social status in society. To achieve these goals, it have conducted studies and activities to increase the role of women in the society since its establishment in 2000

In terms of gender-related study, the Institute holds regular academic conferences and discussion sessions, and conducts interdisciplinary joint research projects, thereby creating chances for domestic and foreign scholars to exchange information and thoughts and broadening their academic horizons. In the local community, the Institute collects data on the current situation of female rights in this region and provides programs that can enhance the ability and possibility to work in cooperation with the Gwangju Metropolitan Government, women's rights organizations, and the Ministry of Gender Equality and Family. In addition, it also hosts leadership camps targeting CNU female students to nurture them into leaders for future generations, and an employment-enhancing program for women.

# 38. Research Center for History and Culture

Phone: +82-62-530-0788 URL: http://cafe.daum.net/history0788 The Research Center for History and Culture conducts comprehensive studies on Korean history, as well as Asian and Western history. It strives to build an organic and comprehensive research system with related fields of study, and to develop history education programs and content for various demands. It also attempts to contribute to the popularization of historical content and creation of a new culture. To achieve these goals, the Center carries out the following activities:

- The study of Korean, Asian, and Western History comprehensively and systematically
- The investigation of methods tying in with related fields of studies and academic exchanges
- Operating a stable research support program for future generations of scholars and researchers
- Operating various educational programs to teach history and culture in step with the popularization of history study

#### 39. Institute of Coastal Environment Research

Phone: +82-61-659-6970 URL: http://icer.re.kr After its establishment in 1992 as the Environmental Research Institute, the Institute was renamed the Coastal Environment Research Institute in March 2007. The Institute aims to develop environmental technology to overcome pending issues in environment, improve the environment, and promote development of the local community and the nation by researching region-specific environmental problems.

As an endeavor to fulfill this goal, the Institute develops environmental technology, provides education and training on environmental conservation, holds academic seminars and workshops to present research findings, collects research data and materials, publishes papers, conducts research projects commissioned to the Institute and provides consulting. The Coastal Environment Research Institute is composed of research divisions of Coastal Environment Management, Industrial Complex Environmental Management, Environmental Safety and Disaster Prevention and Natural Environment Management.

# 40. The British/American Studies Institute

#### Phone: +82-62-530-3120 URL: http://altair.chonnam.ac.kr/~eculture/

The British/American Studies Institute was established to improve the understanding of American and British culture through various academic activities involving English-speaking nations. To this end, the Institute invites scholars at home and abroad to hold open lectures and seminars on the history, politics, society, literature, and the arts of English-speaking nations. In addition, the Institute collects books and material for the study of these areas, and holds study sessions on a regular basis to deepen understanding of these cultures.

In the future, the Institute will strengthen ties with the Korean studies institutes working in Englishspeaking countries. To realize these goals, it will increase academic exchanges with English Studies institutes in foreign countries to invigorate the study of American and British cultures.

#### 41. Art Research Institute

#### Phone: +82-62-530-3007

The goal of the Art Research Institute is to revitalize the local art community and promote development of culture through information exchange, data collection, and public relations. Since its establishment in 1992, the Art Research Institute has conducted comprehensive research on regional art, culture of art and music, and classical Korean music. The Institute also publishes an academic journal, Collected Papers on Art, biennially. The detailed list of activities of the Art Research Institute is as follows:

- Publication of papers and resource books
- Promotion of regional and international art exchanges
- Study and production of pieces of art in the city
- Joint musical performances with other regions and international exchanges
- Research of the music of the Jeonnam region planning of lectures by invited guests
- Popularization and globalization of Korean music
- Research of different characteristics of Korean music in various regions

#### 42. Space Particle Research Center

Phone: +82-62-530-3484 URL: http://168.131.177.72/g5/bbs/group.php?gr\_id=cepl Space particles invoke curiosity and provides key information to understanding the standard theory and modern physics. The discovery of neutrino vibration through the study of atmosphere neutrino and solar neutrino has made a quantum leap beyond the grand unified theory based on the standard theory. Therefore, this Center intends to conduct research on key issues of modern physics such as the characteristics of space particles, the development of space particle detectors, dark matter, and the origin of space.

The Center also aims to expand the research capacities of graduate school students and promote Chonnam National University through joint research projects with the world's best space research centers: Fermi National Accelerator Laboratory of the USA, CERN (Conseil Europeen pour la Recherche Nucleaire) of Europe, DESY (Deutsches Elektronen Synchrotron) of Germany, KEK (The High Energy Accelerator Research Organization) of Japan, and the Spaceship Center at Tokyo University.

#### 43. Institute of Eurasian Studies

#### Phone: +82-62-530-3195

The purpose of the Eurasian Institute is to promote interdisciplinary research amongst different fields of study related to the culture of the European and Asian regions. The institute contributes to the academic development of Gwangju and the South Jeolla Province, and also Korea by establishing a sound research structure, cooperating with related domestic and international research institutes to study the different aspects of the cultures and societies of the two continents.

#### Major projects of the institute include:

- Structuring focused research on boundary and methodology
- Conducting research projects
- Publication of the Eurasia Nonchong, a magazine of research papers
- Publication of the Chonnam University Eurasian Studies series
- Holding seminars and forums on Eurasian Studies
- Holding domestic and international conferences
- Exchange with domestic and international research organizations and the invitation of scholars
- The research, sorting, and evaluation of data and database structuring

#### 44. European Regional Studies Institute

Phone: +82-62-530-3123 http://eucenter.jnu.ac.kr/ The Institute was established in 1999 to meet the government's demand for globalization and to create more professional personnel working in and studying politics, economics, culture, and other academic fields in Europe.

Its mid- and long-term itinerary includes five areas: research, education, academic events, facilities, and finances. The Institute plans to create a joint-research team to study for the next two to five years how the European Union (EU) was created, the wide spectrum of European cultures, and the language policies of EU members. To achieve this, it will recruit more talented researchers and attempt to attract more research funds.

Close attention will be paid to education by linking European Regional Studies-related majors to the Interdisciplinary Program of European Studies graduate courses. It will strengthen social awareness by establishing open courses for the public.

In addition, academic seminars will be held on topics such as the 21st century cooperative relationship

between Europe and Korea, the European Union and an Asian union, European and Korean policies on the environment, and the economic and trade policies of Europe and Korea. The Institute's facility has yet to be fully furnished. More effort will be made to attract research funds.

#### 45. Research Institute of Medical Sciences

Phone: +82-61-379-2881 URL: http://medicine.jnu.ac.kr/ The Research Institute of Medical Sciences came into existence on November 21, 1979, and contributes to the development of medical sciences and the improvement of public health by studying cooperatively pressing issues. The Center is composed of the Director, General Manager, and research departments, focusing on the following activities:

- Developing research tasks in basic and clinical medicine and offering financial support
- Hosting domestic and overseas academic symposia and delivering presentations of research results sponsored by the Institute
- Publishing journals, newsletters, and medical education materials
- Nurturing competent researchers, offering them chances to study abroad, and supporting discussion sessions
- Providing high-tech equipment for various analysis activities

#### 46. Yi Sunshin Marine Culture Research Center

Phone: +82-61-659-6580(Director), 6583(office) URL: http://ymcri.jnu.ac.kr/ The Yi Sunshin Marine Culture Research Center was established in July 2007, after the 2006 merger between Chonnam National University and Yeosu University, to contribute to the distribution of marine culture and its development through comprehensive research on marine culture.

The center will comprehensively and systematically study the marine culture of the Jeolla region, East Asia and the world to transform it into a cultural and spiritual asset, utilizing it as a foundation of creating new culture.

The center will firmly establish the position of Chonnam National University as a leading school in East Asian and global marine culture research and support the success and legacy of the Expo Yeosu 2012 academically.

For the above purpose, the research center conducts comprehensive research on marine culture, collecting research data, publishing academic magazines including the Marine Culture Research, or Marine Culture Studies, holding academic conferences and exchanges in various ways including ideas and human resources with domestic and international research organizations and societies.

# 47. Artificial Intelligence Convergence Research Institute

Phone: +82-62-530-0430 URL: http://aicri.jnu.ac.kr

The Artificial Intelligence Convergence Research Institute(AICRI) was established in January 2019, and there are 13 AI expert professors from the Engineering College, Natural Science College, and Medical College, including the first Dean, Prof. Soo-Hyung Kim. This Institute tries to apply AI and machine learning technologies to various applications, such as medical, healthcare, finance, automobile, military, mass production, electronic marketing, agriculture, arts, entertainment, energy, legal application, and so on, with the purpose of leading a nationwide 4th industrial revolution. In addition, this Institute focuses on the development of multi-modal AI technologies which combining visual, speech, linguistic, and emotional intelligences, education of AI convergence experts, establishing domestic as well as international cooperative networks among AI convergence experts, and hosting several leading research centers.

#### 48. Research Institute for Humanities

Phone: +82-62-530-3119 URL: http://ioh.jnu.ac.kr This Institute aims to contribute to the humanities locally and globally through interdisciplinary research and joint research on humanities. In particular, the Institute carries out the following tasks in order to review current studies of humanities and to plan ways of practicing and applying research results.

- Building up and intensifying interdisciplinary and convergence research.
- Leading future humanities after the 4th industrial revolution.
- Training humanities experts and extending the outcomes.
- Creating and fulfilling models of the popularization of humanities.

#### 49. Institute of Humanities

#### Phone: +82-62-530-5218 URL: http://jnuinmun.org

The Institute of Humanities was founded in 2017 as a consortium of five research institutions (Research Institute for Humanities, Research Center for History and Culture, Korean Language and Literature Studies Institute, the British/American Studies Institute, Center for Philosophical Studies). Through the inter-disciplinary and muti-disciplinary collaboration, it systematically explores and develops urgent and pressing agendas and seeks to engage in open, informed and nonpartisan dialogues on historically relevant issues.

The Institute has been selected by the National Research Foundation of Korea to be included as part of the National Strategies Research in Humanities Korea (HK+). Accordingly, the Institute has initiated a 7-year research project with the agenda, "Family-Community Humanities for the Integration and Communications in the Trans-Individual Era", funded by the National Research Foundation of Korea. In the face of the increasing disintegration of traditional communities including family and local community, and of unprecedented upsurge of individualism, the Institute focuses on diagnosing and analyzing the ground-changing transformation and tries to develop humanities discourses that have explanatory power as well as the capacity to entail ethical and political practice. Specifically, it imagines coming communities

in the age of the 4th industrial revolution, investigates possibilities of new family forms that embrace multi-cultural determinations, and tries to suggest specific family-community policies that the state can utilize to resolve various family-related social problems. It ultimately aims to propose family-community discourses in Humanities that will suggest a new way of thinking politics on the level of State and also on the level of everyday life.

The Institute, while enhancing collaborative research among multiple disciplines along with Research Institute for Human Ecology and the Big Data Center, mediates theory and practice to re-vitalize Humanities Studies. Its visions and mottos are:

- to accumulate and systematize inter-disciplinary and muti-disciplinary collaboration
- to explore agendas that are relevant to the current Korean society and develop discourses accordingly
- to nurture Humanities scholars and to disseminate research achievements
- to develop and implement Humanities programs for general public

#### 50. Research Center for Japanese Studies

Phone: +82-62-530-3288 URL: http://jjss.jnu.ac.kr/ The goal of the Research Center for Japanese Studies is to develop Japanese studies in Korea, to contribute to a greater understanding between Korea and Japan, and initiate cultural exchanges. It also strives to develop the local community at the same time by building a database of Japanese studies and conducting comprehensive and systematic studies on Japan in terms of language, culture, folklore, history, politics, economics, and society.

To achieve this goal, the Center plans to host domestic and international academic conferences, publish academic journals, collect research material, and perform an increasing amount of exchanges on this topic with domestic and foreign universities and academic institutes.

#### 51. Automobile Research Center

Phone: +82-62-530-1980 URL: http://motors.jnu.ac.kr

The Automobile Research Center(ARC) was established in 1995, fueling the research of advanced automobile technologies, building an automobile infrastructure, and promoting collaboration between industry and academia in automobile research. ARC is carrying out the following actions as of below

- Holding International Conference on Advanced Automotive Technology(ICAT)
- Promoting collaboration with industry, academia in automobile research, research institute and regional government
- Supporting technical items for automobile related industries
- Revitalizing research in automotive technology related to industry
- Development of policy issues for specialized automotive technology
- Publishing the Journal of Machinery & Automobile Research and technical information service

# 52. Information Technology Research Institute

Phone: +82-61-659-7444 URL: http://isrc.chonnam.ac.kr The Information Technology Research Institute was established to manage research projects in the fields of information technology and related comprehensive research toward qualitative improvement and development of information technology. The main objective of the Institute is to oversee organization and operation of research in information technology.

Among the Institute's major activities are:

- Data collection and analysis of information technology
- Research on applications of information technology, technology development, and education
- · Commissioning research on applied information technology and joint research of industry and academia
- Policy research for consulting information technology
- Lectures, presentations of research findings, academic seminars
- Publication of research reports and papers

#### 53. Information Technology Research Institute

Phone: +82-61-659-7432 URL: http://isrc.chonnam.ac.kr The Information Technology Research Institute was established to manage research projects in the fields of information technology and related comprehensive research toward qualitative improvement and development of information technology. The main objective of the Institute is to oversee organization and operation of research in information technology.

Institute's major activities

- Data collection and analysis of information technology
- Research on applications of information technology, technology development, and education
- Commissioning research on applied information technology and joint research of industry and academia
- Policy research for consulting information technology
- Lectures, presentations of research findings, academic seminars
- Publication of research reports and papers

#### 54. Institute for Religion and Culture

Phone: +82-62-530-3910 URL: http://www.rdialog.com/ The Institute for Religion and Culture conducts research and studies on primitive religions, historical religions, new-emerging religions, Asian and Western religions, and the cultural phenomena accompanying the rises and falls of these religions using research methods in the colleges of humanities and social studies. Through these activities, the Institute expects to contribute to the development of these fields of study, and increase the exchanges and understanding among people, religions, and cultures. To this end, the Institute publishes academic journals, and holds academic seminars and conferences on a regular basis. Through cooperation and exchanges with research centers at home and abroad, it pursues the evolution of studies of religion and culture.

#### 55. Center for Regional Development

Phone: +82-62-530-1428 URL: http://crd.chonnam.ac.kr/ The Center for Regional Development (CRD) was founded in May 1968 as a policy research institute and based at Chonnam National University in Gwangju. It has since played a leading role as a research center for regional development in Southwestern Korea. It focuses on solving general issues of the local region through research and analysis of the local economy, society, city planning, environment, and transportation.

Through comprehensive research and analysis of the current economy, society, city planning, environment, and transportation, the Institute strives to solve related issues through the suggestion of a regional development model.

It has published its research results in the form of reports, press releases, web-site access, bulletins, and a semi-annual research journal, Studies in Regional Development, generating a steady series of books and reports on special topics. In step with globalization, it hosts an international academic conference in cooperation with Fudan University in China, Saga University in Japan, and Kasetsart University in Thailand.

The institute is making greater efforts along with businesses and public organizations to nurture development in Gwangju and the Jeonnam region. It aims to become a central institute linking industry and academia in this region.

#### 56. Research Institute for Creativity Education

#### Phone: +82-62-530-3905 URL:

This research institute was established in 2019 to take a leading role in researching and spreading science creativity, fostering the competent truth-seekers in the field and serving the local community. The institute aims to actively respond to the diverse needs of the local community and the university by researching, developing, and implementing talent development programs based on the experience and expertise of the Science Education Institute for the Gifted.

- Development and research of creativity education/gifted education/science museum education programs
- Selection and education of students gifted in science
- Training and support in creativity education for professionals

#### 57. Center for Philosophical Studies

Phone: +82 - 62 - 530-3291 URL: http://sophia.jnu.ac.kr/ The Center for Philosophical Studies was established to conduct systematic, professional, and comprehensive studies on Asian and Western philosophies. It seeks to manage Humanities, Social Studies, and Natural Sciences exchange programs systematically, run research-supporting programs for future generations, and develop philosophy education programs for a wider audience.

By working for the popularization of philosophy and delivering philosophy education to the greater public, the Center aims to create a new culture based on the understanding of philosophy in the future. To this end, the Center performs the following activities: carrying out long and shortterm projects utilizing every condition given, and conducting research and education systems efficiently by adopting a team-oriented system.

The Center also focuses on maximizing the efficiency of the study of philosophy by conducting systematic, professional, and comprehensive studies of Asian and Western philosophical thoughts by recruiting as many talented research staff as possible. Through this, the Center will realize one of its long-term visions to transform itself into one of the most acclaimed philosophical research and educational institutes.

The Center has a will to strengthen and expand its educational functions by running post-doctoral support programs, developing philosophy education content and programs, offering open lectures, opening cultural courses on basic philosophical education, logics, and essay writing, and setting up philosophy camps for local residents. Through these activities, more professionals in this field of study are expected to be cultivated, and philosophy will approach the general public not as an academic subject but as a part of our everyday lives. By deepening its academic level of study and popularizing its areas at the same time, the Center is eager to contribute to the formation of future cultural trends.

#### 58. Research Institute for Catalysis

#### Phone: +82-62-530-1975

This Institute was established in December 1977 under the presidential decree 8841 as an affiliated research center to the College of Engineering. In December 1982, it changed its name to the Catalysis Research Institute under the presidential decree 11018. Since then, the Institute has studied general technologies related to catalysis.

This Institute has contributed to the development of industry and the promotion of knowledge by conducting research, hosting conferences, and by publishing journals. In 2007, this institute was chosen to carry out "Clean Energy Catalysis Development Project for Next Generation" and it is currently at the third stage of the project.

- Developing functional catalysis for clean energy
- Developing clean energy manufacturing process using photons
- Developing nano-based clean energy manufacturing process

# 59. Dental Science Research Institute

#### Phone: +82-62-530-4800 URL: http://dsri.chonnam.ac.kr

The Dental Science Research Institute was established in 1992, aiming to create leading, world-class research in dental sciences. The researchers of the institute are made up of professors of Chonnam National University Dental School and other personnel. They are actively conducting diverse research with funding from both the government and industry. It also contributes to the development of dental sciences by publishing a dental journal, providing continuing education programs, and holding academic meetings. Moreover, the institute awards prizes to outstanding researchers and supports its staff in many other positive, motivating ways.

#### 60. Institute of Environmentally-Friendly Agriculture

Phone: +82-62-530-0397 URL: http://iefa.jnuac.kr/ The Institute of Environmentally-Friendly Agriculture is a premier institute that develops environmentallyfriendly agro-materials which can be used as effective and safe crop protectants, and educate organic farmers to use the developed products and technology for sustainable food and agricultural systems.

The Institute was established in 2011 in response to requests by Jeollanamdo and Ministry of Agriculture, Food, and Fishery and supporters to provide science-based on information to Korea's existing organic farmers and to newcomers to organic agricultural production. The institute consists of Chonnam National University Professors and Scientists, Jennam farmers, and five agricultural companies which relate to develop and commercialize materials and technology of CNU scientists. This interdisciplinary team works together to develop research related to plant pest control by environmentally-friendly means, and the invented materials and technology are transferred to industrials and are used to train organic farmers and students. The ultimate goal of the institute is to enhance the vitality of organic agriculture using the developed cost and efficiency effective means and technology in Korea.

### 61. Institute of French Cultural & Regional Studies

Phone : +82 (062) 530-3123

The purpose of the institute is to promote multi-disciplinary and scholarly research and education about Francophone countries including France, their cultures, language, politics, economies, and society. The institute was founded by the necessity of research on French cultural and regional studies which can be a part of the sustainable growth engine of Korea in the 21st century.

The institute would like to play a major role in crossing forging links between France with Quebec, Belgium, Switzerland, and African francophone countries. To achieve this goal, we have the following major business plans.

Major projects of the institute include:

- Publication of journals
- Organizing and sponsoring academic conferences
- Published Francophone books
- Exchange with domestic and foreign institutes and organizations
- Development of a French Regional Studies education program
- Construction of a Digital archiving system

#### 62. The Institute of Student Independence Movement

Phone: +82-62-530-0610

The Institute of Students' Movement for Independence was established to contribute to the right reassessment of the independence movement and development of Korean society by studying domestic and oversea independence movements. The ISMI especially focuses on the active participation in social issues and independence movements led by students in East Asian countries under the rule of Japanese imperialism. In order to achieve the aim, ISMI is pursuing various academic projects including collecting historical materials and artifacts related to the topic.

The independence movement of the Korean public deserves better assessment since it has played a pivotal role in the independence movement that has taken place in East Asian countries. ISMI tries to overcome the narrow-minded view that concentrates only on Korean perspectives and recover the universal and international characteristics independence movements hold.

Furthermore, ISMI investigates the meaning of the Korean Independence movement, especially of the March 1st movement, June 10th movement, Gwangju Student independence movement of 1929, under world-historical perspective. Various lecture series, academic lectures, seminars and cooperative research with in/out state scholarly institutions are ongoing projects of ISMI as they are concentrated on the Korean independence movement, civil rights movements, and nation-wide movements throughout history.

Presently, ISMI utilizes its collective data in a scholarly database it has developed with comprehensive materials and information on student independence movements. It also holds cultural exchange programs and visiting programs to accelerate mutual understanding and solidarity among the youth in East Asian countries.

#### 63. Korea Cardiovascular Stent Research Institute

Phone: +82-61-392-6243 URL: http://koreastent.com/ Since its inception in April 2010, the Korea Cardiovascular Stent Research Institute has been making ceaseless efforts to be the best in the world, in the same vein as a heart that works ceaselessly. Cardiovascular disease is the leading cause of death in the world and the cardiovascular stent tops the list of imported medical devices in Korea.

In order to meet the growing demand, our institute has developed a novel coronary stent for the first

time in Korea, validated its safety and efficacy through a large number of bench and animal experiments, and published the related technologies in many domestic and international papers.

The Korea Cardiovascular Stent Research Institute will make its best endeavors to develop new technologies and product innovations and to contribute to the advancement of biotechnology by promoting domestic and international research networking as well as collaboration.

# 64. Korean Language and Literature Studies Institute

Phone: +82-62-530-3299 URL: http://eomun.jnuac.kr The Korean Language and Literature Studies Institute is composed of professors and researchers from the Department of Korean Language and Literature at in the College of Humanities and the Department of Korean Education at the College of Education. Through its extensive academic researches on both Korean language and literature, the institute aims to foster human resources required by the contemporary knowledge-based society, share and spread the research results, and ultimately contribute to the development of Korean language and literature. The institute also aims to contribute to the development of Korean language education by combining education and research activities to improve Korean language skills. The main activities are as follows:

- Operation of a comprehensive research program on Korean language and literature
- Support various academic research on Korean language and literature
- Research on Korean language and literature education and the operation of related programs
- Facilitate joint research and cooperative exchanges with other disciplines
- Operation of research support programs for the next generation in the discipline

In addition, the institute has continued to organize domestic and international academic conferences in cooperation with related academic societies and research institutes, plan and publish of research collections, including the publication of the Journal of EOMUNNONCHONG.

#### 65. Experimental Center for Coastal & Harbor Engineering (ECCHE)

Phone +82-61-659-6957 URL: https://www.koced.or.kr/facility/sub61

- 1. Purpose
  - Laboratory facilities equipped with the naiton's largest coastal harbor test centers
  - Marine renewable energy(offshore wind, wave power, tidal power, etc.): regarding the construction and design of facilities; also cooperation between academia and industry
  - International scale workshops, seminars and graduate students and researchers in the study of high-quality human resource straining tailored industry
  - International coastal harbor engineering

- Local industrial development and sustainable coastal environment
- 2. Research areas and features
  - 1) Coastal & harbor structures, develop a disaster mitigation and disaster response
    - New types of coastal & harbor structures
    - Stability of coastal & harbor structures
    - Establish disaster reduction technologies and measures derived measures, etc.
  - 2) Wave test
    - Spread of wave variants
    - Agitation within harbors
    - Wave structure interaction evaluation
    - Evaluation of hydraulic characteristics of harbor structures
    - Nearshore currents
  - 3) Sediment experiments
    - Beach modification
    - Establishment of coastal erosion measures
  - 4) Ocean energy
    - Tidal power
    - Wave power
    - Offshore wind farms
  - 5) Fisheries experimental facility test
    - Cultural stability testing and artificial reefs

## 66. Ocean Leisure Sports Research Center

Phone: +82-61-659-6912, 7550

The Center publishes journals and books related to ocean leisure sports; hosts academic conferences and seminars; conducts joint research with other organizations around the world; assesses feasibility for ocean leisure sports by analyzing the environment; and provides counsel to ocean leisure sports business.

The Center also develops human resources to work in corporations, governments, and the community as leaders and administrators through lectures and training sessions, promoting ocean leisure culture. The Center will continue to play the role of leader and advisor for government organizations in creating added-value, promotion, and policy-making.

Main Research Fields

- · Investigation and academic research about ocean leisure sports
- Specialized training and public relations about ocean leisure sports
- · Ocean leisure sports industry promotion and consulting activities about policy

• Marketing strategies and economic effect analysis of ocean leisure sports

#### 67. Research Institute of Ocean Civil Engineering Technology

#### Phone: +82-61-659-6916, Fax: +82-61-659-6917

The Research Institute of Ocean Civil Engineering Technology aims to advance engineering technologies regarding regional development, disaster prevention, and construction safety by conducting research and education projects on issues related to the ocean civil industry. Major activities of the Institute include (1) data collection and analysis for the leading technology in the construction industry, (2) conducting research and education projects for the construction technology, (3) providing technical consultation for the revitalization of the local and national construction industry, (4) hosting of lectures, presentation of research findings, seminars, and (5) publication of research reports and papers.

#### 68. Overseas Resource Development Research Center

Phone: +82-62-530-0720 Homepage: http://myweb.chonnam.ac.kr/~oversee/ Countries of the world have already entered the never-ending competition to secure natural resources. Natural resource exporting countries in South America, Southeast Asia, and Africa are raising their prices through resource nationalism while newly industrialized countries such as China and India are practically becoming black holes of resources. This leads to predictions that the competition among countries to win resources will become fiercer.

Korea depends on imports for 97% of its natural resources and cannot pull back anymore when it comes to securing natural resources.

With the current economic structure, which focuses on exporting manufactured products, price increases in materials are having a much greater impact on Korean than some other countries. This is why the development of overseas natural resources is important.

The center was established for the following reasons: to research and develop related technologies that enable Korea to compete with leading countries, to engage in resource exploring, and develop technology that can be commercialized through joint research with related companies.

Through these courses, the center also trains graduate students and those from the industry.

#### 69. Research Center for Healthcare Convergence Technology

Phone: +82-61-659-7360 Homepage: The Research Center for Healthcare and Biomedical Engineering at Chonnam National University has been established to promote the biomedical breakthrough and public healthcare enhancement through education, research, and collaboration with Industry and Academia. We are committed to integrating multidisciplinary technologies to develop innovative biomedical technologies and further ensure national technological competitiveness in extensive biomedical research. To accomplish this, the center currently consists of three major research divisions:

- Research division for Biomaterials: The division aims to provide solid research results for the delivery of high-quality medical care for animals and humans. Research interests include biocompatible materials, health-related functional food, natural cosmetics, natural antibiotics, and intelligent drug delivery systems.

- Research division for digital healthcare-wellness: The division aims to develop cutting-edge medical/health care systems for ultimately providing a better quality of life. Research interests include Big data analytics, Data-driven medicine, Mobile healthcare, Population health management, and Smart hospitals for future personalized medicine by creating, managing, and analyzing various vital data of life information.

- Research division for medical equipment: The division aims to develop innovative diagnostic and therapeutic technologies for early diagnosis, real-time monitoring, and target-therapy in various incurable diseases in a personalized Medicare system. Research interests include in-vivo and in-vitro medical equipment, morphological/functional/molecular imaging modalities, wearable medical devices, and point-of-care systems.

# 70. Honam Buddhism Culture Research Center

Phone: +82-62-530-3235 URL: https://www.kbpf.org/134938/134938/ The Honam Buddhism Culture Research Center was established to enable experts to conduct research and share their results with the general public.

The following are the projects being conducted by the center:

- Discovering and Organizing Buddhist Cultural Assets
- Research on Buddhism
- Lectures on Buddhism for the general public
- Holding of conferences

#### 71. Institute of Honam Studies

Phone: +82-62-530-2710 Homepage: http://www.homun.or.kr

Institute of Honam Studies was formed as a result of the merger of the former Honam Culture Research Center and the Honam Studies Research Group. The former was established in 1963 to study traditional Korean culture from a local point of view and the latter was established in 2005 for the purpose of searching for abundant history and culture of the Jeolla region. The merger has allowed for a transformation of cultural content that successfully utilizes both centers.

Academically, the research institute has worked to uncover the issues on Korean culture that are worth discussing in an academic way. In a practical way, it developed Korean culture to become content that can be communicated to the international population. By doing so, Institute of Honam Studies has become a comprehensive research center, positioning itself as one of the main humanities research institutes at Chonnam National University.

Along with research, the center is active in publishing its work, which includes more than 60 editions of The Journal of Honam Studies Series.

The Journal of Honam Studies, an academic magazine, is published biannually. The magazine was selected as a candidate to be registered in the Korea Research Foundation's list in 2006.

The center's current research on the sensibility of Honam, and in a wider perspective, of Korea under the name of Establishment of Korean Sensibility as an International Communication Code was selected by the National Research Foundation's Humanity Korea Support Project 2008.

The following are the research and academic activities of the center:

- Research of traditional Korean culture focusing on the Honam Area
- Research of arts and culture policies and comparative culture
- Data gathering
- Publishing of research papers and series
- Holding announcements on research and conferences
- Concentrating research capacity
- Fortifying the ability to publish research results
- Increasing educational activities on Korean studies and spreading Honam culture
- Uploading gathered data into a digitized database (creation of a center homepage and installation of a Honam Area Studies morgue)
- Conducting research supported by the National Research Foundation's Humanities Korea Project

#### 72. May 18 Institute

Phone: +82-62-530-3916 URL: http://cnu518.jnu.ac.kr/

In order to further explore the consequences and significance of the 5.18 Democratic Movement and to contribute to the evolution of democracy and the general improvement of human rights in Korea, the May 18<sup>th</sup>Institute has continued to carry out the following activities since its establishment on December 10<sup>th</sup> 1996:

- The research of material and documents related to the 5.18 Movement
- Publishing and advertising research results, as well as presenting them to the public
- Offering information on the 5.18 Movement to foreign countries as well as to the general public in Korea
- The study and application of ideologies on democracy, human rights, and peace

Every May, the Institute hosts large-scale domestic and overseas academic conferences, publishes research & thesis collections, creates an anthology, and produces brochures on the 5.18 Movement in Gwangju. To support these activities, the Institute strives to emphasize democratic values. The Institute's journal, *Democracy and Human Rights*, issued quarterly, has been designated as one of the Korea Research Foundation's Registration Journals, giving it the status of a nationally acclaimed periodical. In the future,

the Institute will operate various educational programs on democracy and human rights, and establish a database of materials pertaining to the 5.18 Movement. It seeks ways to become a democratic human rights and peace center in Asia through vigorous exchanges and cooperation with research institutes both at home and abroad.

# 73. Alan MacDiarmid Energy Research Laboratory

Phone: +82-62-530-1962 URL: http://ameri.chonnam.ac.kr The Alan MacDiarmid Energy Research Laboratory conducts research in the areas of materials & process research for clean, efficient energy devices, and renewable agrienergy. This international cooperative research center was established in Korea to promote exchange in human resources and to contribute to the development of related technologies and the improvement of the university, local community, and the country.

The central government supports the laboratory through its Global Research Laboratory which is a project to attract foreign research facilities to Korea.



# **VII. Graduate Schools**



# Nursing

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# Graduate Studies in Nursing

The goals of the graduate program in Nursing are:

- 1. To empower students to conduct nursing research for the purpose of generating and testing nursing knowledge.
- 2. To acquire professional nursing knowledge and skills, and to develop problem-solving competency in practice.
- 3. To demonstrate leadership roles appropriate for nursing and the healthcare system in general.
- 4. To prepare for expanding nursing roles contributing to the health of human beings.

# Degree Requirements

Master's degree candidates must complete 3 core courses (9 credits) and five electives (15 credits). To be awarded the degree, all students must pass a comprehensive exam and a foreign language test prior to submitting a thesis.

Students must deliver a presentation, successfully complete a defense, and provide all required documents to the thesis committee.

Ph.D. candidates must complete 6 core courses (18 credits) and 6 electives (18 credits). To be awarded awarded the degree, all students must pass a comprehensive exam and a foreign language test before submitting a thesis.

Students must deliver a presentation, successfully complete a defense, and provide all required documents to the thesis committee.

# What Do You Study?

# **Core Courses**

Master's Program Nursing Theory (3) Nursing Research (3) Health Statistics (3) Ph.D. Program Nursing Science (3) Nursing Theory Development (3) Quantitative Research 1 (3) Qualitative Research in Nursing (3) Quantitative Research 2 (3) Nursing Research Seminar (3)

#### **Elective Courses**

Family Nursing and Family Therapy (3) Concept development in Nursing (3) Analysis of Nursing Outcome (3) Counceling in Nursing (3) Seminar for nursing simulation (3) Analysis for nursing research (3) Nursing Profession (3) Organizational Management in Nursing (3) Development of Nursing Interventions (3) Philosophy of Nursing science (3) Management of Infectious Disease (3) Health Promotion (3) Methodology and Application in Evidence-based Nursing (3) Seminar for Older People's Health Problem (3) Chronic Illness Nursing and Practice (3) Problem Based Learning (3) Health Program Development and Evaluation (3) Advanced Health Assessment (3) Bioethics and Nursing Issue (3)

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Seminars in Stress & Symptom Management (3) Faculty Development (3) Theory of human behavior (3) Clinical Physiology (3) Process of Decision Making in Clinical Nursing (3) Rehabilitation Nursing Seminar (3) Advanced Nursing Administration and Practice (3) Advanced Adult Nursing and Practice (3) Advanced Child Health Nursing and Practice (3) Advanced Women's Health Nursing and Practice (3)Advanced Community Health Nursing and Practice (3) Advanced Community Mental Health Nursing and Practice (3) Qualitative Research in Nursing (3) Health related theory (3) Advanced Health Statistics (3) Nursing Policy (3) Scale development and psychometric evaluation (3)

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# Laboratories

- Center for Supporting Field-Specific Technology
- Center for Evidence-Based Nursing Education & Research
- Center for Simulation
- Center for Mental Health Promotion
- Center for Multicultural Family Health Promotion

Department of Business Administration

Contact Information Phone: +82-62-530-1451 Fax: +82-62-530-1449 URL: http://cba.chonnam.ac.ki

# Graduate Studies in Business Administration

The goal of the Business Administration Graduate Studies Program is to train students to be business professionals with both leadership and managerial capabilities. We provide advanced theories and techniques of management applicable to all management environments. Consequently, we not only teach students the general theories and techniques of management but also endeavor to cultivate the skills needed to solve crucial practical problems in business. The topics covered include Human Resource Management and Organizational Behavior, Marketing, Financial Management, Production and Operations Management, and Management Information Systems.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.
Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to publish an article in a journal listed in National Research Foundation of Korea as a first author, also have to present a related paper at an Academic conference, pass a comprehensive exam and a foreign language exam as well as submit a thesis.

# What Do You Study?

Advanced Industrial Relations (3)	E-Business Project (3)
Advanced Statistics (3)	E-Business Research Methodology (3)
Advanced Study on Regional Corporate Strategies (3)	E-Business Strategy (3)
Advanced Study on Strategic Management (3)	Empirical Research in Corporate Finance (3)
Advertising Promotion (3)	Empirical Research in Financial Institutions (3)
Asset Pricing Theory (3)	Empirical Research in Investments (3)
Business Innovation and Change Management (3)	Environmental Management : Theory and Practice (3)
Channel Management (3)	Environment · Climatic Change and business
Consumer Behavior (3)	Management (3)
Consumer Behavior Seminar (3)	Financial Econometrics (3)
Customer Relationship Management (3)	Fixed income Securities (3)
Decision Science (3)	Global Operations Management (3)
Derivatives (3)	Human Resources Development (3)
E-Business Management (3)	Human Resources Management (3)

Information Policy and Evaluation (3) Information Technology and Management Innovation (3) Information Technology Management (3) Intelligence Information Systems (3) Intermediate Business Statistics (3) Internet Marketing (3) Leadership and Motivation Theory (3) Management Information System (3) Management Innovation Case Study (3) Management of Financial Institutions (3) Management of Technology (3) Management Theories on Corporate Social Responsibility (3) Manufacturing Strategy (3) Marketing Research (3) Marketing Seminar (3) Marketing Strategy and Planning (3) Marketing Theory (3) Merchandise planning and brand management (3) Multimedia Applications Study (3) Operations Management: Special Topics (3) Optimization Theory (3) Organizational Behavior and Theory (3) Organization Change and Development (3) Organization Theory (3) Organizations and Interpersonal Relationships (3) Pricing Management (3) Production Innovation Theories and Practices (3) Production planning and control (3) Research Methods in Business Administration (3) Research Methods in Organizational Behavior (3) Retailing Management (3) Seminar of Management Information System (3) Seminar in Organization Theory (3) Seminar I in Organizational Behavior (3) Seminar II in Organizational Behavior (3) Service Marketing (3) Service Operations Management (3) Service Science (3) Simulation and Application (3) Societal Marketing (3) Solution Applications and Programming (3) Special Topics in Corporate Finance (3) Special Topics in Human Resources? Management (3) Special Topics in Industrial Relation (3) Strategic Quality Management (3) Structured Finance and Securitization (3) Studies in Investments (3) Studies in Organizational Culture (3) Supply Chain Management (3) System Development Methodology (3) Technology and Innovation Study (3) Theoretic Approach to the Theory of Corporate Finance (3) Theory of Corporate Finance (3)

# Professors

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Department of Economics Contact Information Phone: +82-62-530-1540 Fax: +82-62-530-1559 E-mail: eco@jnu.ac.kr URL: http://eco.jnu.ac.kr

# Graduate Studies in Economics

The Major of Economics places great value on practical applications of economic theories and strives to provide market economy-oriented education. The instructional focus is on cultivating the students' problem-solving skills in an effort to better prepare them for the 21st century. In the Economics major track, courses are offered to develop the students' ability to understand and analyze a wide variety of economic phenomena.

### Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.
Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

# What Do You Study?

Game Theory (3) Economic Development (3) Economic History (3) Economic Philosophy (3) Mathematics for Economists (3) History of Economic Thoughts (3) Econometrics (3) Advanced Microeconomic (3) International Finance (3) Labor Economics (3) Industrial Organization (3) Mathematical Economics (3) Regional Economy Analysis (3) Macroeconomy Analysis (3) International Economy Analysis (3) Microeconomy Analysis (3) Advanced Macroeconomics (3) Seminar on Political Economy (3)

Seminar on Industrial Organization (3) International Trade (3) Seminar on International Economics (3) Financial Economics (3) Seminar on Monetary Theory (3) Analysis of Industrial Relations (3) Seminar on Labor Economics (3) Seminar on Public Economics (3) Law and Economics (3) Seminar on History of Economic Thoughts (3) Political Economy (3) International Political Economy (3) Monetary Theory (3) Public Economics (3) Economics Seminar (3) Special Lectures on Economics (3) Public Economy Analysis (3) Statistical Method for Economic Analysis (3)

Information, Risk, and Uncertainty (3) Energy and Resource Economics (3) Environmental Economics (3) Microeconomics Seminar (3) Macroeconomics Seminar (3) Industrial Economy Analysis (3) Economics Research (3)

# Professors

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- Hyun-Ho Kim, Ph.D.
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Economics of Taxation (3) Financial Economy Analysis (3) Seminar on Resource and Environment (3) Advanced Econometrics (3) Seminar on Economic History and Development (3)

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- Woo-Young Jeon, Ph.D. [Assistant Professor, Energy Economics, wyjeon@jnu.ac.kr]
- Kee-Hwa Chung, Ph.D.
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- Yoon-Seok Choi, Ph.D.
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# Graduate Studies in Regional Development

The Department of Regional Development aims to provide students with knowledge and skills in the field necessary to cope with trends in globalization, localization, and information technology.

Graduate programs in Regional Development aim to help students gain an understanding of economic theories and their implications on urban planning, regional development, and the environment. The programs guide students' understanding of modern

methods of urban planning that will reduce the gap among different cities and regions, producing regional development experts with thorough theoretical and practical knowledge.

The graduate programs equip students with research ability and teaching skills in the field. The subjects taught in the program comprise theory and methodology, which provide the basic tools necessary in solving the problems in the field of Urban and Regional Development.

## Degree Requirements

- Master's course: Master's degree candidates must earn a minimum of 24 credits.
- Doctoral course: Ph.D. candidates must earn a minimum of 36 credits.
- Students are required to pass both the qualifying examination and the foreign language examination.

# What Do You Study?

Advanced Macroeconomics	Advanced Transportation Economics
Advanced Public Economics	Advanced Theory of Economic Development
Advanced Study on Transportation Policy	Advanced Theory of Economic Integration
Seminar On Rural Development Planning	Seminars in Industrial Locations
Studies on City Management	Advanced Study on Real Estate
Urban Planning Process	Advanced Study on Economic Geography
Advanced Study on Urban Planning Theory	Small and Medium Sized City Development
Urban Transportation Planning	Advanced Urban Development Policy
Advanced Housing Economics	Advanced Study on Planning Laws
Advanced Regional Development Policy	Advanced Histroy of Urban Planning
Advanced Regional Economic Analysis	Advanced Urban Economics
Advanced Land Economics	Advanced Local Public Finance
Advanced Urban Land Use Planning	Special Topics in Urban Economics
Advanced Environmental Planning	Special Topics in Regional Economics
Advanced Planning Theory	Methodology in Statistical Survey

Project Evaluation Theory Research on Urban History Advanced Urban Development **Planning Statistics** Advanced Logistics Management and Policy Advanced Public Investment and Policy Advanced Studies on the Environmental Policy Geographic Information System Advanced Urban Econometrics Regional Logistics Management Advanced Urban Management Case Studies on International Development A Study on Real Estate Econometrics Advanced Study on Urban & Regional Regeneration Theory of city and reginoal tourism Advanced Community Business

A Study on Spatial Econometrics Analysis Real Estate Appraisal Social Overhead Capital Theory Advanced Regional Development Theory Advanced National and Regional Planning Theory City and Regional Information Theory Advanced Regional Community Development Theory Seminar in Regional Economic policies A Study on Real Estate Development Advanced Social Economy Social Economy

# Professors

- Ju-Mong Na, Ph.D.
   [Professor, Urban and Regional Economics, najumong@jnu.ac.kr]
- Woo-Jin Shin, Ph.D.
   [Associate Professor, Urban Economics & Real Estate, sayurban@jnu.ac.kr]

 Bong-Hyun Jeong, Ph.D.
 [Professor, Transportation Economics Policy and Logistic Planning, bhjeong@jnu.ac.kr]

• Dong-Woo Hyun, Ph.D. [Assistance Professor, Urban Economics & Real Estate, d.hyun@jnu.ac.kr] Department of Accounting Contact Information Phone: +82-62-530-1470 Fax: +82-62-530-1489 E-mail: sijeon@jnu.ac.kr URL: http://cba.jnu.ac.kr

# Graduate Studies in Accounting

The most common aspiration of a graduate in accounting is to pursue a career as a university educator and researcher in the field. Accounting educators teach and conduct research across a wide variety of specializations, including financial reporting, management accounting, auditing, taxation, and accounting information systems.

### Degree Requirements

- At least 24 course units of graduate level credit in Accounting courses are required for the master's degree, and further 60 course units for doctor's degree (including units completed in master course).
- 2) Students have to pass qualifying examination and the foreign language examination.
- 3) Students must fulfill presentation, defense, and document requirements in the department thesis committee.
- 4) A thesis advisor can be any faculty member from the department.

# What Do You Study?

Intermediate Business Statistics (3) Research for the Master's or Doctoral Degree (I) Advanced Business Statistics (3) Research for the Master's or Doctoral Degree (I) Financial Accounting Seminar (3) Managerial Accounting Seminar (3) Market-based Accounting Research Seminar (3) Income Determination and Asset Valuation Seminar (3) Information Economics Seminar in Accounting (3) Behavioral Research Seminar in Accounting (3) Advanced Financial Accounting (3) Financial Statements Analysis & Investment Theory (3) Advanced Management Accounting (3) Advanced Tax Accounting (3) Tax Accounting Seminar (3) Advanced Accounting Information System (3) Research Methodology in Accounting (3) Auditing Seminar (3) Special Topics in Accounting (3) Study of Advanced Financial Accounting (3) Study of Advanced Auditing (3) Study of Advanced Managerial Accounting (3) Experimental Research in Accounting (3) Research Methodology in Tax Accounting (3) Study of Tax Compliance (3) Study of Tax Planning & Management (3) Study of Advanced Accounting Information System (3) Study of Accounting Disclosur Systemse (3) Accounting Research Methodology (3) Accounting Trend (3)

# Professors

- Seon-Mi Kim, Ph.D. [Assistant Professor, Accounting, smkim09@jnu.ac.kr]
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- Sung-Il Jeon, Ph.D.
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- Yong-Ki Jung, Ph.D. [Professor, Accounting Information Systems, ykchung@jnu.ac.kr]
- In-Seon Jo, Ph.D.
- [Professor, Tax Accounting, isjo@jnu.ac.kr]
  Ung-Yong Choi, Ph.D.
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# Graduate Studies in Department of Advanced Chemicals & Engineering

Advanced Chemicals & Engineering serves as the core foundation for information, electronic, communication, aerospace, energy, environment, and healthcare technologies that drive 21st century industries. The Department of Advanced Chemicals & Engineering consists of four specific research tracks: advanced material for photonic application, functional material for energy application, material for information and electronic technology, and nanostructured material. Principal researchers and faculty members carry out state-of-the-art research and education in their respective fields. Faculty members also encourage students to develop and apply their own creative design and chemical preparation ideas.

# Degree Requirements

### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree as well as pass one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

### What Do You Study?

Seminar on Research Topics I Seminar on Research Topics II Research for Master's or Doctoral Degree Special Topic on Fine Chemicals Advanced Biopolymer Polymeric Nanofabrication Advanced Polymer Physics Polymer Alloys Advanced thermal analysis of polymers Advanced Course Of Polymer Chemistry Advanced Industrial Organic Chemistry Advanced Photo-Electronics **Opto-Electronics** Advanced Photocatalyst Advanced Course of Instrumental Analysis **Functional Polymers** Functional Polymer Materials Functional Organic Molecular Design Technical Informations and Patent Strategies Nano-Structured Media Advanced Nano Science Advanced Nono Biotechnology Nano Materials Chemistry Nanocarbon Engineering **Display** Engineering Advanced Inorganic Material Chemistry Advanced Course Of Inorganic Chemistry Advanced Biophotonics Thin Film Fabrication Process Thin Film Coating & Modification Process Semiconductor Materials and Processing Reaction Equipemnt Engineering Advanced Colloid Thin Film Materials Advanced Bioprocess Engineering Advanced Bioseparation & Purification Advanced Bioanalysis Advanced Biochemical Engineering Advanced Biomaterials **Biochemical Sensors** Advanced Biochemistry Hydrogen Energy New and Regenerable Energy Process Special Topic on Fine Chemicals Advanced Drug Delivery Energy Materials Engineering Advanced Instrumental Analysis for Energy Materials Environment and Energy Energy Policy Development Research Guidance 1 Research Guidance 2

### Professors

• Do-Heyoung Kim, Ph.D.

Research Guidance 3 Fuel Cell Technology Organometallic Chemistry Advanced Organic Reactions Spectroscopic Identification of Organic Molecules Organic Electronic Materials Advanced Organic Synthesis Advanced Organic Chemistry Imaging Materials Low Temperature Plasma Process Fibrous Electrode Advanced Electrochemistry Organic Conductive Materials Advanced Electronic Materials Advanced Battery Materials Management and Valuation of Intellectual Properties Method of Intellectual Property based Research and Development Coordination Chemistry Supramolecular Chemistry Advanced Catalysis Design Chemistry Advanced Catalytic Chemistry Materials for Solar Cell Advanced Photonic Crystals Surface Science Process System Engineering Numerical Analysis for Chemical Process Chemical Process Optimization Advanced Chemical Equilibrium Adsorption Processes Analysis Seminar on Engineering for Research & Industrial Application Global Field Practice Design of Experiments Industry Field Placement 1 Industry Field Placement 2 Capstone Design

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- Hyung-Jin Kim, Ph.D.
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- Yun-Sung Lee, Ph.D. [Associate Professor, Lithium Secondary Battery, leeys@jnu.ac.kr]
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- Hyun-Yong Lee, Ph.D.

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- Dong-Lyun Cho, Ph.D. [Professor, Low Temperature Plasma Process, dlcho@jnu.ac.kr]
- Sung-June Cho, Ph.D.
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- Yong-Il Park, Ph.D.
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- Young-Si Jun, Ph.D.

# Laboratories

- Chemical Process Laboratory for Advanced Materials
- Catalytic Chemistry Lab
- Polymer Oriented Leading Study Lab
- Organic Synthesis and Molecular Engineering Lab
- Synthesis Organic Chemistry Lab
- Adsorption and Separation Lab
- Functional Polymers Lab
- Reaction Engineering Lab
- Biopolymer Lab
- Polymer Functional Devices Lab
- Organic Electronic Materials Lab
- Energy Conversion and Storage Lab
- Biochemical Engineering Lab
- Photonic Materials and Devices Lab

[Assistant Professor, Photocatalysis, Polymer semiconductors ysjun@jnu.ac.kr]

- Process Systems Lab
- Interface Engineering Lab
- Clean Energy Technology Lab
- Nano-Materials Lab
- Opto-electron Research Lab
- Inorganic Materials Chemistry Lab
- Electrochemical Energy Materials Lab
- Nano Photonic Devices Lab
- Nano Carbon Convergence Materials Lab
- Polymer Energy Materials Lab
- Chemical Process Safety System Lab
- Functional Nanomaterials Lab
- Separation and Energy Conversion/Storage Process Lab

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# Graduate Studies in Architectural Engineering

Architectural Engineering is a comprehensive science which is combined with natural science, social science, engineering, and art to create spaces for human living. There are four major areas in the Department of Architectural Engineering: architectural and urban design, architectural structure, architectural environment, and architectural construction. The graduate program is committed to training researchers and engineers with advanced knowledge in the architectural profession.

# Degree Requirements

## Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields. In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree as well as pass one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

## What Do You Study?

Advanced Value Engineering	Principles of Building Facilities
Construction Network Scheduling ( I )	Plastic Analysis of Structure
Theory of Architectural Planning	Principles and Applications of Architectural
Methodology in Architectural Planning	Acoustics
Theory of Architectural Space	Theory of Elasticity
Advanced Building Foundation Analysis and Design	Theory of Architectural Form
Theory of Architecture	Advanced Course in Building Science
Research Methodology for Architectural History	Evaluation Theory of Architectural Planning

Advanced Site Planning Theory of Urban Structure Theory of Urban Design Theory of Urban Renewal Advanced Theory of History of Orient Architecture Matrix Analysis of Structure Principles of Noise Control Advanced Decision Analysis Advanced Theory of Housing Structural Design Of R.C.S. Building Theory of Elastic Stability Theory of Plates and Diaphragms Advanced Theory in History of Korean Architecture Advanced Theory of Modern Architecture Fundamentals of Acoustics and Noise Control Computer Applications for Field Construction Projects Architectural Aesthetics Architectural Criticism Ecological Architecture Plasticity in Concrete Structural Control A Higher Rising Building Structure Design Theory of Buddhist Architecture Seismic Engineering Finite Element Analysis Structural Optimization Structure Dynamics Advanced Construction Production Engineering Advanced Construction Management & Engineering Studies in Construction Material Engineering Studies in High-class Construction Material

The Planning of Ecological Life House The Planning of Regeneration Technology of Wooden Buildings Environmental Friendly Architectural Theory of Wood Structure Architecture Reliability Engineering Advanced Construction Risk Management Advanced Construction Productivity Management Research Guidance 1 Research Guidance 2 Research Guidance 3 Smart Concrete Integrated Architectural Design Theory in Digital Architecture Building Information Modeling Urban Research Methodology Architectural Design Studio 1 Architectural Design Studio 2 Urban Design Studio 1 Urban Design Studio 2 Advanced Safety management Engineering Housing Design Theory Architectural Design Theory Special Topics in Architectural space and Practice Theories of Urban Cultural Landscape Urban Cultural Landscape Design Workshop Special Topics in Architecture, Cultural Regeneration Special Topics in History of Western Architecture Integrative Design Studio Smart City and Building

# Professors

### Architecture & Urban Design Major

 Se-Gyu Oh, Ph.D.
 [Professor, Architectural and Housing Design, Sustainable Green Housing Design, Architectural Design and Renovation, Urban Renewal Design, oskar@jnu.ac.kr] Hyo-Won Lee, Ph.D.
[Professor, Architectural Design, Design Theory, Planning and Research of Facility for the Aged, Louis I. Kahn, leehw@jnu.ac.kr]

- Uoo-Sang Yoo, Ph.D.
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- Seung-Hoon Han, Ph.D.
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- Min-Seok Lee, Dr.-Ing [Professor, Urban Design Planning, leeminseok@jnu.ac.kr]
- Yunnam Jeong, Ph.D.
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# Architectural Engineering Major

 Jin-Gyu Song, Ph.D.
 [Professor, Reinforced Concrete, Performance Evaluation, Loess Reinforced Concrete, jgsong@jnu.ac.kr]

# Laboratories

- Architectural History & Design Lab
- Architecture & Housing Design Lab
- The Architecture Design Theory Lab
- Architectural Design and Evaluation Lab
- Sustainable Architecture Design Studio
- Urban Design Planning Lab
- Urban Architecture and Regeneration Lab

- Jae-Seung Hwang, Ph.D.
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- Seong-Seok Go, Ph.D.
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- Bang Yeon Lee, Ph.D.
   [Professor, Advanced Building Materials, bylee@jnu.ac.kr]
- Jong Kwan Ryu, Ph.D.
   [Associate Professor, Architectural Environment & Acoustics, jkryu@jnu.ac.kr]
- Kanghyeok Yang, Ph.D. [Assistant Professor, Construction Informatics, kyang@jnu.ac.kr]
- Construction Management & Technology Lab
- Concrete Structural System Lab
- Control of Vibration Lab
- Advanced Building Materials Lab
- Architectural Environment & Acoustics
- Construction Informatics Lab

# Chemical Engineering

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# Graduate Studies in Chemical Engineering

The Chemical Engineering Graduate Studies Department offers advanced degree programs to prepare its students for research and technical careers in industry, academia, and government. The program strikes a balance between the science of chemical engineering and its implementation, by synthesizing a blend that bases itself upon the fundamentals of the discipline whilst encouraging students to develop the skills to apply these fundamentals to significant engineering problems.

# Degree Requirements

### Master's Program

The graduate program aims at the instruction of the highest level of academic theory and developing capabilities to perform original research work. Applicants for the master's program should have achieved a good standard in an undergraduate degree course in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Assessment of M.S. students includes a combination of at least 24 credit hours coursework and a thesis based on the research project. These requirements should be fulfilled between two and three years of enrollment.

### Ph.D. Program

Students who pursue a Doctor of Philosophy degree undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields. The dissertation is examined by at least five committee members. In addition, students are required to take at least 60 credits in coursework including the master's degree, and must pass one foreign language test. Degrees are conferred to those who fulfill the requirements between two and five years of enrollment.

### What Do You Study?

### **Common Course**

Chemical Engineering Seminar Research Guidance 1 Research Guidance 2 Research Guidance 3

### Separation Process & Thermodynamics

Transport Phenomena Advanced Chemical Engineering Thermodynamics Mass Transfer Membrane Separation Advanced Heat Transfer of Chemical Engineering Statistical Thermodynamics Advanced Separation Process Advanced Chemical Engineering Fluid Mechanics Electrochemistry Molecular Thermodynamics Thermodynamics of Phase Equilibria Advanced Particulate Technology

### **Catalytic & Reaction Engineering**

Advanced Chemical Reaction Engineering Catalytic Reaction Engineering Reaction Kinetics Catalyst Design Polymer Science C-1 Chemistry Acid-Base Catalytic Surface Science Functional Polymer Materials Special Topics in Chemical Engineering I Special Topics in Chemical Engineering II Advanced Chemical Process Design Chemistry in Organic Resources Organic Reaction Mechanism Selected Topics in Material Patents

## **Energy & Environment**

Advanced Energy Engineering Advanced Air Pollution Control Engineering Advanced Solid Waste Treatment Engineering Advanced Clean Technology Advanced Chemical Safety Engineering

# Professors

- Sung-Ju Kang [Professor, Chemical Engineering, sjkang@jnu.ac.kr]
- Choon-Hyoung Kang [Professor, Chemical Engineering, chkang@jnu.ac.kr]
- Young-Dae Kim [Professor, Chemical Engineering, youngdae@jnu.ac.kr]
- Young-Chul Kim

Laboratories

Coal Conversion Technology Basic Nuclear Engineering Petroleum Refinery Engineering New Energy Technology Energy Recycling Technology Energy Environmental Engineering Heat Economic Engineering Advanced Combustion Engineering Water Pollution Control Engineering Advanced Biochemical Engineering Advanced Biochemical Separation Process Advanced Biopolymer

### **Process Systems**

Advanced Process Control Advanced Process Analysis Advanced Unit Process Computer Aided Control System Design Advanced Modeling and Simulation Advanced Modeling and Simulation Advanced Chemical Process Optimization Advanced Chemical Process Optimization Advanced Chemical Engineering Design Advanced Chemical Engineering Mathematics Experimental Design in Chemical Engineering Advanced Numerical Analysis in Chemical Engineering

[Professor, Catalytic Engineering, Industrial Property Rights, youngck@jnu.ac.kr]

- Nam-Cook Park [Professor, Catalytic Engineering ncpark@jnu.ac.kr]
- Jae-Soon Shin Ph.D.
   [Professor, Chemical Reaction Engineering jsshin@jnu.ac.kr]

### **Process Modeling Simulation Laboratory**

Examines process systems through control algorithms and process simulation using Wavelet Transform to analyze the characteristics of voice signals and undertakes research that improves efficiency through manufacturing of encoding and compression.

### Intelligence Polymer & Biosensor Laboratory

Analysis of the planning and composition of intellectual polymers, alongside the development and application of biosensors.

### **Environmental Catalyst Laboratory 1**

The research of environmental problems is undertaken here. We have developed a degradative reaction of ammonia, a liquid reaction of ammonia and a liquid reaction of phenol by using metal oxide catalysts. Furthermore, we study environmental catalyst application through the creation and characteristic analysis of nano-catalysts. We use the GC 3, TPD/TPR. Auto-clave, and Xe lamp.

### **Environmental Catalyst Laboratory 2**

In this laboratory we use several catalysts to undertake research that investigates environmental pollutants and research that investigates waste. In our laboratory, we are trying to investigate how we can manufacture and develop a catalyst alongside nano rescue to have a perovskite structure that can be used cheaply in a natural gas car. There is GC and FT-IR with experiment equipment that is possessed in this laboratory, produced worthy scholar 7 persons.

### **Catalyst Oxidation Reaction Lab**

Oxidative reaction of catalysts and degradation of polymers have been studied by a variety of catalysts. In this laboratory we study partial oxidative reactions of ethylene and propylene using Ag-Nano catalysts and Naphtha cracking. We have the GC 2, GPC, HPLC, and GC-Mass.

### Physical Properties & Equi. Lab

This laboratory carries out experiments on separation and purification, phase equilibrium of mixtures, application of polymers and separation using supercritical fluid extraction.

Our lab possesses GC (Gas Chromatography), GPC (Gel Permeation Chromatography), and UV (Ultra-Violet spectroscopy).

# Civil Engineering

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# Graduate Studies in the Department of Civil Engineering

The Civil Engineering department focuses on developing future leaders for the engineering profession, for academia, and for applying engineering methods in the broader application. The department conducts cutting-edge research, defining what constitutes the evolving domain of civil engineering. This research develops theory and understanding as well as tools and techniques for professional practice and for solving engineering problems. The department exhibits great service, both through the actions of its members and contributing expertise where needed. The research and graduate study programs within the civil engineering department are organized by the different disciplines: Transportation Engineering; Water Resources; Hydrology; Geotechnical Engineering; Structural Engineering and Structural Mechanics and Land Surveying.

### Degree Requirements

### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum of 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation is examined by at least 5 committee members and should make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree as well as passing one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

# What Do You Study?

### **General Courses**

Advanced Applied Mathematics Material Science Numerical Analysis Research for Master's or Doctoral Degree

### **Planning Major Courses**

Advanced Urban Planning Advanced Transportation Engineering Advanced System Engineering for Civil Engineering Advanced Pavement Engineering Instrumentation & Measurement for Civil Engineering Advanced Regional Planning Land Use Planning National Planning Theory of Surveying Error Advanced Geodesy Advanced Photogrammetry Advanced Remote Sensing

### Hydraulics, Environment Major Courses

Advanced Fluid Mechanics Advanced Hydraulics Analysis of Water Distribution Systems Dimensional Analysis Applied Hydrology Applied Ground Water Hydraulics Water Resource Engineering Hydrological Modeling Theory of Sedimentation Coastal Engineering River Morphology Advanced Water Treatment Engineering Environmental Chemistry Treatment and Management of Waste Water Management of Environmental Pollution Advanced System Engineering of Water Treatment Solid Waste Management

# Professors

- Woo Kim, Ph.D.
   [Professor, Structural Engineering, wkim@jnu.ac.kr]
- Tae-Jun Ha, Ph.D.
   [Professor, Highway and Traffic Engineering, tjha@jnu.ac.kr]
- Kyoung-Hoon Rhee, Ph.D. [Professor, Water Resources,

Planning of Usable Water Design and Construction of Water Supply and Sewage

### **Structure Major Courses**

Advanced Structural Analysis Theory of Elasticity Theory of Plasticity Theory of Plates and Shells Continuum Mechanics Structural Dynamics Theory of Structural Stability Fracture Mechanics Matrix Structural Analysis Finite Element Method Advanced Steel Structures Advanced Reinforced Concrete Structures Geotechnical Engineering Major Courses Advanced Soil Mechanisms Advanced Foundation Engineering Soil Dynamics Theory of Shear Strength Theory of Multi-Dimensional Consolidation Theory of Deformation for Soils Surveying and GIS Courses Theory of Surveying Error Advanced Geodesy Advanced Photogrammetry Advanced Remote Sensing

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- Inkyu Rhee, Ph.D.
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- Jae-Hong Oh, Ph.D.
   [Assistant Professor, Surveying and GIS, ojh@jnu.ac.kr]

# Laboratories

- Structural Engineering Lab
- Water Resource Lab
- Water Supply and Water Drain System Lab
- Geotechnical Research Lab
- Highway/Transportation Lab

# Electrical Engineering

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# What is Electrical Engineering?

Electrical engineering is based on sciences such as mathematics, physics, and chemistry, and studies how to transform fossil, hydraulic, atomic, wind, solar light or heat, and tidal energy into electric energy. Students also study how to transport the transformed energy efficiently and steadily to distant places. One primary focus of the Department is on transforming these into other types of energy such as light, heat, and power. The Department maintains high standards of research and development of electrical energy to benefit society.

# Degree Requirements

### Master's Program

The graduate program aims at instruction of the highest level of academic theory, towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

### Ph.D. Program

Students who pursue a Doctor of Philosophy degree undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields and will be examined by at least five committee members. In addition, students are required to take at least 60 credits in coursework including the credits already earned for the master's degree and they must pass one foreign language test. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

# What Do You Study?

Topics of Special Electric Machinery Advanced Analysis for Electric Machinery Optimal Control Theory Applied Electrostatics Advanced Electrical Power Engineering I Advanced Electrical Power Engineering II Solar Energy Generation Engineering Power System Analysis I Power System Analysis II Advanced Power System Operations Advanced Power System Control Power System Control Power System Planning Theory of Light Sources Lighting System Design and Applications C Programing Digital Processor Embedded Program Filter Circuit Design High Integrated Power Circuit Advanced Power Electronic Engineering Optimization Theory Advanced Servo Control of Electric Machinery Power Communication Network Special Topics in Solid-State Lighting Color Science & Its Applications Power System Dynamic Simulation Application of Energy Storage Systems on Power System Digital Control Theory Sensor Interfacing Automatic Measurement System Mechatronics Automatic Guided Vehicle System Electric Vehicle Technology Automation of Industrial Process Topics of Management for Electric Machinery Advanced Applied Power Electronics Design Projects of Power Electronic Converter System Lighting Calculations and Computer Modeling

### Professors

- In-Seon Yeo, Ph.D.
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- Kyung-Woo Ryu, Ph.D.
   [Professor, Superconductivity Applications, kwryu@jnu.ac.kr]

• Joon-Ho Choi, Ph.D.

[Professor, Power System and Electrical Apparatus,

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Lighting Design High Voltage Power Apparatus Power System Protection Power IT Engineering Advanced Electromagnetic Field Theory Computer-Aided Problem Solving Techniques Electrodynamics Power Communication Theory Power Communication Systems **Digital Processor Applications** Illumination Optics & Its Applications Power System Modeling Renewable Energy Systems Applied Numerical Method of Engineering Microprocessor Applications Automatics Devices and Apparatus Adv. Electric Machinery Design Power System Operations Data Visualization and Analysis Techniques Advanced Power Communications Advanced Power Communication Systems Advanced Power Communication Networks Advanced Optimization Research Guidance 1 Research Guidance 2 Research Guidance 3 Research Training 1

- Research Training 2
- Sung-Jun Park, Ph.D.
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- Seon-Ju Ahn, Ph.D. [Associate Professor, Smart Grid, sjahn@jnu.ac.kr]
- Yong-Hoon Choi, Ph.D.
  [Associate Professor, Wired/Wireless Innovative Technologies and Hybrid, yh.choi@jnu.ac.kr]
  Sang-Yun Yun, Ph.D.

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• Dong-Hee Kim, Ph.D.

# Laboratories

- Control & Instrumentation Lab
- Light source & Illuminating System Lab
- Electric Machine Design Lab
- Superconductivity Applications Lab
- Power System & Electrical Apparatus Lab
- Design of Electronic System based on Micro Processor Lab
- LabWired/Wireless Innovative Technologies and Hybrid Lab (WITH Lab)

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Electronics and Computer Engineering

Computer Science, Computer Engineering, and

Electronics Engineering

Major of Computer Science Contact Information \_\_*Contact Information* Phone: +82-62-530-3420 Fax: +82-62-530-3439 URL: http://ece.jnu.ac.kr

# Graduate Studies in Computer Science

A focal point for graduate-level research and education, strong research groups exist in areas of software engineering, database, computer graphics, multimedia communication, theory of computation, mobile computing, Internet application technology, image information processing, information retrieval, and smart computing. Basic work in computer science is the main research goal of these groups, but there is also a strong emphasis on interdisciplinary research and on applications that stimulate basic research.

# Degree Requirements

### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in a computer science discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree.

# What Do You Study?

3D Multimedia Advanced Computer Graphics Advanced Computer Vision Advanced Database System Advanced Multimedia Systems Advanced Object-oriented Systems Client Server System Computer and Multimedia Society Computer and Network Security Cryptography Database Design Design and Analysis of Algorithms Distributed Application System Distributed Database Distributed Object System Distributed Systems Design Graph Theory High-speed Networks Human Computer Interaction Image Analysis Image Information Processing Image Synthesis Theory Information Extraction and Integration Information Protection Systems Information Retrieval Integrated Networks Operations and Management Internet Protocols Internet Security Introduction to Computer Vision Introduction To Data Mining Machine Learning Mathematics for Computer Graphics Mathematics for computer scientist Medical Imaging and Applications Methodologies for Development of Program Mobile Interface Mobile IP Multimedia Data Mining Multimedia Information Storage and Retrieval System

Network Programming Parallel Processing Project Management Real-time System Security Protocol Sensor Networks Software Engineering Environment Software Process Software Reuse Statistical Language Processing TCP/IP Technical Writing Theory of Computation Topics in Artificial Intelligence Topics in Computer Networks Topics in Context Inferencing Topics in Data Communication Topics in Data Mining Topics in Deep Learning Topics in Distributed Systems Topics in Image Processing Topics in Intelligent Systems Topics in Internet Topics in Mobile Computing Topics in Natural Language Processing Topics in Pattern Recognition Topics in Software Engineering Topics in Theoretical Computer Science Topics on Web Mining Transaction Processing Systems Ubiquitous Computing Virtual Reality Visual Information Processing Web Engineering

# Professors

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# Laboratories

### Database Lab

Research is carried out on transaction management, data mining, mobile transaction management, and XML. In addition, research is conducted on X3D in the 3D field. The main research topics of Distributed Networks and Systems Laboratory are bigdata processing platform and algorithms, social networking systems, software defined network, content distribution networks, and grid/cloud systems.

### **Computer Graphics Lab**

Research is conducted on soft rendering and efficient velocity of radiosity rendering.

### Internet@Information Security Lab

Research is carried out on information security including secure operating systems, intrusion detection, security in ubiquitous computing, privacy protection, cyber forensics and the recent security issues such as botnet detection.

### Multimedia and Image Processing Lab

Research is conducted on image processing and computer vision. Recent research has been focused on document image processing, face tracking, object tracking applications. Especially deep learning approaches with convolutional neural networks are explored.

### Theory of Computation Lab

The Theory of Computation Lab is involved in the study of graph theory applied to the parallel or distributed process, network algorithm, information security, and bioinformatics.

# Mobile Computing Lab

The Mobile Lab conducts research on a mobile agent which improves performance of the distributed Object System.

### Advanced Network Lab

Research is carried out on ubiquitous computing, particularly the ubiquitous computing environment consisting of sensor layers, middleware layers, and application layers, which sense information, collect and analyze information, and apply information, respectively.

### Pattern Recognition Lab

Research is carried out on artificial intelligence techniques related to image processing and pattern recognition to implement human thinking and learning mechanisms. Research is also conducted on human emotion recognition, gesture recognition, medical image analysis, and so on.

### **Information Retrieval Lab**

Research is carried out on information retrieval and natural language processing development which utilizes human language processing and artificial intelligence technology. Major research includes all major intelligent software and natural language processing technologies such as information retrieval, information extraction, text and multimedia classification, text summarization, speech recogni- tion, text-to-speech, natural language dialog, intelligent agents, and bio-informatics.

### Smart Computing Lab

Research is conducted on multimedia data mining, e-learning, collaborative product development, and bio-image analysis. The main direction of research is to support intelligent computing in many applications such as multimedia information retrieval, e-health, and e-product design by employing data mining and machine learning techniques.

### Smart Mobile & Media Computing Lab

The Smart Mobile & Media Computing Lab, performs research in the field of next generation computing, broadcasting & telecommunication convergence media, human-oriented IT convert- gence services.

### Software Language & System Lab

The main research themes of Software Languages and Systems Laboratory are programming languages, compilers, and software engineering. The laboratory has studied on the design and implementation of programming languages, program analysis, and software testing for efficient development of defect free software in the areas of mobile computing and Internet-of-Things computing.

#### **Distributed Networks and Systems Lab**

The main research topics of Distributed Networks and Systems Laboratory include Software Defined Network/Infrastructure, Bigdata Platforms (distributed data collecting/processing architecture), GRID/Cloud network/systems, Social networking systems, AI applied Cyber Physical Systems, BlockChains, and other issues in the field of Distributed Systems.

### Care Science and Technology (CST) Lab

The interest of CST Lab is a science and technology to enhance a quality of life. It helps our past

research understand CST Lab; screening technology of sleep disorder and sudden infant death syndrome, noninvasive measurement technology of respiration rate/depth and emotion, remote measurement and analysis of human posture, human and robot interaction based on machine learning and deep learning, musculoskeletal simulation, capillaries and so on.

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# Graduate Studies in Computer Engineering

As the role of computers in our lives continues to expand dramatically, it has become even harder to imagine engineering, natural science or society in general without such devices. In the emerging future information society, computer engineering will become one of the most important fields of expertise. Computer engineering is a branch of engineering that studies various problems occurring in information acquisition, processing, storage, and transmission. Computer engineering is classified into two major areas: software and hardware. The software branch includes artificial intelligence, multimedia network programming, database and convergence. The hardware branch includes computer architecture, SoC design, embedded systems, computer networks and communication.

# Degree Requirements

### Master's Program

The graduate program aims at the instruction of the highest level of academic theory and the development of capabilities to perform original research work. Applicants for the Master's Program should have achieved a good grade in an undergraduate degree course in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Assessment of M.S. students includes a combination of at least 24 credit hours of course work and a thesis based on the research project. These requirements should be fulfilled between two and three years of enrollment.

### Ph.D. Program

Students who pursue Doctor of Engineering degrees undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields and it will be examined by at least five committee members. In addition, students are required to take at least 60 credits in coursework including the credits already earned for the master's degree, and they must pass one foreign language test. Degrees are conferred to those who fulfill the requirements between two and five years of enrollment.

# What Do You Study?

Three Dimensional Vision Object-Oriented System Advanced Network Security Advanced Mobile Computing Systems Modern coding theory Reliable Computer System Design Machine Vision Advanced Network Programming Advanced Network Protocols Studies in DBMS Digital Systems Design Digital Signal Processor Architecture Digital Arithmetic Algorithm Design Deep Neural Networks and Deep Learning Microcontroller Architecture and Low Power Design Advanced Microprocessors Topics in multimedia Systems Multimedia Applications Wireless Network Engineering Wireless Communication Engineering Advanced coding applications Coding Theory Distributed Processing **Bioinformatics** Performance Evaluation Advanced Performance Evaluation Smart Sensors and Application Advanced Smart NUI Special Topics in Neural Networks Real Time Internet Protocol Advanced Algorithm Design Special Topics on Cryptography Visual Information Processing and Recognition Image Communication Advanced Theory of Applied Mathematics Application VLSI Design Medical Image Processing Special Topic on Mobile Internet

Mobile Communication Engineering Artificial Intelligence Theory Internet Engineering Advanced Embedded Software Advanced Embedded System Design Embeded System Chip Advanced Natural User Interface Low Power Design Methodology Advanced Information Retrieval Information and Communication Security Knowledge and Information System Next Generation Cloud Computing Next Generation Protocol Advanced Next Generation Mobile NUI Special Topics in the computer Engineering Advanced Computer Architecture Design Advanced Computer Graphics Computer Vision Advanced Computer Image Processing Advanced Communication Engineering Pattern Recognition Advanced Pattern Recognition Advanced Programming Project Management Probability and Statistical Theory Probability Theory Human Interface System

# Professors

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 SunYong Yoo, Ph.D.
 [Assistant Professor, intelligence information system, syyoo@jnu.ac.kr]

Laboratories

- Computer Architecture Lab Seong-Mo Park Ph.D.
- IT SoC Lab Young-Chul Kim Ph.D. http://soc.jnu.ac.kr
- Multimedia Data Communication Lab Ji-Seung Nam Ph.D.
- Intelligent Image Media/Interface Lab Chil-Woo Lee Ph.D. http://image.jnu.ac.kr
- Intelligent Computing & Bio-Medical Engineering Lab Yonggwan Won Ph.D.

- Network Technology Lab Jaehyung Park Ph.D.
- Embedded System Lab Cheol-Hong Kim Ph.D. http://eslab.jnu.ac.kr
- Smart Mobile & Media Computing Lab Jin-Sul Kim, Ph.D.
- Coding & Communication Theory Lab. Hosung Park, Ph.D. http://cctl.jnu.ac.kr
- Intelligence information system Lab. SunYong Yoo, Ph.D.

# Major of Electronics Engineering

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# Graduate Studies in Electronics Engineering

Electronic engineering is making rapid progress in a variety of research areas ranging from electronic materials and electron devices to the design of ultra-large-scale computers, information processing systems, and software. Education in the Department of Electronic Engineering is aimed at the development of versatile research scientists and engineers with a wide field of vision based on mathematics and physics.

# Degree Requirements

### Master's Program

The graduate program aims at instruction of the highest level of academic theory and the development of capabilities to perform original research work. Applicants for the Master's Program should have achieved a good standard in an undergraduate degree course in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Assessment of Electronics Engineering students includes a combination of at least 24 credit hours of course work, and a thesis based on the research project. These requirements should be fulfilled between two and three years of enrollment

### Ph.D. Program

Students who pursue Doctor of Engineering degrees undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields and will be examined by at least five committee members. In addition, the students are required to take at least 60 credits in coursework including the credits already earned for the master's degree. Degrees are conferred to those who fulfill the requirements between two and five years of enrollment.

### What Do You Study?

Adaptive Signal Processing	
Advanced Antenna Design	
Advanced Control Engineering	
Advanced Digital Communication	
Advanced Digital Signal Processing	
Advanced Digital System	
Advanced Digital video compression	
Advanced Electronic Circuits	

Advanced image communication systems
Advanced integrated circuit fabrication methodology
Advanced Machine Learning
Advanced mobile communication Engineering
Advanced MODEM Theory
Advanced semiconductor design methodology
Advanced Signal and System Mathematics
Advanced Speech Signal Processing

Advanced Visual System Analysis and Design of RFID Antenna Engineering Artificial Neural Network Automatic Control Broadband Convergence Network Coding Theory Compound Semiconductor Devices Computer Architecture Design Control Application Engineering Digital Broadcasting Engineering Digital Control Applications Digital Filter Theory Digital Image compression Digital Image Processing Digital Processing of Speech Signal Digital Signal Processing? Digital Video Broadcasting Engineering Electromagnetic Wave Analysis Estimation Theory ICT Convergence Technology based Start-ups Image Communication Systems Image Compression System Design Image Processing and Analysis Information Theory Integrated-Circuit System Intelligent Control Engineering Introduction to Communication System Engineering Introduction to Pattern Recognition Linear System Theory Local-area Wireless Communications Mechatronics control Microwave Circuit Design Microwave Engineering Multi-antenna Communication Systems Multi-Dimensional Signal Processing Multimedia Signal Processing Multimodal Signal Processing Nanoelectronics Nano-scaled semiconductor applied sensor engineering Network Protocols Next Generation Convergence Information and Communication Engineering Next Generation Convergence Mobile Communication Engineering Next Generation Convergence Wireless Communication Engineering Next Generation Intelligent Convergence Information and Communication Engineering Next Generation Intelligent Convergence Wireless Communication Engineering Next Generation Intelligent Mobile Communication Engineering Next Generation Intelligent Information and Communication Engineering Next Generation Intelligent Wireless Communication Engineering Next generation memory semiconductor design Optical Communication SoC Design Optical Communication System **Optical** Internet Optical Wireless Communications **Opto-Electronics** Organic Electronics Parallel Processing System Power Electronics Power Semiconductor Engineering Probability and signal processing Programming for Electrical Engineering Random Variables RF Circuit Design Robotics Satellite Communication System Semiconductor Device Physics and Technology Semiconductor Device Process Engineering Sensor-based control Service Robots Signal and System Mathematics Signal Detection Theory Signal Processing Programming Spectral Estimation Theory Statistical Signal Processing and Modeling Wave Propagation Theory

# Professors

- Yeongseog Lim Ph.D.
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- Jin-Young Kim, Ph.D.
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- Dae-Jin Kim, Ph.D. [Professor. Digital Communication, djinkim@jnu.ac.kr]
- Sung-Hoon Hong, Ph.D.
   [Professor. Image Processing, hsh@jnu.ac.kr]
- Sung-June Baek, Ph.D.
   [Professor. Digital Signal Processing, tozero@jnu.ac.kr]
- Dong-Kook, Kim Ph.D.
   [Professor. Audio Signal Processing & Pattern Recognition, dkim@jnu.ac.kr]
- Tae-Jin Jung, Ph.D.

# Laboratories

- Microwave Lab Yeongseog Lim Ph.D. Jin-Young Kim, Ph.D. & Sung-June Baek, Ph.D.
- New Media Signal Processing Lab Dong-Kook Kim, Ph.D.
- Optical Communication Lab Su-il Choi, Ph.D.
- Digital Communication Lab Dae-Jin Kim, Ph.D.
- Visual Information Processing System Lab Sung-Hoon Hong, Ph.D.
- Broadband Wireless Communication Lab

[Professor. Wireless Communication, tjjung@jnu.ac.kr] • Su-il Choi, Ph.D. [Professor. Optical Communication Systems, sichoi@jnu.ac.kr] • In-Tae Hwang, Ph.D. [Professor. Mobile Communication, hit@jnu.ac.kr] · Taek-Soo Ji, Ph.D. [Professor, Semiconductor & Electronic device, tji@jnu.ac.kr] • Myoungjin Lee, Ph.D. [Associate Professor, Semiconductor device & Circuit design, mjlee@jnu.ac.kr] • HyunDuck Choi, Ph.D. [Assistant Professor, Next Generation Intelligent

[Assistant Professor, Next Generation Intelligent Control, ducky.choi@jnu.ac.kr]

Tae-Jin Jung, Ph.D.

Information and Telecommunication Research Lab In-Tae Hwang, Ph.D. http://itrl.jnu.ac.kr
Semiconductor Device Research Lab

- Semiconductor Device Research Lab Taek-Soo Ji, Ph.D. http://sdrg.jnu.ac.kr
- Integrated Nano Device & Circuit Lab Myoungjin Lee, Ph.D.
- Next Generation Intelligent Control Lab HyunDuck Choi, Ph.D.

Energy and Resources Engineering *Contact Information* Phone: +82-62-530-1720 Fax: +82-62-530-1729 E-mail: energy@jnu.ac.kr URL: http://resources.jnu.ac.kr

## Graduate Studies in Energy & Resources Engineering

These days, natural resources are essential for developing domestic economies. Each country is trying to secure natural resource stability. Currently, our government is making efforts to develop the technology of resource extraction and to encourage resource engineers, as many other developed countries have, because the matter of resources is based not only on geopolitical situations. In order to meet the demands of these times, the Department of Energy & Resource Engineering deals with Applied Geology & Applied Geochemistry, Resources Geology Engineering, Geophysical Prospecting, Resource Development Engineering, Petroleum Engineering, Mineral Processing, Resources Development Safety & Environment, Drilling Engineering, and Resource Economics.

# Degree Requirements

### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project.

### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn a minimum of 36 credits. Students should pass a foreign language test and a qualifying examination to present their thesis.

# What Do You Study?

Metallic Mineral Processing Advanced Physical Separation Advanced Flotation Treatment Power Technology Non-Metallic Mineral Processing Separation Process Design Advanced Material Processing Technology Materials Analysis Technology Advanced Rock Mechanics Theory of Rock Failure Advanced Energy Materials Special Issues on Resource Engineering Advanced Resources Recycling Recycling of Waste Materials Advanced Geochemistry Exploration Advanced Geochemistry Theory and Measurement of Earth Press Advanced Engineering Geology Advanced Geology Advanced Ground water Engineering Elastic Wave Theory Potential Theory Advanced Marine Mineral Resources Advanced Chemical Treatment Development of Environmental Resources Planning and Design in Environmental Engineering Advanced Environmental Geochemistry Advanced Rock Blasting Advanced Seismic Prospecting Interfacial Phenomena Advanced Thin Film Technology Materials Synthesis Technology Advanced Gravity and Magnetic Prospecting Electronic Property of Materials Advanced Environment Management Treatment of Contaminated Soil Rock Structure Design Rock Slope Engineering Advanced Electrical and Electromagnetic Prospecting Wavelet Theory GPR Prospecting Applied Remote Sensing Dielectric Materials Advanced Mechanical Properties of Materials

#### Professors

Yang Hyungsik, Ph.D.
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Yoon Wangjung, Ph.D.
[Professor, Geophysical Prospecting, Advanced Construction Noise & Vibration Engineering Borehole Geophysics Advanced Recovery of Valuable Minerals Topics In Tunnel Engineering Statistics of Rock Mass Special Topics in Geotechnical Engineering Advanced Microbiological Geochemistry Advanced Groundwater Geochemistry Advanced Ore Deposits Specialized Solutions for Applied Geology Special Topics in Geomicrobiology Special Topics in Environmental Geochemistry Advanced Applied Petrology Information of Global Resources Recycling of Industrial Solid Waste Remediation of Urban Natural Environment Bioremediation of Geological Environment Applied Geostatistics Advanced Reservoir Engineering Advanced Energy and Environmental Engineering Reserve Estimation and Energy Economics Renewable Energy Engineering Hydrocarbon Phase Behavior Advanced Petroleum Drilling Engineering Advanced Petroleum Production Engineering Enhanced Oil Recovery Reservoir Simulation Advanced Well Test Analysis Geomicrobiological Engineering Seminar Instrumental Chemical Analysis Clay Mineralogy Advanced Applied Mineralogy

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- Microbial Geochemistry Lab

- Advanced Material processing & Mineral Economics Lab
- Petroleum & Natural Gas Engineering Lab
- Laboratories
- Applied Geology & Geochemistry Lab
- Rock Mechanics & Blasting Engineering Lab
- Geophysical Prospecting Lab
- Mineral Processing & Recycling Lab
- Mineral Processing & Extractive metallurgy Lab

# Environment and Energy Engineering

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## Graduate Studies in Department of Environment and Energy Engineering

Environmental researchers deal with interactions between human beings and their environment, to protect each from the harmful effects of the other. The broad scope of this course provides graduate students with unique opportunities to specialize in areas best suited to their background and research interests. The objectives of the graduate program in Environmental Engineering are to mold students into highly competent environmental engineers and scientists, and to research pollution abatement technologies. The Environmental and Energy Engineering Program covers the areas of water supply and water resources, wastewater treatment, environmental systems modeling, air pollution control engineering, air quality management, solid and hazardous waste management, environmental biotechnology and microbiology, fuel cell & battery, and novel renewable energy systems such as microbial fuel cells (MFC).

#### Degree Requirements

The Department offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees in Environmental and Energy Engineering. The Master's Program emphasizes the enhancement of professional knowledge and skills, including research techniques. The doctorate is a research degree emphasizing more extensive and original approaches to problem solving. Students may work directly toward the doctorate, but must earn a master's degree first.

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory, towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an Environmental and Energy engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Students must pass a foreign language and a qualifying examination. Master's degree candidates are required to earn a minimum of 24 credits and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn a minimum of 36 credits. Students should pass a foreign language test and a qualifying examination to present their thesis. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

## What Do You Study?

Advanced Environment and Safety Engineering Advanced Air Pollution Control Advanced Chemical Substance Safety Advanced Construction Noise & Vibration Engineering Advanced Control of Underground Water Pollution Advanced Coping Engineering with Air Pollution & Climate Change Advanced Eco-Toxicology Advanced Environmental Aerosol Engineering Advanced Environmental Biological Engineering Advanced Environmental Chemistry Advanced Environmental Ecology Advanced Environmental Impact Assessment Advanced Environmental Microbiology Advanced Environmental Toxicology Advanced Hazardous Gases Treatment Advanced Micrometeorology Advanced non-point pollutant treatment Advanced Organic Waste Recycling Engineering Advanced Soil Chemistry Advanced Wastewater Treatment Engineering Advanced Water Environmental Microbiology Advanced Water Quality Management Advanced Water supply and Sewerage Planning Advanced Water Treatment Engineering Air quality management seminar Atmospheric Chemistry of Air Pollution Bioenergy Seminar

## Professors

Seon-Yong Chung, Ph.D.
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Yong-Woon Lee, Ph.D.
[Professor, Water Quality Management System, ywlee@jnu.ac.kr]
Sung-Yong Cho, Ph.D.
[Professor, Eco-Energy and Air Pollution Engineering, syc@jnu.ac.kr]

Biological Engineering Seminar **Bioremediation Engineering** Clean Energy Technology Design and Operation of Bioreactor Eco-Energy Storage Systems Environmental GIS Environmental Microbiology Seminar Environmental Polymer Design Environmental Risk Assessment Experiment for Eco-Toxicity Assessment Fuel Cells Industrial Waste-water Treatment Engineering Introduction to Korea REACH and ACC Microbial Electrochemical Systems Patent Mapping Remediation Engineering of Polluted Soil Research Guidance 1 Research Guidance 2 Research Guidance 3 Secondary Battery Seminal for Air Pollution and Climate Change Seminar for Air Pollutant Protection Design Seminar for water environment technologies Seminars in Chemical Risk Soil Remediation Seminar Trends in Bioenergy Technology Trends in Modern Renewable Energy Technology Waste Management Seminar

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·Sok-Hee Jung, Ph.D.

## Laboratories

- Environmental Microbiology Lab
- Water Quality Management System Lab
- Air Pollution Control and New Energy Lab
- Environmental Biotechnology Lab
- Hazardous Waste and Soil Lab
- Air Quality Management Lab
- Environmental Energy Materials Lab
- Environmental Fusion Energy Technology Lab

[Assistant Professor, Microbial Fuel Cells, Bioenergy, Environmental Biotechnology, sokheejung@jnu.ac.kr]

# Industrial Engineering

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## Graduate Studies in Industrial Engineering

Industrial Engineering deals with various issues such as software design, system management, statistical application and artificial intelligence. Studies undertaken at the graduate level are firmly based on undergraduate curricula. Qualified students perform advanced cutting-edge research. Under the supervision of faculty members, students are offered the opportunity to apply their knowledge and to lead many research projects supported by academic institutes and the private sectors.

## Degree Requirements

#### Master's Program

The Master's Program generally takes two years to complete and requires students to earn 24 credits and submit a master's thesis. In the Department of Industrial Engineering, there are eight Laboratories for master's students to take part in: Production Management Lab, Reliability & Communication Management Lab, Autonomous Vehicle Research Lab, HCI & Design Lab, Stochastic Systems & Creative Problem Solving Lab, Knowledge Service Engineering Lab, Data Mining Lab, and Management of Technology Lab.

#### Ph.D. Program

Ph.D. candidates are required to earn 60 credits including credits already earned during master's courses and present a dissertation that offers academically significant contributions and new findings. It will be carefully examined by five committee members. Ph.D. candidates must demonstrate their excellence in research and understanding of leadership in various fields of society.

### What Do You Study?

Major Courses	
Advanced Computer Vision	Advanced Logistics Management
Advanced Data Mining	Advanced Probability and Statistics
Advanced Decision Analysis	Advanced Programming Language
Advanced Design Engineering	Advanced Project Management
Advanced Design and Analysis of Experiments	Advanced Quality Management
Advanced Human Interface Engineering	Advanced Supply Chain
Advanced Inventory Management	Advanced Technology Management
Advanced Knowledge Engineering	Advanced Topics in Service Engineering
Advanced Linear Programming	Advanced Topics in Systems Safety Engineering

Advanced Topics on Digital Design Applications Advanced Topics on Product and Technology Innovation Advanced product development engineering Application of Image Processing Applied Probability Case Study of Industrial Engineering Case Study of Systems Engineering Cognitive Systems Engineering Collaboration and Interaction Design Complex Systems Engineering Computer Application to I.E Creative Problem Solving Project Creative Problem Solving and Patent Application Graphics and Visualization Design HCI Research Methodology Human Decision Making and Support

## Professors

- Chung, Namkee, Ph.D.
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- Chung, Sang Wook, Ph.D.
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- Lee, Joon-Woong, Ph.D.
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- Lee, Jae Yeol, Ph.D. [Professor, HCI Design, jaeyeol@jnu.ac.kr]
- Kim, Nam Ki, Ph.D.

#### Laboratories

- Production Management Lab
- Reliability & Communication management Lab
- Autonomous Vehicle Research Lab
- HCI & Design Lab
- Stochastic Systems & Creative Problem Solving Lab
- Knowledge Service Engineering Lab

Information Design and Visualization Metaheuristics Multivariate Statistical Methods Neural network algorithms and Applications Optimization Theory Production Innovation Methodology Queueing Theory Reliability Engineering and Maintenance Theory Research Guidance 1 Research Guidance 2 Research Guidance 3 Simulations Special Topics in Industrial Engineering TOC Constraint Management TOC Thinking Process Technological Innovation Policy UX and Service Design

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- Ham, Dong-Han, Ph.D.
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- Jeong, Young-Seon, Ph.D.
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- Joo, Si-Hyung, Ph.D. [Assistant Professor, Management of Technology, innovation@jnu.ac.kr]
- Data Mining Lab
- Management of Technology Lab

Materials Science and Engineering \_\_Contact Information Phone: +82-62-530-1711 Fax: +82-62-530-1699 E-mail: kye7@jnu.ac.kr URL: http://mse.jnu.ac.kr/

## Graduate Studies in Materials Science and Engineering

Materials Science and Engineering (MSE) is an interdisciplinary field which deals with the discovery and design of new or high-performance materials constituting modern civilization and industrial developments. The field involves studying materials through the materials paradigm — synthesis, structure, properties and performance. It incorporates elements of physics and chemistry and is at the forefront of nanoscience and nanotechnology research. Mechanical, electrical, optoelectronic, and electrochemical properties of metals and ceramic materials are utilized for the transport machinery, semiconductor devices, energy and environmental devices such as batteries, fuel cells, and solar cells, and also medical applications. Eminent large-scale national projects such as WCU, BRL, Get-Future, and BK21+ and numerous individual government and industrial projects indicate the high-level research activities in Graduate Studies in MSE at Chonnam National University. The graduate students are trained for the R&D career paths in industrial laboratories, research institutes and also for faculty positions at the colleges and universities.

#### Degree Requirements

#### Master's Program

Applicants should have an undergraduate degree in an engineering discipline. Candidates from other backgrounds should take the required undergraduate courses during the graduate course. Master's degree candidates are required to earn 24 credits minimum, to pass the foreign-language and qualifying examination, and to prepare a thesis evaluated by a 3 member committee.

#### Ph.D. Program

Ph.D. candidates should have a master's degree in an engineering or natural science discipline. Students are required to earn at least 36 credits and pass the foreign-language and qualifying examination for the thesis submission. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the Materials Science and Engineering.

#### **Combined Degree Programs**

Combined degree programs allow qualified candidates to earn a bachelor's/master's degree in as little as five years or to focus directly on the Ph.D. dissertation without submission of Master's thesis.

#### What Do You Study?

Advanced Ferrous Alloys Advanced Theory of Plastic Deformation Advanced Ceramics Processing Advanced Course Of Inorganic Materials For Special Use Advanced Course of Instrumental Analysis Advanced Crystal Physics Advanced Crystallography Advanced Energy Materials Engineering Advanced Foundry Metallurgy Advanced High Temperature Materials Advanced Instrumental Analysis(Inorganic Substance) Advanced Materials Characterization Advanced Materials Science Advanced Mechanical Behavior Of Materials Advanced Metallography Advanced Metallurgical Thermodynamics Advanced Non Ferrous Alloys Advanced Sintering Theory Advanced Solid State Physics Advanced Solid Thermodynamics Advanced Solidification Theory Advanced Surface Treatment of Metals Advanced Welding Metallurgy Amorphous Materials Battery Materials Battery Materials Science Ceramic Fuel Cell Materials Computational Materials Science Corrosion and Protection of Metals Crystal Structure Analysis Defects in Solids Dental Materials Dislocation Theory Electrochemical Energy Conversion and Storage Electrochemistry Electromagnetic Properties of Materials Electronic Materials Fracture Mechanics Instrumental Analysis of Solid Surface Introduction to electronic structure calculations

Introduction to Error Analysis Kinetic Processes in Solids Light Metals and Materials Mechanical Properties of Thin Films Metallic Biomaterials Metals and Alloys for Medical Use Nanointerface Engineering Nanoionics Nano-processing for Energy Materials Nonstoichiometry of Materials Optical Properties of Materials Plasma Processing of Materials Research Guidance 1/2/3 Research Training 1/2 Semiconductor Materials and Processing Semiconductor Physics Sensor Materials and Devices Single Crystal Growth Solid State Electrochemistry Solid State Ionics Solid State Lighting Device Special Lecture of Nanomaterials Engineering Strengthening and Fracture of Metals Structure of Inorganic Materials Surface Phenomena of Materials Surface Treatment of Biomaterials The Role of Solid State Electrochemistry in Green Energy Technology Theory and Practice of Electron Microscopy Theory of Magnetic Materials Theory of Metals and Auoys Theory of Phase Transformation in Metal Alloys Thermoelectric Materials Thin Film Materials and Processing Transition Metal Oxides Understanding Organic Chemistry Vibrational and Electronic Spectroscopy X-ray Crystallography

## Professors

• Choong-Nyeon Park, cnpark@jnu.ac.kr [Hydrogen Storage Materials, Ni-MH Secondary Batteries] • Byung-Teak Lee, btlee@jnu.ac.kr [Thin Film Growth & Fabrication of Optoelectronic Devices] • Ho-Sung Kim, symmetry@jnu.ac.kr [Crystal Structure Analysis & Crystal Growth] • Kwangmin Lee, kmlee@jnu.ac.kr [Nano- & Bio-materials] • Youngman Kim, kimy@jnu.ac.kr [Mechanical & Thermal Characterizations of Thin Films] • Jong-Ha Moon, jhmoon@jnu.ac.kr [Photonic Electronic Thin Films] • Sung-Kil Hong, skhong@jnu.ac.kr [Light Metals, Mold & Automotive Parts Materials] • Jin-Hyeok Kim, jinhyeok@jnu.ac.kr [Photonic Electronic Thin Film Growth & Characterization] • Jaekook Kim, jaekook@jnu.ac.kr

## Laboratories

- Advanced Biomaterials Lab
- Materials Electrochemistry Lab
- Electroceramics Lab
- Electrochemistry Lab
- Green Energy Materials Lab
- Ionics Lab
- Light Metal Materials Lab
- Mechanical Metallurgy Lab
- Nano Energy Lab
- Nanodevices and Materials for Energy Lab

[Design, Synthesis, Characterization of Nano Energy Materials] • June Key Lee, junekey@jnu.ac.kr [Semiconductor Process Design] • Jong-Sook Lee, jongsook@jnu.ac.kr [Electroceramics] • Sun-Ju Song, song@jnu.ac.kr [Ionics, Energy Materials] • Chan-Jin Park, parkcj@jnu.ac.kr [Corrosion & Energy Materials, Materials Electrochemistry] • John Gerard Fisher, johnfisher@jnu.ac.kr [Green Energy Materials] · Jaeyeong Heo, jheo@jnu.ac.kr [Nanodevices & Materials for Energy] • Hoonsung Cho, cho.hoonsung@jnu.ac.kr [Biomaterials] • Uk Sim, usim@jnu.ac.kr [Synthesis and characterization of multi-functional low-dimensional nanostructured materials] • Jang-Yeon Hwang, hjy@jnu.ac.kr [Synthesis and Characterization of energy storage materials]

- Nanomaterials Processing Lab
- Photonic and Electronic Thin Film Lab I
- Photonic and Electronic Thin Film Lab II
- Photonic and Electronic Thin Film Lab
- Semiconductor Process Design Lab
- Single Crystal Growth Lab
- Nanomaterials for Energy and Environment Laboratory (NEEL)
- Energy Storage Materials Lab

# Mechanical Engineering

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## Graduate Studies in Mechanical Engineering

Mechanical Engineering covers comprehensive technological fields encompassing the entire spectrum of design, manufacture, and control of mechanical systems. Mechanical Engineering is rapidly expanding its frontiers into more modern and high-tech areas including robotics, hydrogen energy, fuel cells, nano-technology, smart materials, and automotive engineering.

#### Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an environmental engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree as well as pass one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

#### What Do You Study?

Adv. Control Engineering	Advanced Electrochemical Power Systems
Adv. Mechanical Vibration	Advanced Energy Conversion
Adv. System Engineering	Advanced Energy Transfer
Advanced Automotive and Environment	Advanced Experimental Plan and Measurement of
Advanced Combustion Engineering	Energy System
Advanced Course of Applied Mathematics	Advanced Fluid Mechanics
Advanced Course of Composite Materials	Advanced Internal Combustion Engine
Advanced Design Engineering	Advanced Kinetics
Advanced Dynamics	Advanced Material Strength

Advanced Mechatronics Advanced MEMS Advanced mold design Advanced Nonlinear Control Advanced Numerical Analysis Advanced Robotics Advanced Signal Processing Advanced Solid Mechanics Advanced Techs in Internal Combustion Engines Advanced Thermodynamics Analytical Fluid Dynamics Application of finite element method Application of Hydrogen Energy Automation in Manufacturing Autonomous Mobile Robot **Bio** Fluid Mechanics **Biomaterials** Biomechanics **Biomimetics** Compressible Fluid Dynamics Computational Fluid Dynamics Conduction Heat Transfer Convective Heat Transfer Design and fabrication of microsystems Discrete System Control Finite Element Method Fracture Mechanics

## Professors

- Ki-Ju Kang, Ph.D.
   [Professor, Mechanics of Solids and Structures, jkang@jnu.ac.kr]
- Bo-Seon Kang, Ph.D.
   [Professor, Spray Analysis using Optical Techniques, bskang@jnu.ac.kr]
- Hyun Wook Kang, Ph.D.
   [Associate Professor, Micro Fluidics, Nano Technology and System kanghw@jnu.ac.kr]

Fuel Cell Power System Introduction to Mechatronics and Measurement Systems Introduction to Nanotech Process Mechanics for Inelastic Materials Micro Thermal and Fluid System Microscale Heat Transfer and Thermophysical Properties Nano process and measurement **Optimal** Control Optimal Design of Thermal System Production Technology Radiation Heat Transfer Renewable Energy Research Guidance 1 Research Guidance 2 Research Guidance 3 Rotor Dynamics Science and Technical Writing Service Robotics Spray and Atomization Structural Dynamics Turbulence Two-Phase Flow Ultra Light Metal Structures Viscous Fluid Dynamics Welding Engineering

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- Woohyun kim, Ph.D. [Assistant Professor, Modeling, analysis and control of thermal systems, whkim@jnu.ac.kr]
- You-Gon Kim, Ph.D.

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- Gyuhae Park, Ph.D.
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- Su Han Park, Ph.D.
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- Jong-Oh Park, Ph.D.
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- Seoung-Yun Seol, Ph.D.
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- Young-Soo Yang, Ph.D. [Professor, Analysis of Welded Structures, ysyang@jnu.ac.kr]

• Byeong-Soo Oh, Ph.D. [Professor, Non-pollution Hydrogen Engine and Cryogenic Storage,

## Laboratories

- Active Structures and Dynamics Laboratory
- Advanced Combustion Control Lab
- Advanced Fluidics & Nanotechnology Lab
- Autonomous Navigation and Smart Robot Lab

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- Eunpyo Choi, Ph.D. [Assistant Professor, Medical micro/nano robotics,

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- Composites & Mechanics Lab
- Electrochemical Power Lab
- HVAC Lab
- Hydrogen and Fuel Cell Lab

- Material Strength Lab
- Mechanoptical Engineering Lab
- Mechatronics Lab
- Medical Robotics & Intelligent Control Lab
- Micro/Nano Robotics Lab
- MNTL (Micro/Nano Technology Laboratory)
- Multiscale Flow Control Lab
- Multiscale Molding & Manufacturing (M3) Lab
- Nano-Composite Materials Lab

- Optical Flow Measurements Lab
- Power & Energy Conversion Lab
- Robot Research Initiative Lab I
- Robot Research Initiative Lab II
- SMART (Self-Monitoring, Analysis & Reporting Technologies) Lab
- Theoretical Fluid Mechanics Lab
- Thermal Engineering Process Lab
- X-Lab

# Polymer Engineering

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#### Graduate Studies in the Department of Polymer Engineering

Polymer engineering is an academic field dealing with the synthesis, properties, processing, and application of polymers. Polymers are giant molecules that have significance not only in terms of products such as plastics, rubber, fiber, adhesives, and coatings, but also less obviously though none the less importantly, in many leading industries (new materials, biochemistry, biomedical, environments, aerospace, electronics, automotive, etc.). The Department is dedicated to producing high-quality graduates who are able to make significant engineering contributions toward enhancing the quality of life of human beings. The objectives of our academic functions are the practical application of scientific and engineering principles to generate new material and processing concepts, and the enhancement of technical problem-solving capabilities related to the production and use of polymers.

#### Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in a polymer engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields. In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree as well as pass one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

## What Do You Study?

Sensitive Polymer	Advanced Polymer Processing $(II)$
Advanced Surface Chemistry	Advanced Polymer Engineering (1)
High performance functional fibers	Advanced Polymer Engineering $(II)$
Advanced Polymer Processing (1)	Structure and Properties of Macromolecules

Advanced Instrumental Analysis of Polymer (1) Advanced Instrumental Analysis of Polymer (II) Advanced Polymer Rheology Advanced Physical Chemistry of Polymer Advanced Polymer Reactions Organic Composite Materials Membrane Separation Advanced Polymer Testing Method Advanced Polymer Solution Polymers in Electronics Advanced Polymer Chemistry (1) Advanced Polymer Chemistry (II)Advanced Functional Polymers (I) Advanced Functional Polymers (II)Functional Dyestuffs Functional Carbon Materials Nanostructured Organic Materials for Electronics and Photonics Special topics of Nanostructured techniques for Nanofabrication Multicomponent Polymer Materials Organic Electronic Materials and Devices for Displays Microcapsule Hair Science Advanced Course of Fiber Formation Structural Mechanics of Non-woven Fabrics

## Professors

- Su-Kyung Kim, Ph.D.
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- Bong-Ryeul Ryu, Ph.D. [Professor, Rheology, brryu@jnu.ac.kr]
- Gyun-Taek Lim, Ph.D. [Professor, Emulsion Polymerization, gtlim@jnu.ac.kr]
- Chang-Nam Choi, Ph.D.
   [Professor, Preparation of Functional Fibers by Chemical Modification, cnchoi@jnu.ac.kr]

Advanced Course of Industrial Textile Materials Advanced Course for Color Science Advanced Biopolymers Introduction of Petroleum Chemistry Fiber Modification Chemical Reaction of Fibrous Polymers Advanced Course of Fiber Function Design Physical Properties of Fibers Advanced Course of Fibrous Materials Advanced Water-soluble Polymers Special Seminar1 Carbon Materials for Energy and Environment Advanced Elastomer Engineering Advanced Course of Physical Chemistry of Dyeing Organic-Inorganic Hybrid Materials Advanced Organic Chemistry Polymer Colloids Advanced Transport Phenomena Low dimensional carbon materials Conducting Polymers Computer Applications in Textile Engineering Kinetics of Polymerization Natural Polymers Advanced Course of Natural Fibrous Polymers Structure and Properties of Carbon Fibers Technical Writing Texturing

- Dong-Il Yoo, Ph.D.
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- Yang-Il Huh, Ph.D. [Professor, Polymer Membranes, yihuh@jnu.ac.kr]
- Sung-Min Kim, Ph.D. [Assistant Professor, Textile Engineering, Apparel Engineering, smkim71@jnu.ac.kr]
- Yoong-Ahm Kim, Ph.D. [Professor, Nano Carbon Materials,

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- Hyeon-Seok Yoon, Ph.D. [Associate Professor, Functional Nano Materials, hyoon@jnu.ac.kr]
- Soo-Mi Huh, Ph.D. [Assistant Professor, Theory and Simulations for

## Laboratories

- Physics Polymer Science Lab
- Polymer Processing Lab
- Polymer Physical Chemistry Lab
- Polymeric Materials and Polymeric Membranes Lab
- Fiber Chemistry Laboratory
- Carbon Materials Laboratory

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[Assistant Professor, Polymer Semiconductor

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- Laboratory of Automation in Textile and Apparel Manufacture
- Nano Carbon Materials Laboratory
- Functional Polymer Laboratory

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organic materials,

- Functional Nano Materials Laboratory
- Theory and Simulations for Soft Materials Laboratory

Interdisciplinary Program of Bioenergy and Biomaterials

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### Graduate Studies in Bioenergy and Biomaterials

The interdisciplinary Graduate program of Bioenergy & Biomaterials is an academic discipline that researches and educates profound knowledge of bioenergy and biomaterial. Bioenergy and biomaterials have become a very active and vital area of research which is rapidly developing in industrial sectors and spreading to almost every field of science and engineering. Bioenergy, a renewable energy, is derived from biomass including wood, straw, sugar cane, plant parts, garden waste, animal waste and other agricultural materials. Bioenergy is a research field to produce biofuel derived from biological sources in its most sense. Biomaterials research encompasses area such as design of biomolecules, biopolymer and biosensor resulting in exciting developments in biomaterials-based technologies over the last decade. Graduate students in our program will learn the theory and applications of biology, chemistry and engineering as it pertains to bioenergy and biomaterial science and engineering. The diverse faculty members from several colleges and departments are participated in the interdisciplinary masters program of bioenergy and biomaterials. It should give a chance to students exposing to a wide range of projects and viewpoints on the cutting edge of the field. The program will accept both part-time and full-time students. Full-time graduate students typically receive financial support. Regardless of strong background, we have a place for students to grow in our program. Our alumni fulfil leadership roles in industry, research center and academia across a wide variety of sectors including bioenergy, biomaterial, biotechnology and bioengineering.

#### Degree Requirements

The master of interdisciplinary program of bioenergy and biomaterials requires 24 credits of coursework. A student studying for Ph.D. degree must earn an additional 36 credits. All of students in the programs must pass a foreign language exam, a qualifying exam, and a thesis submission for graduation.

## What Do You Study?

Research for the Master's or Doctoral Degree	Advanced Bioenergy Microbial
Climatical Change Agreement	Biotechnology
Special Topics in Process Design	Advanced Bioenergy Fermentation
Scientific Writing	Technology
Advanced Biomass Conversion	Bioenergy Production Processes &
Bioproducts	Practices I (Biodiesel)
Biosystem Engineering	Bioenergy Production Processes &
Advanced Bioenergy Plant Design	Practices II (Bioethanol/Biogas)
Advanced Bioenergy Engineering	Bioenergy Production Processes &

PracticesIII(Biodiesel) Bioenergy Production Processes & PracticesIV (Bioethanol/Biogas) Bioenergy Seminar 1 Bioenergy Seminar 2 Bioenergy Seminar 3 Bioenergy Seminar 4 Advanced Bioenergy Materials Bioenergy Quality Analysis & Practices I Bioenergy Quality Analysis & Practices II Bioenergy Quality Analysis & PracticesIII Bioenergy Quality Analysis & Practices IV Advanced New & Renewable Energy Advanced Energy Engineering Advanced Energy Materials Analysis Advanced Energy Materials Synthesis Energy Policy Advanced Energy Catalystic Chemistry Advanced Environmental Biological Engineering Environmental Energy Engineering Advanced Technologies in Combustion Control Advanced Microbial Biotechnology Advanced Plant Metabolism Advanced Plant Tissue Culture I Advanced Plant Tissue Culture IISpecial Topics in Protein Separation & Purification Advanced Fermentation Technology Cell Culture Engineering Advanced Bioprocess Engineering

Advanced Bioprocess Control Advanced Bioreactor Design Advanced Bioseparation & Purification **Bioinfomatics** Advanced Plant Molecular Biology Advanced Plant Physiology Plant Tissue Culture Special Topics in Metabolic Engineering Biochemistry & Molecular Biology Special Topics in Biochemistry **Biomedical Engineering** Advanced Carbohydrate Materials Special Topics in Enzyme Process Engineering Advanced Inorganic Material Chemistry Advanced Catalyst Design Chemistry Advanced Catalystic Chemistry Advanced Crop Physiology Crop Seed Physiology Seminar in Seed Production Advanced Energy Materials Materials Analysis Technology Advanced Synthesis Technology Advanced Process Control Acid Base Catalysts Energy Environmental Engineering Advanced Combustion Engineering Advanced Solid Waste Treatment Engineering Design & Operation of Bioreactor Advanced Aquatic Chemistry

## Professors

Do-Heyoung Kim, Ph.D.
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Seong-Jun Kim Ph.D.
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Jong-il Choi, Ph.D.
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[Metabolic Engineering. leesh@jnu.ac.kr]
Jae-Won Lee, Ph.D.
[Wood Chemistry, Bioenergy, ljw43376@jnu.ac.kr]
Sooim Shin, Ph.D.
[Protein Engineering, sooim.shin@jnu.ac.kr]

# Laboratories

- Catalytic Chemical Lab.
- Environmental Biotechnology Lab.
- Biomolecules Engineering Lab.
- Metabolic Engineering Lab.

- Wood Chemistry Lab.
- Protein Engineering Lab

Interdisciplinary Program of Photonics Engineering

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## Graduate Studies in Photonics Engineering

The Interdisciplinary Program of Photonics Engineering offers opportunities to perform basic and applied research at the frontier of optical communications and networking, optoelectronic semiconductor devices, and harnessing solar energy. Faculty members from Department of Materials Science and Engineering, Applied Chemical Engineering, Chemistry, and Physics constitute the interdisciplinary program.

#### Degree Requirements

#### Master's Program

Master's degree candidates are required to earn 24 credits minimum, to pass the foreign-language and qualifying examination, and to prepare a thesis evaluated by a 3 member committee.

#### Ph.D. Program

Students are required to earn at least 36 credits and pass the foreign-language and qualifying examination for the thesis submission. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to Photonic Science and Engineering.

## What Do You Study?

Applied Optics I / II	Electromagnetic Engineering
Advanced Course of Inorganic Materials For Special	Electronic Materials
Use	Experiments for Optical Materials Fabrication
Advanced Course of Instrumental Analysis	Process
Advanced Course Of Polymer Chemistry	Functional Polymer Materials
Advanced Electronic Materials	Laser Engineering
Advanced Instrumental Analysis	Laser Materials Processing
Advanced Photocatalyst	Low Temperature Plasma Process
Advanced Photonic crystals	Mechanical Properties of Thin Films
Advanced Polymer Physics	Microfabrification of polymers
Advanced Solid State Physics	Nanocarbon Engineering
Advanced Solid Thermodynamics	Nanotechnology Engineering
Amorphous Photonic Materials	Optical Communication System
Display Engineering	Optical Fiber Theory
Electrochemistry	Optical Materials

Optical Materials Fabrication Process & Characterization **Optical** Polymers Optical Sensor Engineering Optical Telecommunication Experiments Optical Telecommunication Devices Optical Thin Film Fabrication Process **Optics** Experiments **Opto-Electronics** Organic Conductive Materials Organic Electronic Materials Photoelectrochemistry Photofunctional Polymers Physical Chemistry of Polymers Plasma Processing of Materials Plastic Optical Fibers

Polymer Optical Devices Polymers for Electronics and Photonics **Ouantum** Mechanics Research Guidance 1/2/3 Research Training 1/2 Semiconductor Device Physics Semiconductor Materials and Processing Semiconductor Physics Semiconductor process design Sensor Materials and Devices Special topics in optic & electronic materials Strengthening and Fracture of Materials Theory and Practice of Electron Microscopy Thin Film Fabrication Process

• Jun-Seok Ha, jsha@jnu.ac.kr

• Jong-Hoon Han, jhhan@jnu.ac.kr [Nano Carbon Convergence Materials]

• Chang-Kook Hong, hongck@jnu.ac.kr

Polymer

[Solar Cells, Energy Engineering,

• Soon-Hyung Kang, skang@jnu.ac.kr

· Joong Wook Lee, leejujc@jnu.ac.kr

• Yung Ho Kahng, yhkahng@jnu.ac.kr

• Jaeyeong Heo, jheo@jnu.ac.kr [Nanodevices and Materials for Energy]

• Eun-Mi Han, emhan@jnu.ac.kr

[Nano Photonic Devices]

[Analytical Chemistry]

[Terahertz Photonics]

[Opto-electronic Materials]

[Emerging Materials Devices]

Materials]

## Professors

• Byung-Teak Lee, btlee@jnu.ac.kr [Thin Film Growth & Fabrication of Optoelectronic Devices] • Jong-Ha Moon, jhmoon@jnu.ac.kr [Photonic Electronic Thin Films] • Jin-Bong Kim, jbkim@jnu.ac.kr [Polymer Synthesis, Photonic Devices] • Jin-Hyeok Kim, jinhyeok@jnu.ac.kr [Photonic Electronic Thin Film Growth & Characterization] • Do-Heyoung Kim, kdhh@jnu.ac.kr [Metal Organic Chemical Vapor Deposition] • Hyun-Yong Lee, hyleee@jnu.ac.kr [Photonic Materials & Devices] • June Key Lee, junekey@jnu.ac.kr [Semiconductor Process Design] • Sang Wan Ryu, sangwan@jnu.ac.kr [Semiconductor Physics]

## Laboratories

- Photo and Electrochemical Energy Room	- Photonic and Electronic Thin Film Lab I
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- Chemical Process Lab
- Photonics oriented leading study Lab
- Photonic and Electronic Thin Film Lab
- Photonic and Electronic Thin Film Lab

- Nano Photonics Lab
- Semiconductor Process Design Lab
- Terahertz Photonics Lab
- Photonic Materials & Devices Lab
- Nano Photonic Devices Lab

- Nanocarbon Convergence Materials Lab
- Nanodevices and Materials for Energy Lab
- Polymer Energy Materials Lab
- Opto-electric device lab
- Emerging Materials & Devices Lab

Electronic Communication Engineering <u>Contact Information</u> Phone: +82-61-659-7230 Fax: +82-61-653-7706 E-mail: llubin@jnu.ac.kr URL: http://webgs.jnu.ac.kr

## Graduate Studies in Electronic Communication Engineering

The Department of Electronic Communication Engineering provides education that will prepare students to be the backbone of this localizing/globalizing society. Students will fully understand the electronic communication development process, and utilize state-of-the-art equipment as well as computer simulations that will develop their creative skills and get them accustomed to the working environment.

#### Degree Requirements

Both master's and Doctoral Programs are normally completed in 2 years. Students wishing to complete the programs in shorter durations are required to earn the necessary credits (24 for a master's and 36 for Ph.D.) and achieve a grade point average of at least 4.3 (out of 4.5). They will also need to obtain the recommendation of their academic adviser and pass the thesis qualification exam.

## What Do You Study?

Advanced Optical Communication Graph Theory Networks and Algorithms Network Programming Digital Design Digital Signal Processing Microwave and Millimeter Wave Engineering Microwave Communication System Microwave Circuit Design Advanced Coding Theory Distributed Operating Systems Sensor Engineering Principles of Underwater Sound Communication

#### Professors

Hee-jong Suh, Ph.D. [Professor, Computer Communication Networking, hjsuh@jnu.ac.kr]
Ki-Ryang Cho, Ph.D. Theory and Application of Antenna Piezoelectric Ceramic Application Technique Acoustic Engineering Advanced Wave Engineering Information Communication and Management Optimization Theory Computer Networks Computer Networking Advanced Circuit Theory Design of Digital Integrated Circuits Design of Data Converters VLSI Design Automation VLSI Digital Signal Processing Systems

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Seung-yeop Rhee, Ph.D.
 [Professor, Microwave Engineering, ysrsy@jnu.ac.kr]

- Dae-Ik Kim, Ph.D. [Professor, Integrated Circuit Design, daeik@jnu.ac.kr]
- Han-Seung Jang, Ph.D.

## **Laboratories**

- Electronic Measurement Lab
- Communication Engineering Lab
- Digital Lab

[Assistant Professor, IoT & Machine-to-Machine Communications, Smart Grid, hsjang@jnu.ac.kr]

- Electronic Circuit Lab
- Applied Electronic Lab
- Electrical and Electronic Lab

Department of Computer Engineering *Contact Information* Phone: +82-61-659-7250 Fax: +82-61-659-7259 E-mail: jangsj135@jnu.ac.kr URL: http://webgs.jnu.ac.kr

#### Graduate Studies in the Department of Computer Engineering

Leading the information-oriented society, computers are playing a major role in scientific calculation as well as computer communication, office automation, design automation, and artificial intelligence, all of which are crucial to future industry. In order to nurture computer-related human resources, the Department of Computer Engineering offers subjects in computer programs, digital systems, computer structure, databases, computer graphics, artificial intelligence, pattern acknowledgement, embedded systems, SOC design, data communication, and networks.

#### Degree Requirements

Both master's and doctoral programs are normally completed in 2 years. Students wishing to complete the programs in shorter durations are required to earn the necessary credits (24 for master's and 36 for Ph.D.) and achieve a grade point average of at least 4.3 (out of 4.5). They will also need to obtain the recommendation of their academic adviser and pass the thesis qualification exam.

## What Do You Study?

**Required Course** Research for Master's and Doctor's Degree **Major Courses** Object-oriented Systems Multimedia System Design Parallel Processing Architecture Interconnection Network System Advanced Computer Graphics Advanced Image Processing Advanced Artificial Intelligence Soft Computing Digital Integrated Circuits MOS Integrated Circuit Advanced Data Communication Advanced Operating System Advanced Database Topics in Supercomputer System Digital Signal Processing Advanced Multimedia Computer Vision

Advanced Pattern Recognition Artificial Intelligence Application VLSI System Design VLSI Test Advanced Multi Processor Architecture Advanced 3D Graphics Graphics Modeling Embedded System Design Advanced Pattern Recognition Artificial Intelligence Application Advanced Real Time Communication Systems Fault Tolerant Computer Systems Multimedia Computer Architecture Advanced Computer Vision Medical Image Processing Systems SoC Design Embedded Software Advanced Soft Computing Ubiquitous Sensor Network Advanced Ubiquitous

#### Mobile Communication

#### Wide Band Communication Networks

## Professors

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## Laboratories

- High Performance Computer Lab

- Image Processing Lab
- Embedded System Lab

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- Computer Application Lab

- Real-time Communication Lab

Electrical and Semiconductor Engineering *Contact Information* Phone: +82-61-659-7310 Fax: +82-61-659-7319 E-mail: 2song2@jnu.ac.kr URL: http://webgs.jnu.ac.kr

#### Graduate Studies in Electrical and Semiconductor Engineering

The Department of Electrical and Semiconductor Engineering is focused on research and development in specific fields, such as power systems, semiconductor and VLSI engineering, power electronics, vision and computer engineering, and automatic controls and mechatronics.

#### Degree Requirements

Master's candidates are required to earn 24 credits (15 credits in electrical and semiconductor engineering). A maximum of 9 credits (earned up to 5 years from the time of enrollment) may be transferred into the program from other graduate schools. Transfer credits are determined by the Department. Master's candidates are required to publish a minimum of one conference paper and one academic society paper. The student's academic advisor is selected by the Department.

### What Do You Study?

Required Course Research for Master's or Doctoral Degree Major Courses Advanced DSP Motion, Tracking and Stereo Vision VLSI Circuit Design Emotion Engineering Advanced Robust Control Robot and Machine Vision Advanced Microprocessor Reliability Engineering of Power System Stability Engineering of Power System Power Electronics Systems Advanced Power Electronics Power Electronics Project Analysis of Power Electronics Circuit Advanced Engineering Electromagnetics Advanced Electronic Display Engineering Advanced Electronics Advanced Information Security Probability Stochastic Process Theory Advanced Probability Control

Network Analysis and Synthesis Advanced Matrix Converter Multimedia Digital Signal Processing Thin Film Engineering Semiconductor Process Advanced Semiconductor Engineering Semiconductor Physics Advanced Non-linear Control Theory Industrial Safety Engineering Advanced Solid Electronic Device Engineering Advanced Optoelectronics Engineering Advanced Nano Integrated Circuit Engineering Neuro Computing Advanced Digital Image Processing Digital Control Engineering Regulation **Biometrics** System Advanced Linear Control Theory Plant Diagnosis Theory Sensor Engineering Renewable Energy System Dielectric Engineering Adaptive Control Engineering

Advanced Electrical Machinery Economic Engineering of Power System Advanced Power System Engineering Power System Simulation Power System Operation Intelligent Control Engineering Advanced Intelligent System Automatic Engineering Study

## Professors

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### Laboratories

- Power Electronics Lab
- Automatic Controls Lab
- Power Systems Lab
- Semiconductor and VLSI Lab

Green Energy Engineering Advanced Chaos Engineering Advanced Chaos Control and Synchronization Advanced Pattern Recognition Fuzzy-neuro Control Theory Advanced Plasma Engineering Advanced Modern Control Circuit Design and Simulation

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Seong-Jun Kang, Ph.D.
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- Non-linear Dynamics Lab
- Signal Processing and Computer Vision Lab
- VLSI Processing and Design Lab

Dept.of Mechanical Design Engineering <u>Contact</u> Information Phone: +82-61-659-7280 Fax: +82-61-659-7280 E-mail: terfuone@inu.ac.kr

#### Graduate Studies in Mechanical Design Engineering

The Department of Mechanical Design Engineering trains students in industrial technology theory and application methods. The Department fosters creativity and critical thinking amongst its students, in terms of mechanical engineering as the center of advanced technology. Graduates serve as prominent figures in government agencies and research institutions, servicing a broad range of important industries.

#### Degree Requirements

Master's candidates are required to earn 24 credits and successfully complete a research project. Ph.D. candidates are required to earn an additional 36 credits and successfully complete a research project.

#### What Do You Study?

Research for Thesis Random Data Machine Tool Research Advanced Manufacturing Processes Theory of Elasticity Advanced Vibration Theory Advanced Measurements Engineering Advanced Fluid Mechanics Advanced Thermodynamics Casting Mechanics of Composite Materials Vibration of Plate and Shell Noise and Vibration Engineering Advanced Automatic Control Advanced Robotics Boundary Layer Theory Advanced Combustion Engineering Finite Element Method Micromachine Nonlinear Vibration Theory of Composit Plates Turbulence Gas Dynamics Experimental Methods in Thermal Engineering Computational Fluid Dynamics Computational Turbulence Modelling Heat Power Aeroacoustics Multi-phase Flow Hydraulic and Pneumatic Control System Applied Mathematics Materials for Machines Fracture Mechanics Advanced Machine Design Continuum Mechanics Numerical Control Advanced Fluid Machinery Internal Combustion Engines Advanced Welding Process Mechanical Behavior of Materials Advanced Dynamics Numeral Stresses Analysis Experiment for Fluid Engineering Advanced Heat Transfer Advanced Thermal Engineering Numerical Analysis Structural Vibration Optimal Design

Application of Image Thermal System Design Energy Conversion Engineering Energy and Environment Convective Heat Transfer

## Professors

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Kang Chung, Ph.D.
[Professor, Noise and Vibration Engineering, Numerical Analysis and Structural Vibration, ckang@chonnam.ac.kr]
Seung-Uk Ko, Ph.D.
[Associate Professor Dynamics Control and

## Laboratories

- Control Engineering Lab
- Heat Engineering Lab
- Hydraulic Engineering Lab

Radiation Heat Transfer Transport Phenomena Turbo Machinery Tribology

Biomedical, kos2@jnu.ac.kr] • Young-Wan Kim, Ph.D. [Professor, Mechanical Design and Mechanics of Composite Materials, ywkim@jnu.ac.kr] • Ki-Seong Kim, Ph.D. [Professor, Heat and Particle Imaging Velocimeter, sngkim@jnu.ac.kr]

- Applied Mechanics Lab

- Materials Lab

Dept.of Product Mechanical Engineering *\_\_\_Contact Information* Phone: +82-62-659-7220 Fax: +82-62-659-7229 E-mail: dj3220@jnu.ac.kr URL: http://mechauto.inu.ac.kr/

#### Graduate Studies in Product Mechanical Engineering

The Department of Product Mechanical Engineering is an application field which is composed of multidisciplinary electronic and material engineering disciplines, based on mechanical engineering. Students in the Department of Product Mechanical Engineering study basic subjects of electronics and high technology materials after the completion of studying basic subjects which are required in mechanical engineering. Students also study car engines, chassis and the basic principles of cars as automotive-related disciplines.

#### Degree Requirements

Master's candidates are required to earn 24 credits and successfully complete a research project. Ph.D. candidates are required to earn an additional 36 credits and successfully complete a research project.

## What Do You Study?

Research for Thesis Advanced Dynamics Advanced Vibration Theory Advanced Solid Mechanics Experiment for Stress Analysis Advanced Combustion Engine Advanced Fluid Mechanics Applied Numerical Method of Engineering Advanced Automatic Control Advanced Working Machine Tribology

## Professors

Kyung-Jo Park, Ph.D.
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Chung-Youb Kim, Ph.D.
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[Professor, Thermal and Fluid Engineering,

Advanced Numerical Dynamics Advanced Vehicle Dynamics Finite Element Analysis Advanced Figure Mechanical Behavior Strength Design of Automotive Component Advanced Thermodynamics Advanced Heat Transfer Advanced Mechatronics Mechanical Instrumentation Theory and Application Advanced Manufacturing Special Machining

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- 140 -

# Laboratories

- Dynamics Lab
- Mechanics of Mechanics Lab
- Combustion Engine Lab

- Production Engineering Lab
- Control System Instrumentation Lab

Department of Refrigeration and Air-Conditioning Engineering

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## Graduate Studies in Refrigeration & Air-Conditioning Engineering

The Department of Refrigeration and Air-Conditioning Engineering aims to cultivate quality human resources in the field of refrigeration and air conditioning, development of heat exchangers and energy-saving machines, cryogenics, utilization of natural energy, and food refrigeration. There have been numerous research projects led by the Department's faculty members and involving numerous graduate students.

Scholarships are available for selected students along with opportunities to attend domestic and international conferences where students can learn about new research and developments in their respective fields and learn how to present themselves in international environments.

The Department of Refrigeration and Air-Conditioning Engineering provides graduate student exchange programs lasting from a month to a year with overseas universities including ACRC at the University of Illinois in the USA, and the Departments of Mechanical Engineering at the University of Tokyo and University of Waseda in Japan.

These exchange programs allow students a chance to improve their research skills and expand their experience with international researchers. Upon finishing a master's or Ph.D. Program, graduates are expected to contribute significantly to research and development on a national and global scale.

#### Degree Requirements

Master's candidates are required to earn 24 credits while Ph.D. candidates must earn 36 credits. Students are able to select their courses upon consulting their academic advisor.

As a general rule, graduate students are limited to earning 9 credits per semester, up to 2 semesters per year. Students who have transferred from other graduate schools may transfer up to 9 credits and 12 credits for master's and Ph.D. programs, respectively.

Master's and Ph.D. degree candidates subbit coursework, including the Korean language proficiency examination.

The Department encourages all students to present and publish research papers at international conferences and in journals.

Master's degree candidates have their theses assessed by three examiners while Ph.D. theses are assessed by five examiners.

Two of the five Ph.D. thesis examiners are from external organizations. Applicants are encouraged to select their supervisors by contacting faculty are required to pass one foreign language exam. Graduate students must pass examinations upon completing all members at Chonnam National University directly.

#### What Do You Study?

- Advanced Building Environmental Engineering 1, 2
- Advanced Air Conditioning 1, 2
- Advanced Engineering Mathematic 1, 2
- Advanced Air Conditioning Plan
- Advanced Air Conditioning Equipment and Design 1, 2
- Advanced Refrigeration Fluid Engineering 1, 2
- Advanced Refrigeration Equipment and Design 1, 2
- · Research for Master's or Doctoral Degree
- · Advanced Ship Refrigeration
- Advanced Noise Engineering
- Advanced Numerical Analysis
- Advanced System Optimal Design
- Advanced Food Freezing 1, 2
- Advanced Energy Utilizing Engineering 1, 2

### Professors

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- Ki-Won Park, Ph.D. [Professor, Air Conditioning Engineering,

## Laboratories

#### Laboratories

The Department of Refrigeration and Air conditioning Engineering has many Laboratories including the Refrigeration Engineering Lab, Heat Engineering Lab, Energy Engineering Lab, Air Conditioning Lab, Control and Instrumentation Engineering Lab, Food Refrigeration Lab, and Thermal and Fluid Engineering Lab.

- Advanced Energy
- Advanced Thermal Engineering 1, 2
- Advanced Heat Exchanger and Design 1, 2
- Advanced Thermal Engineering 1, 2
- Advanced Sanitary Provision 1, 2
- Advanced Fluid Engineering 1, 2
- Advanced Two-phase Flow 1, 2
- Advanced Automatical Control
- Advanced Material Engineering 1, 2
- Advanced Low Physical Properties Engineering 1, 2
- Advanced Cold Chain 1, 2
- Advanced Numerical Fluid Mechanics 1, 2
- · Advanced Control Measurements Engineering
- Advanced Vibration Engineering
- Advanced Ultra Cryogenics Engineering 1, 2

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- Young-Woo Shin, Ph.D.
   [Professor, Mechanical Engineering, (Material Forming), shin5381@jnu.ac.kr/+82-10-3785-3254]
- Yongseok Jeon, Ph.D. [Professor, Energy, Refrigeration and Heat Engineering, silverriver@jnu.ac.kr/ +82-10-4805-4647]

#### Heat Engineering Lab

The Heat Engineering Lab provides experimental equipment and measuring devices for heat transfer research. The research includes flow patterns and heat transfer characteristics of boiling and condensation inside micro/mini channels, heat transfer enhancement technology and effective heat exchanger design and development, heat transfer characteristics and energy consumption used in cryogenics refrige- ration, analysis of insulation performance, special quality of heat fluids, and energy saving studies.

#### **Energy Engineering Lab**

The Energy Engineering Lab provides students with energy conversion machines and measuring equipment for energy engineering research. Research in this lab includes district heating and cooling equipment, cogeneration systems, energy diagnosis of building and estimation of heat loss, development of new and potential energy, development of waste heat collection technology, energy saving operations, development of high efficiency heat pump systems, estimation of heat source and propriety examination, and solar energy studies.

#### Air Conditioning Lab

The Air Conditioning Lab provides experimental equipment for air-conditioning system research.

Topics studied in the Lab include comfort air and indoor environment control, building development, energy saving appliances, air and earth environment

#### **Refrigeration Engineering Lab**

The Refrigeration Engineering Lab provides students with sophisticated experimental and measurement equipment, used for drop-in testing of alternatives, pure and mixture refrigerants, development and improvement of various refrigeration cycles, cryogenics equipment, improvements protections, plumbing flow characteristic estimations, indoor heat environment assessments, heat storage air-conditioning systems, weather condition standardization for air-conditioning equipment, and windows air circulation development.

#### Control and Instrumentation Engineering Lab

The Control and Instrumentation Engineering Lab offers control and instrumentation test devices for graduate students. Research is conducted on operation enhancement of system controls for food and beverages storage, air conditioning environment control, performance improvement of equipment controls, efficient use of refrigeration equipment, solutions for industry control systems, engineering numerical analysis, and computer applications.

#### Food Refrigeration Lab

The Food Refrigeration Lab is specifically designed for students wishing to conduct research in the field of food refrigeration technology.

Research is carried out in the fields of operation development of food storage and circulation system, physical and chemical characteristics of food at low temperature storage, heat properties of material changes of food at cryogenics conditions, heat transfer, cryogenics and super conduction utilities application, thermodynamics characteristics of food of freezing processes, thermal diffusions coefficients by thermal conduction model estimations, thermal properties measurement to estimate freezing time of food, controlled atmosphere (CA) storage, and development of after-ripening control systems. Civil and Environmental Engineering \_\_Contact Information Phone: +82-61-659-7240, 7260 Fax: +82-61-659-7329, 7269 E-mail: hozilla@jnu.ac.kr, tmd1029@jnu.ac.kr URL: http://oce.jnu.ac.kr, http://environ.jnu.ac.kr

### Graduate Studies in Marine and Civil Engineering

Graduate programs in Marine and Civil Engineering aim to improve research activities in the fields of structuring engineering, geotechnical engineering, hydraulics, coastal engineering, transportation engineering, surveying and GIS toward enhancing industry productivity and preserving the natural environment. Quality engineers are produced by providing training in theory along with opportunities to apply this knowledge.

### Graduate Studies in Environmental Engineering

Environmental Engineering focuses on identifying and understanding environmental problems and designing appropriate solutions. Major research areas include air pollution control, water and wastewater treatment, bioremediation, hazardous waste management, and pollution prevention. Environmental engineers have the technical and scientific knowledge to identify, monitor, design, build and operate systems that protect the environment from damage and correct existing problems. Environmental engineers typically work in consulting firms, industries, state and federal agencies, universities or waste treatment companies.

### Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### **Doctoral Program**

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree as well as pass one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

### What Do You Study?

Marine and Civil Engineering Theory of Elasticity and Plasticity Finite Element Method Theory of Structural Stability Advanced Prestressed Concrete Advanced Reinforced Concrete Structural Dynamics Boundary Element Method Earthquake Engineering Reliability Engineering Advanced Applied Mathematics Design and Analysis of Special Structure Theory of Optimum Design Advanced Soil Mechanics Advanced Foundation Engineering Advanced Rock Mechanics Advanced Ocean Soil Mechanics Soil Improvement Method Theoretical Soil Mechanics Advanced Geodesy Liquefaction of Soil Ground Translation Site Investigation and Reinforcement Techniques Advanced Hydrodynamics Advanced Hydraulics Advanced Coastal Hydraulics Advanced Hydrology Coastal Hydraulic Models Advanced River Engineering Water Resource System Advanced Coastal Engineering Advanced Harbor Engineering Advanced Study on Transportation Engineering Transportation Policies Transportation Planning and Economy Traffic Engineering Advanced Study on Intelligent Transportation Systems Artificial Neural Networks Advanced Photogrammetry Advanced Remote Sensing

Advanced Geographic Information System Research for Master's Degree or Doctoral Degree Environmental Engineering Advanced Water and Wastewater Treatment Advanced Instrumental Analysis Advanced Air Pollution Control Equipment Design Modeling of Atmospheric Diffusion Advanced Atmospheric Chemistry Physical and Chemical Processes for Water and Wastewater Treatment Special Topics in Pollutant Mixing Advanced Industrial Gas Treatment Advanced Industrial Wastewater Treatment Advance Water Supply System Engineering Biological Processes for Water and Wastewater Treatment Noise Control Engineering Hydrological Simulation Advanced Water Quality Control and Management Combustion Gas and Particle Control Engineering Thermal System Design Engineering Advanced Water Treatment Plants Technique of Watershed Modeling Fluid Flow and Heat Transfer Design Engineering Advanced Hazardous Gas Treatment Advanced Hazardous and Industrial Waste Treatment Mobile Source Control Engineering Advanced Soil Pollution Management Advanced Integrate Waste Management Engineering Advanced Waste Treatment Engineering Advanced Wastewater Treatment Advanced Sewage System Engineering Design of Advanced Wastewater Treatment Plants Maintenance and Operation of Wastewater Treatment Plants Advanced Ocean Environmental Engineering Environmental Economics Environmental Toxicology Advanced Environmental Hydraulics

Advance Environmental Hydrology Numerical Analysis for Environmental Engineering Advanced Environmental System Engineering Advanced Environment and Combustion

# Professors

### Marine and Civil Engineering

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- Jong-in Lee, Ph.D. [Professor, Coastal and

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# **Environmental Engineering**

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- Eun Sik Kim, Ph.D. [Assistant Professor, Environmental Materials and Membrane Water Treatment]
- Min Jin Hwang, Ph.D.
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# Graduate Studies in Biotechnology and Chemical System Engineering

The Department of Biotechnology and Chemical System Engineering is open to all students interested in pursuing further studies in the fundamental and applied aspects of biotechnology. The Department's aim is to educate a new generation of young scientists with fundamental knowledge and state-of-the-art research skills to harness the potential of biotechnology for the development of human society in ways harmonious with the natural environment. Both master's and Ph.D. programs are offered.

The Major of Chemical Engineering has the educational aim of studying manufacturing processes of chemicals and operations for the conversion of raw materials into final products, as well as to cultivate creativity and a challenging spirit toward new things. To reach this goal, the department presents a curriculum that centers on teaching the basics in mathematics, physics and chemistry, which stem from the basis of natural science and on helping students to experiment and practice. The spectrum of research and educational opportunities in our department also includes environmental engineering, chemical reaction engineering, particle technology, electrochemical engineering, biochemical engineering, semiconductor processing, polymer and material engineering, The major has produced engineers who have greatly contributed to the nation's industrial development as some of sophisticated experts in inorganic and organic industrial fields including petrochemicals, fertilizers, acid-alkali, rubber, synthetic ibers, biosensor, fine chemicals, ceramics and fine polymers.

#### Degree Requirements

Master's candidates are required to earn 24 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Ph.D. candidates are required to earn an additional 36 credits with a grade point average of 3.0 (based on a 4.5 scale). Graduate students must also pass a comprehensive examination in three subjects within a specific major as well as a foreign language examination. All students must successfully complete a thesis presentation and defense and provide all required documents to the thesis committee. The thesis must be submitted in English or Korean. The thesis advisor must be a faculty member within the Department.

### What Do You Study?

### Biotechnology

Advanced Botany (3) Advanced Genetics (3) Topics in Functional Food (3) Topics in Bioreactor Engineering (3) Topics in Fermentation Technology (3) Bioresource Engineering (3) Topics in Ecology (3) Advanced Biochemistry (3) Topics in Breeding (3) Advanced Protein Engineering (3) Protein Chemistry (3) Advanced Immunology (3) Topics in Microbial Engineering (3) Advanced Microbiology (3) Molecular Genetics (3) Advanced Industrial Microbiology (3) Advanced Bioseparation (3) Advanced Cell Technology (3) Advanced Food Engineering (3) Ichthyology (3) Special Topics in Genetic Engineering 2 (3) Special Topics in Antioxidants (3) Advanced Zoology (3) Advanced Molecular Biology (3) Advanced Cell Culture (3) Advanced Food Biotechnology (3) Special Topics in Culture Engineering (3) Bioprocess Engineering (3) Special Topics in Food Biotechnology (3) Advanced Bioactive Material Fermentation Technology (3) Special Topics in Breeding (3) Special Topics in Marine Ecology (3) Special Topics in Enzyme Technology (3) Special Topics in Controlling Products (3) Topics in Microbial Engineering 2 (3) Advanced Microbial Physiology (3) Radiation Biology (3) Advanced Culture Engineering (3) Advanced Biomembranes (3) Special Topics in Genetic Engineering 1 (3) Advanced Economic Botany (3) Phycology (3) Research for Master's or Doctoral Degree (1)

#### **Chemical System Engineering**

Elective Courses Advanced Fine Chemical Process Advanced Chemical Reaction Engineering Advanced Chemical Engineering Thermodynamics Advanced Polymer Chemistry Advanced Fluid Mechanics Advanced Physical Chemistry Fluid Phase Equilibria Advanced Process Control Reaction Kinetics Properties of Polymer Adsorption Technology Advanced Engineering Mathematics Advanced Organic Chemistry The Treatment of Hazardous Materials Advanced Chemical Engineering Safety Rubber Engineering Advanced Polymer Synthesis Catalytic Reaction Engineering High Pressure Chemical Processes Advanced Catalyst Engineering Interfacial Phenomena New Material Engineering Advanced Reactor Analysis and Design Process Analysis and Simulation Properties of Gases and Liquids Advanced Environmental Chemical Engineering Polymer Rheology Energy Engineering C-1 Chemistry Advanced Polymer Materials Polymer Blend Advanced Supercritical Fluids Engineer Topics in Physical Chemistry Advanced Chemical Engineering Materials Advanced Nano and Bioengineering Advanced Biochemical Engineering Advanced Bioanalytical Chemistry Advanced Biopolymer Advanced Tissue Engineering

### Professors

#### Biotechnology

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### Chemical Engineering

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Heon-Ho Jeong, Ph.D.
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# Laboratories

- Plant Genetics and Breeding
- Genetic Resources and Molecular Biology
- Food Biotechnology
- Biological Pharmaceutics
- Cell Culture Technology
- RNA genomics Lab

#### Chemical Engineering

- Polymer Chemistry Lab
- Supervisor: Youn-Sop Kim
- Catalyst and Chemical Reaction Engineering Lab

- Supervisor: Ho-Joon Seo
- Physical Chemistry Lab
- Supervisor: Oh-Yun Kwon
- Supercritical Fluids Thermodynamics and
- Chemical Engineering Safety Lab
- Supervisor: Hun-Soo Byun
- Chemical Engineering Materials Preparation Process and Control Lab
- Supervisor: Soon-Do Yoon
- Bio-application Process Lab
- · Supervisor: Heon-Ho Jeong

Department of Architecture <u>Contact Information</u> Phone: +82-61-659-7330 Fax: +82-61-659-7339 E-mail: msg345@jnu.ac.kr URL: yarchi.jnu.ac.kr

# Graduate Studies in Architecture

The Department of Architecture aims to understand the basis of architectural development considering the background of architecture's comprehensive character, rapid innovation of technology, and recognition of various cultures and values. The department cultivates the ability to think critically and comprehensively among its students. In addition, students are encouraged to understand nature, society, and technology through studies in architecture.

### Degree Requirements

Supervisors are assigned to students based on the preferences of both students and faculty members. Faculty members are limited to supervising up to 5 Master's degree candidates and 3 Ph.D. candidates. Faculty members may not teach more than 2 courses per semester with the exception of jointly taught courses. Students may earn up to 9 credits each semester. Master's degree candidates must earn a total of 24 credits, of which 12 must be from the Department. Ph.D. candidates are required to earn at least 18 credits from the Department.

Among the qualification tests for all graduate students will be a foreign language examination. Students will have to present a thesis plan before submitting the actual thesis. Supervisors will sit in on a thesis supervision committee 6 months prior to submission of a Master's degree thesis and 1 year before the submission of a Ph.D. thesis.

### What Do You Study?

Computer-aided Architectural Design Theory of Architectural Planning Methodology of Architectural Planning Theory of Architectural Space Theory of Architectural Project Theory of Architectural Design 4 Methodology of Architectural Design Psychology of Architecture Architectural Environment Theory of Design's Valuation Theory of Architectural Design 3 Methodology of Urban Design 2 Theory of Welfare Facility's Design Theory of Waterfront Theory of Medical Facility's Design Japan and East History of Architecture Theory of Education Facility's Design Research for Master's Degree Theory of Complex's Design Theory of City Planning Theory of Urban Design Methodology of Urban Design 1 Theory of Architectural Beauty Aesthetics of Architecture Theory of Architectural Design 1 Theory of Architectural Design 2 Theory of Japan and East of Architecture Theory of Garden's Design Theory of Housing Theory of Korea's Architecture

### Theory of Modern Architecture

# Professors

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- Chan Park, Ph.D.
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- Joo-seong Jeong, Ph.D. [Professor,

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Kum-ho Chung, Ph.D.
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Jun Taek Kim, Ph.D.
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# What is Applied Plant Science?

Applied Plant Science deals with scientific theories and applied techniques in plant production harmonized with nature and agro-ecosystems, which ultimately serve as the basis of the lives of human beings. Its goal is the clarification of the plant life phenomena from plant molecular levels to those of the community through understanding of heredity, environments, and their inter-relationships, in order to secure both the productivity and quality of crop plants.

#### Degree Requirements

Master's degree candidates are required to earn at least 24 credits. Ph.D. candidates are required to earn additional 36 credits.

### Department of Applied Plant Science at Chonnam National University

The Department of Applied Plant Science educates students with an interest in agronomic crops. It conducts research and offers courses in the subjects of Crop Science, Agro-Ecology, Crop Breeding, Industrial/Medicinal Crops, Crop Physiology, and Plant Biotechnology. The Department has progressed into exciting new and nontraditional areas in recent years. Environmental concerns have redirected much of the emphasis on both teaching and research. Faculty members are involved in active research projects in crop production and ecology, genetic improvement of crops for environmental reclamation, best management practices, and developing advanced bio-techniques in industrial/medicinal crops. Agronomy is a blend of teaching and research in the basic and applied, traditional and nontraditional aspects of agriculture. Students with graduate degrees will have an opportunity to go on to rich and rewarding careers, being challenged to contribute to the world in which they live.

The Department of Applied Plant Science that houses the Agronomy Program, offers students hands-on training. Learning is enhanced by practical training in the campus fields and campus greenhouses as well as in the facilities at Naju. Faculty members who teach and supervise students are also devoted to meaningful scientific progresses, enabling students to participate in significant research projects in various areas of research.

### What Do You Study?

Advanced Agricultural Meteorology (3) Advanced Agricultural Ecology (3) Advanced Agricultural Genetics (3) Advanced Crop Breeding (3) Advanced Crop Ecology (3) Advanced Crop Molecular Breeding (3) Advanced Crop Physiology (3) Advanced Crop Production (3) Advanced Crop Stress Physiology (3) Advanced Environmental Vegetation Management (3) Advanced Industrial Crop Science (3) Advanced Medicinal Plant (3) Advanced Molecular Biology (3) Advanced Plant Genetic Engineering (3) Advanced Plant Tissue Culture (3) Advanced Rice Culture (3) Advanced Upland Crop Science (3) Arableland Ecology (3) Bio-metrical Breeding (3) Crop Seed Physiology (3) Experimental Design (3) Metabolism in Crop Plant (3) Metabolism of Natural Products (3) Plant Breeding for Unfavorable Environment (3) Plant Cell Engineering (3)

# Professors

- Han-Yong Kim, Ph.D.
   [Rice Crop Science, Principles of Crop Cultivation, Agricultural meteorology, hyk1020@jnu.ac.kr]
- Jonghan Ko, Ph.D.
   [Crop Ecology, Agricultural Remote Sensing, Crop Growth Modeling, jonghan.ko@jnu.ac.kr]
- Ok Ran Lee, Ph.D. [Special Crop Science,

### Laboratories

- Rice Crop Science Lab
- Crop Environmental Ecology Lab
- Special Crop Science Lab

- Plant Growth Regulation (3) Plant Physiological Genetics (3) Plant-water Relationships (3) Production of Functional Materials in Plants (3) Research Guidance 1 (3) Research Guidance 2 (3) Research Guidance 3 (3) Research Training 1 (3) Research Training 2 (6) Seminar in Crop Breeding (3) Seminar in Crop Environment (3) Seminar in Crop Growth and Development (3) Seminar in Rice Culture (3) Seminar in Seed Production (3) Special Studies in Crop Ecology (3) Special Studies in Crop Science (3) Special Topics to Crop Physiology (3) Specific Topics in weed Science (3)
  - Secondary Metabolite Biosynthesis and Transport, Plant Growth and Development, mpizlee@jnu.ac.kr]
- Bo-Keun Ha, Ph.D.
   [Crop Genetices & Breeding, bkha@jnu.ac.kr]
- Jaeil Cho, Ph.D.
   [Climatological Crop Physiology, chojaeil@chonnam.ac.kr]
- Crop Breeding Lab
- Climatological Crop Physiology Lab

Department of Horticulture <u>Contact Information</u> Phone: +82-62-530-2060 Fax: +82-62-530-2069 E-mail: yohong@jnu.ac.kr URL: http://hort.jnu.ac.kr/

# Graduate Studies in Department of Horticulture

Laboratories in the Department of Horticulture provide an opportunity for students to learn knowledge and technology required to be a horticultural specialist in the horticulture industry. The main areas of research are greenhouse horticulture, floriculture, pomology, plant propagation, plant breeding and plant physiology. The combination of theories and practical training enables students to experience advanced and applied technologies prevalent in the horticulture industry.

### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits.

### What Do You Study?

#### **Major Courses**

Advanced Floriculture (3) Advanced General Genetics (3) Advanced Greenhouse Horticulture (3) Advanced Horticultural Crop Breeding (3) Advanced Molecular Breeding of Horticultural crops (3) Advanced Nutrition (3) Advanced Plant Physiological Ecology (3) Advanced Plant Tissue Culture (3) Advanced Postharvest Physiology of Horticultural Crops (3) Advanced Seed Sciences and Technology (3) Advanced Technology for hydroponic culture (3) Advanced Vegetable Crops (3) Crop Growth Modeling in Greenhouse Crops (3) Global Trend in GMO technology and market (3) Grapes and Wine Science (3) Greenhouse Climate Control (3) Horticultural Production System (3) Horticultural Therapy (3) Introductory Cource of Flower Breedomics (3)

Introductory Course about Risk Assessment of GMOs (3) Organic Horticulture (3) Physiology of Environmental Stress in Horticultural Crops (3) Plant Factory system (3) Plant Functional Compound Sciences (3) Plant Metabolomics (3) Plant Propagation (3) Plant Resources (3) Research Guidance 1 (3) Research Guidance 2 (3) Research Guidance 3 (3) Small Fruit Production (3) Special Topics in Applied Ornamentals (3) Special Topics in Horticultural Statistics (3) Special Topics in Plant Physiology (3) Tropical Fruit Science (3)

# Professors

- TaeHo Han, Ph.D.
  [Floriculture, hanth@jnu.ac.kr, +82-62-530-2066]
- JeongHyun Lee, Ph.D.
  [Greenhouse, leetag@jnu.ac.kr, +82-62-530-2064]
- Sunggil Kim, Ph.D.
   [Horticultural Crop Breeding & Genetics, dronion@jnu.ac.kr, +82-62-530-2061]

SangHyeon Lee, Ph.D.
[Propagation of Horticultural Crops, pear@jnu.ac.kr, +82-62-530-2067]
KangMo Ku, Ph.D.
[Horticultural Crop Physiology, ku9@jnu.ac.kr, +82-62-530-2065]

# Laboratories

This Lab meets the demands of horticultural specialists and students in ornamental and pomological areas. Among the research conducted is in regards to eco-physiological mechanisms of individual responses for the adaptive and ecological capacity of any given plant population. Plant breeding theories and basic laboratory principles are also taught.

Department of Applied Biology <u>Contact Information</u> Phone: +82-62-530-2070 Fax: +82-62-530-2079 E-mail: yckimyc@jnu.ac.kr URL: http://agribio.jnu.ac.kr/

### Graduate Studies in Department of Applied Biology

The Department of Applied Biology at Jeonnam National University is composed of 3 main fields: Plant Pathology, Entomology, and Stress Biology. The educational goal at Department of Applied Biology is to foster professional individuals who learn both basic and applied sciences on plant response to pathogens, agricultural pests, and environmental stresses that significantly diminish plant and crop productivity.

Plant Pathology field focuses mainly on plant-pathogen (bacteria, fungi, virus) interactions, molecular genetics to understand mechanisms and biological control of plant diseases, and ecology and evolutionary biology of plant-associated microbes. Entomology field focuses mainly on the damage analysis and integrated pest management by the fundamental studies of classification, phylogeny, chitin biotechnology, and ecology of insect pests. Interactions between microbial natural enemy and insect pests are also studied for the eventual biological control of agricultural insect pests. Stress Biology field focuses mainly on the identification and determination of potential genes involved in plant responses to environmental stresses (drought, high and low temperatures, salt, UV), which would provide novel means to develop stress-tolerant agronomic crops.

The Department's curricula cover all necessary subjects for basic and applied sciences. We will educate students with a vision of becoming leading scientists in future agriculture.

### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits.

# What Do You Study?

#### **General Courses**

Advanced Scientific Communication and Writing Scientific Papers (3)

### **Major Courses**

Microbial Genetics (3) Advanced Plant Virology (3) Biological Control Of Plant Pathogens (3) Biological Control of Insect Pest (3) Insect Natural Enemy (3) Plant Molecular Biology (3) Plant Pathogenic Bacteriology (3) Physiological Plant Pathology (3) Advanced Plant Environmental Stress (3) Nucleic Acid Biochemistry (3) Protein Biochemistry (3) Plant Functional Genomics (3) Plant Nematology (3) Fungal Diseases of Plants (3) Plant Growth Regulator (3) Advanced plant molecular biotechnology (3) Insect Molecular Genetics (3) Insect Molecular Systematics (3) Microbial genetics (3) Molecular Biology Lab. (3) Insect Immunology (3) Insect Protein Purification (3) Plant Biochemistry (3) Research Techniques in Plant Pathology (3) Diagnosis of Plant Diseases (3) Insect Molecular Ecology (3) Biological Statistics and Field Experiment (3) Plant Disease Control (3) Disease of Crop Plants (3) Plant Pathology Lab. (3) Advanced Molecular Plant Pathology (3) Seminar in Plant Pathology (3) Vector Biology (3) Insect Molecular Physiology (3) Insect Integument Biology (3) Gene Sliencing and Functional Genomics in Insect

# Professors

- Young-Cheol Kim, Ph.D. [Plant Pathology, yckimyc@jnu.ac.kr]
- Hun-Seung Kang, Ph.D.
   [Plant Molecular Biology, hskang@jnu.ac.kr]
- Yeon-Soo Han, Ph.D. [Insect Pathology, hanys@jnu.ac.kr]
- Cheol-Soo Kim, Ph.D.
   [Plant Functional Genomics, cskim626@jnu.ac.kr]

### Laboratories

- Plant Pathology Lab
- Plant Molecular Biology Lab
- · Insect Pathology Lab
- Plant Molecular Biology Lab
- Plant Functional Genomics Lab
- Insect Molecular Phylogenetics and Ecology Lab
- · Insect Chitin Biotheonology Lab
- · Plant Virology Lab

Integrated Pest Management (3) Plant Volatile Compound and Natural Enemy Biology (3) Advanced Industrial Entomology (3) Advanced Insect Biochemistry and Molecular Biology (3) Crop Protection Colloquium (3) Crop Protection and Plant Quarantine Seminar (3) Advanced Crop Production and Management (3) Research Guidance 1 (3) Research Guidance 2 (3) Research Guidance 3 (3) Plant Disease Epidermiology (3) Advances in Insect Molecular Diagnosis (3) Methods in Plant Pathology (3) Advanced Plant Microbe Interactions (3)

- Kwang-Yeol Yang, Ph.D. [Molecular Plant Pathology, kyyang@jnu.ac.kr]
- Iksoo Kim, Ph.D.
   [Insect Molecular Phylogenetics and Ecology, ikkim81@jnu.ac.kr]
- Yasuyuki Arakane, Ph.D.
   [Insect Chitin Biothecnology, Yasuyuki Arakane@jnu.ac.kr]
- Rae-Dong Jeong, Ph.D.
   [Plant Virology, jraed2@jnu.ac.kr]

# Forestry

\_\_\_Contact Information Phone: +82-62-530-2080 Fax: +82-62-530-2089 URL: http://forestry.jnu.ac.kr

### Graduate Studies in Forestry

Forests occupy 65% of the land area in Korea. The mission of the Department of Forestry is to educate and engage the next generation of scholars, practitioners, and users of forests, to conduct distinctive problem-solving and fundamental research on the nature and use of forests and related resources, and to share discoveries and knowledge with others. The Department of Forestry is committed to enhancing understanding, effective management, and sustainable use of forests to support the national economy and public welfare, and to conserve the forest ecosystem.

### Degree Requirements

Master's degree candidates are required to earn 24 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Students will normally take 2 years to complete a Master's Program, during which they must pass a comprehensive exam in 3 subjects and a foreign language exam (English). Master's theses may be submitted in English or Korean. Ph.D. Candidates are required to earn 36 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Students will normally take a minimum of 3 years to complete a Ph.D. program, during which they must pass a comprehensive exam in 4 fields and a foreign language exam (English). Ph.D. theses may be submitted in English or Korean.

### What Do You Study?

Advanced	Economic Plants (3)
Advanced	Mycorrhizae (3)
Computer	Science of Agriculture (3)
Advanced	Erosion Control (3)
Advanced	Forest Management (3)
Advanced	Forest Measurement (3)
Advanced	Forest Entomology (3)
Advanced	Forest Protection (3)
Advanced	Forest Ecology (3)
Advanced	Forest Plant Systematics (3)
Advanced	Seed Science of Forest Plant (3)
Advanced	Forest Genetics (3)
Advanced	Forest Policy (3)
Advanced	Forest Soils (3)
Advanced	Forest Valuation (3)

Advanced Dendrology (3) Experimental Design (3) Advanced Forest Economics (3) Advanced Silviculture (3) Regression Analysis (3) Animal Population Ecology (3) Advanced Tree Pathology (3) Seminar in Forestry (3) Advanced Administration (3) Advanced Tree Physiology (3) Advanced Urban Forestry (3) Advanced Forest Civil Engineering (3) Advanced Forest Zoology (3) Advanced Biochemistry (3) Seminar in Forest Policy (3) Advanced Forest Cooperatives (3) Advanced Global Forestry (3) Advanced Law of Forest Environment (3) Advanced Mycology (3) Advanced Mushroom Cultivation (3) Advanced Geographical Information Systems (3) Advanced Landscape Planning (3) Forest Influences (3) Ecotourism (3) Forest Hydrology and Watershed Management (3) Advanced Warm-temperate Forests Tending (3) Forest Soil Conservation (3) Forest Recreation Planning and Management (3) Research for the Master's or Doctoral Degree (3)

# Professors

- Ki-Wan An, Ph.D. [Professor, Forest Policy, kiwan@jnu.ac.kr, 062-530-2085]
- Kye-Han Lee, Ph.D. [Professor, Forest Ecology, khl@jnu.ac.kr, 062-530-2087]

Young-Sang Ahn, Ph.D.
 [Associate Professor.
 Forest Environment Conservation Engineering,

ysahn@jnu.ac.kr, 062-530-2081]

- Mi-Young Noh, Ph.D. [Assistant professor, Forest Protection, annemi@jnu.ac.kr, 062-530-2083]
- Hyun-Jun Kim, Ph.D.
   [Assistant professor, Silviculture, hjkim0837@jnu.ac.kr, 062-530-2082]

# Laboratories

#### **Forest Policy Lab**

Research is carried out on forest resource management, related policies, planning of forest village development, usage pattern of recreation forests, and development of forest cooperatives.

### Forest Ecology Lab

Research is carried out on soil carbon inventory, soil-plant available water, and forest water budgets. Other research areas include Riparian Forest Buffer, Agro-forestry, and Urban forestry.

### Forest Environment Conservation Engineering Lab

Our laboratory goal is to elucidate the forest landscape functions as major environmental resources of forest biosphere with integration of natural and social scientific base, to build theory for renovation of disturbed and ruined environment to develop practical technologies.

# Landscape Architecture

<u>Contact Information</u> Phone: +82-62-530-2100 Fax: +82-62-530-2109 E-mail: cnula3@jnu.ac.kr URL: http://jnula.jnu.ac.kr/

### Graduate Studies in Landscape Architecture

The educational aim of Landscape Architecture is to train landscape architects who have detailed knowledge and understanding of landscape planning, design, construction, and management. Through theoretical study and practice, they are able to create and conserve aesthetically beautiful natural landscapes with concern for ecological stability, social pleasantness, and the artificial environment. Landscape study at Chonnam National University offers the following courses: regional ecosystem planning and management, open space planning, leisure space planning, urban planning, site planning, park planning, detailed design of outdoor space of buildings, roads, and plazas. We also offer research on the methodology for design and planning to analyze visual, functional, human behavioral, and social factors, and on the history of landscape architecture, ecology, landscape engineering, construction technology, landscape plants, and landscape plant design. Students develop traditional landscape techniques of planning, design, and management studied in undergraduate courses. They are also provided an opportunity to study advanced environmental planning, design, and management based on advanced computer graphics and GIS.

# Degree Requirements

Master's degree candidates are required to earn 24 credits and submit a thesis, normally over a period of 4 semesters.

Landscape Planting Design (3)

### What Do You Study?

#### **Major Courses**

Advanced Site Planning (3)	Advanced Landscape Gardening (3)
Advanced Landscape Engineering (3)	Advanced Forest Recreation Planning (3)
Landscape Architectural Structure (3)	Advanced Urban Landscape Planning (3)
Research Methods in Lnadscape Architecture (3)	Urban and Regional Ecosystem Planning (3)
Environmental Planning and Management with GIS (3)	GIS Programming (3)
Landscape Architectural Construction (3)	Water Pollution and Environmental Impact
Advanced Theories on Landscape	Assessment (3)
Maintenance (3)	Park Planning and Ecological Engineering (3)
Advanced Urban Open Space Planning (3)	Advanced Planning of Natural Environment
Advanced History of Oriental Landscape	Restoration (3)
Architecture (3)	Natural Landscape Planning and Management (3)
Advanced History of Western Landscape	Urban Landscape Planning and Management (3)
Architecture (3)	Universal Design (3)
Ecology in Landscape Plants (3)	Advanced Issues in Landscape Design (3)

Participating Landscape Design Theory (3) Integrated Environmental Design (3) Advanced Ecological Restoration and Ecological Engineering (3)

# Professors

- Tong-Buhm Cho, Ph.D. [Professor, Landscape Design, tobcho@jnu.ac.kr]
- Ki-Yeol Lee, Ph.D. [Assistant Professor, Landscape

# Laboratories

- Environment Planning Lab (Phone: +82-62-530-2101)
- Landscape Design Lab (Phone: +82-62-530-0319)

Engineering, kylee@jnu.ac.kr] • Eun-Il Kim, Ph.D. [Associate Professor, Environmental Design, eikim@jnu.ac.kr]

- Landscape Architecture Engineering Lab (Phone: +82-62-530-2103)
- Environment Open Space Planning Lab

Wood Science and Engineering <u>Contact Information</u> Phone: +82-62-530-2090 Fax: +82-62-530-2099 URL: http://wood.jnu.ac.kr

# Graduate Studies in the Department of Wood Science and Engineering

In an era that focuses on lowered carbon emission and environmentally friendly construction materials, the study of wood science is becoming increasingly important. Wood science and engineering is a comprehensive field that combines wood anatomy, chemistry, physics, mechanics and wood architecture disciplines for the study of resource development, education, research and training of talented individuals.

Our field is divided into wood engineering and wood chemistry subfields. The wood engineering field specializes in the study of processing, producing and mechanical analysis of wood resources for green construction. We provide the techniques and theories needed to analyze the physical and mechanical characteristics of lumber in order to evaluate its quality for market pricing. We also research different methods for utilizing wood.

The wood chemistry field studies the mechanism involved in the physical and chemical damage of lumber as well as the structure and composition of wood for the use of renewable energy production. Furthermore, we research and analyze wood composition and the industrial application of timber. There are many different career paths available to our students after graduation. Work opportunities exist in various green industries involved in wood architecture, furniture, instruments and pulp production.

### Degree Requirements

Students must complete 24 credits and submit a master's thesis in order to receive their degree.

### What Do You Study?

History of Furniture (3)	Advanced in Bioenergy Science (3)
Design of Wood Structure (3)	Furniture Design (3)
Advanced Wood Processing (3)	Musical Instruments Design (3)
Advanced Wood Industry Management (3)	Advanced plant and wood science Biotechnology (3)
Advanced Wood Physics (3)	Advanced Pulp and Paper Technology (3)
Advanced Wood Preservation (3)	Advanced Pyrolysis of Wood (3)
Wood-Water Relationship (3)	Extractive chemistry (3)
Advanced Wood Anatomy (3)	Paper Processing, Packaging and Logistics (3)
Advanced Course of Composite Materials (3)	Toppic in Forest Microbiology (3)
Electron Microscope in Wood Science (3)	Topics in Biorefinery (3)
Advanced Chemistry Of Wood (3)	Combustion of Forest Biomass (3)
Applied Mechanics of Wood & Wood-based	Advanced Wood Mechanics (3)
Material (3)	Wood engineering (3)
Maintenance of Woody Cultural Properties (3)	Green Wood construction (3)

Academic writing in wood science (3)

# Professors

- Woo-Yang Chung, Ph.D.
   [Professor, Wood Furniture and Musical Instruments Engineering, wychung@jnu.ac.kr]
- Hyoung-Woo Lee, Ph.D. [Professor, Wood Processing and Machineries, hwlee@jnu.ac.kr]
- Jongsik Kim , Ph.D [Wood Anatomy and Preservation jongsik.kim@jnu.ac.kr]

### Chemical Analysis of Wood (3)

- Jae-Won Lee, Ph.D.
  [Professor, Wood Chemistry, Bioenergy, ljw43376@jnu.ac.kr]
  Gi-Young Jeong, Ph.D.
- [Professor, Wood Engineering, gjeong1@jnu.ac.kr]

# Laboratories

- Wood Acoustics and Vibration Lab (Phone: +82-62-530-0294)
- Wood Processing System Engineering Lab (Phone: +82-62-530-2095)
- Wood Chemistry Lab

(Phone: +82-62-530-0289)

- Timber Engineering Lab
- (Phone: +82-62-530-2107)
- Wood Anatomy Lab

# Agricultural Chemistry

<u>Contact Information</u> Phone: +82-62-530-2130 Fax: +82-62-530-2139 E-mail: mindzero@jnu.ac.kr URL: http://agrochem.jnu.ac.kr,

### Graduate Studies in Agricultural Chemistry

The Department of Agricultural Chemistry focuses on studies in chemical and biological applications to agricultural and environmental systems. The Department is composed of seven main Laboratories: Soil Science and Microbiology (Professor Kil-Yong Kim), Environmental Pesticide Science (Professor In Seon Kim), and Environmental Microbiology (Professor Hyang Bum Lee) and Plant Resources Science(Professor Woo Jin Jung), and Plant Growth Regulators Science(Professor Jin Cheol Kim) and Biofertilizer(Professor Yeonjong Koo).

### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn 60 credits including credits earned in a Master's Program. Students are allowed to transfer up to 9 credits into the master's program. Master's theses should be submitted by May or October of each year. Doctoral theses should be submitted by March or September.

Graduate students must achieve a grade of C or better for all courses, and earn a cumulative average of B or better to be awarded a degree. Candidates will be awarded a degree upon fulfilling all requirements, including the foreign language requirement, and submitting a thesis for approval. The foreign language and comprehensive examinations are held in August or February.

# What Do You Study?

Advanced Course of Instrumental analysis (3)	Advanced Enzyme Chemistry (3)
Advanced Agricultural Environment Chemistry (3)	Pheromone Chemistry (3)
Advanced Analytical chemistry (3)	Advanced Industrial Microbiology (3)
Molecular Cell Biology (3)	Biochemistry of Plant Pathology (3)
Advanced Fertilizers (3)	Advanced Plant Growth Regulators (3)
Fungicide Chemistry (3)	Advanced Biochemistry (3)
Insecticide Chemistry (3)	Advanced Environmental Ecology (3)
Biopolymer Chemistry (3)	Advanced Natural Material Science (3)
Advanced Biotechnology (3)	Seminar in Agricultural Chemistry 1 (3)
Experimental Design (3)	Seminar in Agricultural Chemistry 2 (3)
Advanced Organic Chemistry (3)	Advanced in Biological and Environmental
Advanced Soil Microbiology (3)	Chemistry (3)
Soil Biochemistry (3)	Advanced Environmentally-Friendly Agriculture (3)
Soil Organic Matters (3)	Advanced Plant Resources Science (3)
Environmental Toxicology (3)	Biopesticide Science (3)

Applied Plant Resources Science (3) Environmental Soil Science (3) Applied Environment Agriculture Science (3) Mycotoxicology (3)

# Professors

- Kil-Yong Kim, Ph.D.
  [Soil Science, kykim@jnu.ac.kr, 062-530-2138]
- In Seon Kim, Ph.D.
   [Environmental Pesticide Science, mindzero@jnu.ac.kr, 062-530-2131]
- Hyang Burm Lee, Ph.D. [Environmental Microbiology, hblee@jnu.ac.kr, 062-530-2136]

# Laboratories

- Soil Microbiology Lab (Phone: +82-62-530-2138)
- Plant Growth Regulators Science Lab (Phone: +82-62-530-2132)
- Plant Resource Science Lab (Phone: +82-62-530-3960)

Advanced Plant Diseases (3) Plant Nutrition Physiology (3) Startup Bussiness of Agricultural Chemistry 1 (3) Startup Bussiness of Agricultural Chemistry 2 (3)

- Woo Jin Jung, Ph.D. [Plant Resources Science, woojung@jnu.ac.kr, 062-530-3960]
- Jin-Cheol Kim, Ph.D.
   [Plant Growth Regulators Science, kjinc@jnu.ac.kr, 062-530-2132]
- YeonJong Koo, Ph.D. [Assistant Professor, Biofertilizer, yeonjong@jnu.ac.kr]
- Environmental Pesticide Science Lab (Phone: +82-62-530-2131)
- Environmental Microbiology Lab (Phone: +82-62-530-2136)
- Biofertilizer Lab (Phone: +82-62-530-2133)

Food Science and Technology <u>Contact Information</u> Phone: +82-62-530-2140 Fax: +82-62-530-2149 E-mail: a0184@jnu.ac.kr URL: http://foodsci.jnu.ac.kr/

# Graduate Studies in Food Science and Technology

The Department of Food Science and Technology focuses on studies concerning the chemical, microbiological, and functional side of food and processing, and preservation of food. The Department is composed of six main Laboratories: Food Engineering, Food Processing and Preservation, Food Microbiology, Food Nutrition and Functional Food, Food Chemistry, and Food Fermentation and Enzyme Engineering.

# Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn 60 credits including credits earned in a Master's Program. Students are allowed to transfer up to 9 credits into the master's program. Master's theses should be submitted by May or September of each year. Doctoral theses should be submitted by March or September.

Graduate students must achieve a grade of C or better for all courses, and earn a cumulative average of B or better to be awarded a degree. Candidates will be awarded a degree upon fulfilling all requirements, including the foreign language requirement, and submitting a thesis for approval. The foreign language and comprehensive examinations are held in April or October.

### what Do You Study?

Advanced Sensory Evaluation of Foods (3)	Advanced Research of Food Technology(III) (3)
Computer Science of Agriculture (3)	Literature Review in Food Science (3)
Protein Foods (3)	Advanced Food Sensory Evaluation (3)
Microbial physiology (3)	Food Function (3)
Advanced Fermentation Technology (3)	Advanced Food Freezing Technology (3)
Fermented Foods (3)	Food Toxicology (3)
Advanced Fermentation Chemistry (3)	Physical Properties of Foods (3)
Molecular Biotechnology (3)	Rheology of Foods (3)
Advanced Biochemical Engineering (3)	Advanced Food Microbiology (3)
Advanced Biochemistry (3)	Food Color & Flavor Chemistry (3)
Literature Review in Food Technology (3)	Advanced Food Biotechnology (3)
Paper seminar of Food Engineering 1 (3)	Food Ingredient Technology (3)
Paper seminar of Food Engineering 2 (3)	New product development (3)
Advanced Food Engineering (3)	Thermal Processing of Foods (3)
Advanced Research of Food Technology( $I$ ) (3)	Advanced Food Hygiene (3)
Advanced Research of Food Technology( $II$ ) (3)	Post Harvest Physiology of Food Crops (3)

Advanced Food Preservation (3) Advanced Food Process Engineering (3) Food Additives (3) Advanced Statistics for food science (3) Advanced Food Packaging (3) Advanced Food Research(I) (3) Advanced Food Research(I) (3) Advanced Food Chemistry (3) Applicable Instrumental Analysis (3) Experimental Design (3) Research Training 1 (3) Research Training 2 (6)

# Professors

- Jong-Bang Eun, Ph.D.
   [Professor, Food Processing and Preservation, jbeun@jnu.ac.kr]
- Jae-Hak Moon, Ph.D.
   [Professor, Nutrition and Functional Chemistry, nutrmoon@jnu.ac.kr]

 Du-Woon Kim, Ph.D.
 [Professor, Food Microbiology and Food Biochemistry, dwkim@jnu.ac.kr]

# Laboratories

- Food Processing and Preservation Lab (Phone: +82-62-530-0255)
- Food Microbiology Lab (Phone: +82-62-530-0662)
- Food Nutrition and Functional Chemistry Lab (Phone: +82-62-530-0234)

- Research Guidance 1 (3) Research Guidance 2 (3) Research Guidance 3 (3) Nutritional Physiology (3) Advanced Nutrition Chemistry (3) Lipid Foods (3) Recent Technology for Food Processing (3) Advanced Food Analysis (3) Special Topics in Nutrition (3) Enzyme Technology (3) Enzyme Utilization (3)
- Young-Min Kim, Ph.D. [Associate Professor, Food Fermentation and Enzyme Engineering, u9897854@jnu.ac.kr]
  Jeong-Yong Cho, Ph.D.
- [Assistant Professor, Food and Natural Product Chemistry, jyongcho17@jnu.ac.kr]
- Soo-Jung Kim, Ph.D. [Assistant Professor, Food System Engineering, bioksj@jnu.ac.kr]
- Food Fermentation and Enzyme Engineering Lab (Phone: +82-62-530-2142)
- Food and Natural Product Chemistry Lab. (Phone: +82-62-530-2143)
- Food System Engineering Lab. (Phone: +82-62-530-2146)

Department of Biotechnology \_\_Contact Information Phone: +82-62-530-2160 Fax: +82-62-530-2169 E-mail: westlife-jeong@jnu.ac.kn URL: http://mimb.jnu.ac.kn

# Graduate Studies in Biotechnology

The Department of Biotechnology focuses on the study of regulation and functions of genes at the levels of DNA, RNA, and protein in living organisms. The challenges of Biotechnology are to expand its usefulness by identifying and cloning new genes and traits, developing new diagnostic tests, and continuing to use these tools to better understand plants, animals, and microorganisms that make up our world.

### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn 60 credits including credits earned in a Master's Program. Students are allowed to transfer up to 9 credits into the master's program and 12 into the Ph.D. program. Master's theses should be submitted by May or September of each year. Doctoral theses should be submitted by March or September.

Graduate students must achieve a grade of C or better for all courses, and earn a cumulative average of B or better to be awarded a degree. Candidates will be awarded a degree upon fulfilling all requirements, including the foreign language requirement, and submitting a thesis for approval. The foreign language and comprehensive examinations are held in April or October.

### What Do You Study?

Advanced Biochemistry 1 Advanced Biochemistry 2 Enzymology Advanced Animal Genetic Engineering I Advanced Animal Genetic Engineering II Advanced Animal Genetics Animal Cell Culture Advanced Plant Genetic Engineering I Advanced Plant Genetic Engineering II Advanced Plant Metabolism Advanced Plant Tissue culture I Advanced Plant Tissue culture II Advanced Applied Molecular Microbiology Advanced Molecular Biology I Advanced Molecular Biology II Special Topics in Signal Transduction I Special Topics in Signal Transduction

Advanced Cell Biology I Advanced Cell Biology II Advanced Molecular Genetics I Advanced Molecular Genetics II Advanced Plant Biochemistry Advanced Topics in Protein Structure Methodology in Biochemistry Advanced Molecular Genetics and Breeding Advanced Plant Development Genetics I Advanced Plant Development Genetics II Plant Environmental Stress I Plant Environmental Stress II Ethics in Life Science Industry in Biotechnology Statistics for Biology Special Research in Genetic Engineering and Seminar I

# Professors

- Oksoo Han, Ph.D.
   [Professor, Genetic Biochemistry, oshan@jnu.ac.kr]
- Kyoungwhan Back, Ph.D.
   [Professor, Plant Genetic Engineering, kback@jnu.ac.kr]
- Jeong-Il Kim, Ph.D.
   [Professor, Protein Biochemistry, kimji@jnu.ac.kr]
- Suk-Whan Hong, Ph.D.

# Laboratories

### **Genetic Biochemistry Lab**

- Mechanistic studies and engineering of protoo porphyrinogen oxidase.
- Genetic engineering of Erythromycin bio-synthetic enzymes.
- Molecular mechanistic studies on the bio-synthesis of Jasmonic acid.

### **Plant Genetic Engineering Lab**

- Functional study on melatonin biosynthesis in plants.
- Development of melatonin-rich functional crops for human health.

### Molecular Cell Biology Lab

- Plant hormone abscisic acid (ABA) and stress signaling.
- Molecular genetic study of plant development.
- Development of stress-tolerant crop plants.

### Protein Biochemistry Lab

- Plant light signal transduction.
- Structure-function study of phytochromes.
- Development of genetically-modified crops with commercial value.

#### Molecular Genetics and Breeding Lab

- Breeding for quantitative traits in plants.

[Professor, Molecular Genetics and Breeding, sukwhan@jnu.ac.kr]

- Jun Ho Lee, ph.D.
   [Associate Professor, Neuro Biotechnology, leejunho@jnu.ac.kr]
- Don-Kyu Kim, ph.D. [Associate Professor, Molecular Endocrinology, dkkim2@jnu.ac.kr]
- Hyunkyu Sang, ph.D. [Assistant Professor, Molecular Microbiology]
- Plant chromosome engineering.
- Signal transduction of unfolded protein response in the Endoplasmic Reticulum

### Neurobiotechnology Lab

- Structure and function study of voltage-gated ion channels
- Electrophysiology study of neuronal ligand-gated ion channel
- Molecular study of transporters

#### Molecular Endocrinology Lab

Studies on the regulation of metabolic networks by transcrptional factors

- Studies on cell signaling and gene regulation in hepatic glucose, lipid and iron metabolism

- Control of liver metabolic disease by orphan nuclear receptor-specific ligand

Animal Science and Biotechnology \_\_\_Contact Information Tel: +82-62-530-2120 Fax: +82-62-530-2129 E-mail: a1730@jnu.ac.kr URL: http://agric.jnu.ac.kr/as

### Graduate Studies in Animal Science and Biotechnology

The graduate program in Animal Science and Biotechnology is designed to provide training at the master's degree level for those who wish to continue graduate work at the doctoral levels and for those who wish to seek employment in various fields in the animal industry. The major areas include animal breeding, reproduction, transgenic animals and molecular biochemistry. The program focuses on the development of transgenic animals using biotechnological tools. In addition, the division also emphasizes the research work on the screening of functional ingredients from animal resources by molecular biological and microbiological tools and applies these to animal derived foods such as meat and dairy products.

#### Degree Requirements

#### **Common Course**

Research for the Master's or Doctoral Degree (3)

#### Major course

General Selection Course: over 24

### What Do You Study?

Method of individual model analysis (3) Advanced Muscle Food Analysis and Technology (3) Advanced Muscle Food Science and Biotechnology (3) Advanced Functional Ingredients of Muscle Foods (3) Evaluation of Functional Food of Animal Resources (3) Advanced Functional Molecular Analysis (3) Protein Engineering (3) Controlled Breeding in Animal (3) Animal Engineering Seminar (3) Animal metabolic physiology (3) Advanced Reprodutive Physiology in Animal (3) Reprodutive Failure in Animal (3) Research Methods in Animal Reprodution (3) Advanced Animal Molecular Biology (3) Advanced Animal Molecular Biochemistry (3) Research Method of Animal Molecular Cell Biology (3) Advanced Animal Biotechnology (3)

Advanced Embryo Technology in Animal (3) Advanced Animal Biotechemistry (3) Advanced Animal Cell Toxicology (3) Animal experiment design (3) Animal Quantitative Genetics (3) Methods for Assessing Animal Genetic Capacity (3) Advanced Animal Breeding (3) Advanced Tissue Culture (3) Population Genetics in Animal Breeding (3) Advanced Transgenic Animal (3) Advanced Dispersive Components (3) Advanced Molecular Genetics (3) Biological Application Statistics (3) Special Topics in Bio-Informatics (3) Advanced Linear Modeling (3) Advancede Cell Biology (3) Advanced Meat Processing (3)

Advanced Meat Hygiene (3) Advanced Meat Science (3) Advanced Experimental Design (3) Oil-soluble protein (3) Gene targeting (3)

# Professors

- Moon, Seung-Ju, Ph.D. [Animal Reproduction, sjmoon@chonnam.ac.kr]
- Kang, Man-Jong, Ph.D. [Transgenic Animals, mjkang@chonnam.ac.kr]

Advanced In Vitro Fertilization (3) Advanced Livestock Management and Economics (3) Advanced Animal Food Analysis (3) Hazard Analysis Critical Control Point System of Animal-Origin Food (3)

- Lee, Ji-Woong, Ph.D. [Animal Breeding and Genetics, jwlee@jnu.ac.kr]
- Kim, Sung-hak, Ph.D. [Molecular Biochemistry, sunghakkim@jnu.ac.kr]

Animal Science and Bio-Industry <u>Contact Information</u> Tel: +82-62-530-2120 Fax: +82-62-530-2129 E-mail: a1731@jnu.ac.kr URL: agric.jnu.ac.kr/as/

### Graduate Studies in Animal Science and Bio-Industry

Graduate programs leading to the Master of Science degree in either Animal Science or Dairy Science are offered in the general area of livestock production including dairy foods. Courses in the department such as animal physiology, ruminant nutrition, animal production, meat science, dairy microbiology, grassland science and statistics are basically provided. The courses of relevant departments provide in-depth training and laboratory works. These programs are flexible enough to interest students who may want to consider the master's degree as a terminal and practical degree. They are also designed to accommodate those graduates who want to use the master's degree as a preparatory step towards the doctoral degree.

### Degree Requirements

#### **Common Course**

Research for the Master's or Doctoral Degree (3)

#### Major course

General Selection Course: over 24

### What Do You Study?

Dry and Concentrated Dairy Products (3) Advanced Genetics of Dairy Microbiology (3) Advanced Dairy Microbiology (3) Metabolic and Signaling Pathway (3) Advanced Animal management (3) Advanced Animal Endo- crinology (3) Animal Proteomics (3) Nutriginomics and proteomics (3) Methodology in Animal Feeding and Nutrition (3) Advanced Animal Feeding and Nutrition (3) Seminar in animal industry (3) Advanced Animal Physiology (3) Advanced Aninal Cell Culture (3) Animal Stress Biology (3) Animal nutrient requirements (3) Manipulated Animal Nutrition (3) Farm Animal Hygienics (3)

Advanced Microbiology of Animal Resources (3) Advanced Animal Wastes Management (3) Animal Behavior & Welfare (3) Topics of Horse Science (3) Metabolic Physiology of Pasture Plants (3) Growth and Development of Pasture Plants (3) Advanced Utilization of Pasture Plants (3) Engineering of Fermented Milk (3) Molecular Cell Physiology (3) Advanced Meat Processing (3) Advanced Meat Hygiene (3) Advanced Meat Science (3) Advanced Swine Production (3) Nutrigenomics (3) Hygiene of Milk & Dairy Products (3) Advanced Milk Processing (3) Regulation of Gene Expression (3)

Dairy Chemistry and Physics (3) Advanced Quality Control of Dairy Product (3) Advance Beef Cattle Production (3) Advanced Pasture Mana- gement (3) Grassland Ecology and Productivity (3) Advanced Livestock Management and Economic (3) Livestock Management and Economics Analysis (3) Topics in Management and Economics of Livestock (3) Advanced Livestock and Meat Marketing (3) Hazard Analysis Critical Control Point System of Animal-Origin Food (3) Foodborne Pathogens of Animal Resources (3) Advanced Quality Control of Animal Foods (3) Experimental Design and Statisical Analysis (3) Sustainable Livestock Production (3) Functional Probiotics (3) Advanced Turf Grass Science (3)

# Professors

- Sun, Sang-Soo, Ph.D. [Animal Physiology, ssun@chonnam.ac.kr]
- Kim, Tae-Hwan, Ph.D. [Forage Physiology & Biochemistry, grassl@chonnam.ac.kr
- Chin, Koo-Bok, Ph.D.
  [Meat Science,kbchin@chonnam.ac.kr]
- Oh, Se-Jong, Ph.D.

[Animal Microbial Technology, soh@chonnam.ac.kr]

- Jeon, Tea-Il, Ph.D. [Animal Metabolomics, tjeon@jnu.ac.kr]
- Kim, Min-seok, Ph.D. [Animal nutrition, mkim2276@jnu.ac.kr]

Department of Rural and Biosystems Engineering <u>Contact Information</u> Phone: +82-62-530-2150 Fax: +82-62-530-2159 E-mail: rbe-2150@jnu.ac.kr URL: http://rbe.inu.ac.kr

### Graduate Studies in the Department of Rural and Biosystems Engineering

The Department of Rural and Biosystems Engineering pursues global competitiveness in agriculture and the sustainable development of rural communities through the application of integrated knowledge on engineering, natural science, and humanities and social sciences to agricultural, biological, and rural systems. Graduate students in the Department of Rural and Biosystems Engineering enjoy small class sizes and frequent one-to-one contact with Professors. Faculty members are very keen to help and encourage students to develop their careers, from advising research activities to providing job opportunities.

The Department of Rural and Biosystems Engineering offers both master's and Ph.D. degrees.

Students entering one of the Department's graduate programs may select a research topic from a broad array of research fields. The following two tracks of Rural and Bio-systems engineering research are offered:

#### **Rural System Engineering Track**

- Rural Environmental Water
- Environmental Soil Science
- Rural Infrastructure Engineering

#### **Biosystems Engineering Track**

- Farm Machinery
- Agricultural Machine Control
- Sensors and Intelligent Biosystems

### Degree Requirements

The master's degree requires students to complete advanced coursework, pass a foreign language and preliminary qualifying exams, and become accustomed to research methodology. Students are required to plan, conduct, and analyze a comprehensive research project, and report findings in a thesis.

Master's degree candidates learn to express ideas clearly and forcefully in both oral and written communication. They are also encouraged to develop teaching skills through formal study of pedagogical methods and supervised classroom teaching experience.

The Ph.D. degree is designed to provide students with a thorough understanding of their professional field and training in research methods. Students acquire a strong grasp of a broad field of study and are able to conduct independent research.

Students are required to complete advanced coursework and pass a foreign language exam. A preliminary qualifying examination, covering all fields of study included in the degree program, is also required. Ph.D. candidates will prepare a dissertation, an original, scholarly report of independent research.

- Rural Water Resources Engineering
- Agricultural Facilities and Environment
- Human-Centered Robotics and Automation
- Nanoengineered Biomaterial Systems

### What Do You Study?

#### **Rural System Engineering Track**

Advanced Irrigation and drainage engineering (3) Elastic Stability of Structures (3) International Rural Water Resources Management (3) Advanced Foundation Engineering (3) Foundation Analysis (3) Climate change hydrology (3) Climate-Smart Agriculture and Soils (3) Environmenl control for agricultural buildings (3) Decision-making Analysis and Application for Rural Development (3) Advanced Rural Tourism (3) Design of Rural Survey and Analysis Methods (3) New Local Rural Development Theory (3) Rural Land Use Planning (3) Topics in Water-Energy-Food Nexus (3) Nonpoint Source Pollution Control Engineering (3) Theory of Slope Stability (3) Watershed Environmental Modeling (3) System Analysis and Planning (3) Experimental Design and Analysis (3) Topics in Remediation of Polluted Land (3) Discrete Event Systems Control (3) Social · Spatial Mixed Countryside Planning (3) Advanced Information of Structures on Design and Construction (3) Advanced Intelligent Biosystems Engineering (3) Advanced Design of Ground Improvement (3) Advanced Design of Soil Structures (3) Sustainable Nutrient Management (3) Rural Ecological Engineering (3) Rural water disaster prevention engineering (3) Rural water resources management (3) Rural Water Resources and Information Engineering (3) Rural Systems Engineering Research (3) Rural and peri-urban environmental planning and design (3) Rural Environmental Engineering (3) Soil Carbon Engineering (3) Environmental Soil Chemistry (3) Stability Analysis (3)

Advanced Soil Mechanics (3) Environmental Isotope (3)

### **Biosystems Engineering Track**

Engineering Cell Biology (3) Dynamics of Farm Machinery (3) Advanced Design of Agricultural Machinery (3) Vibration of Agricultural Machinery (3) Agricultural Fluidpower System (3) Advanced Farm Machinery I (3) Advanced Farm Machinery [] (3) Micro- and Nanoengineering in Agriculture (3) **BioMEMS** (3) Biosensor (3) Advanced Measurement Engineering for Biosystems (3) Special Topics in Biosystems Mathematics 1 (3) Special Topics in Biosystems Mathematics 2 (3) Topics in Biosystems Engineering I (3) Topics in Biosystems Engineering II (3) Special Topics in Biosystems Robotics (3) Special Topics in Biosystems Machine Learning (3) Advanced Image and Signal Processing for Biosystems (3) Advanced Electrical and Electronic Engineering for Biosystems (3) Biosystem Control I (3) Biosystem Control Ⅱ (3) Topic in Biological Thermodynamics (3) Advanced Mechanics for Biosystems (3) Advanced data communication and networking for biosystems (3) Advanced Bio-Resources Process Engineering (3) Topic in Biomaterials and Tissue Engineering (3) Advanced Statistics of Bioinformation (3) Biologically Inspried Engineering Systems (3) Advanced mechatronics for biosystems (3) Plant Factory Automation (3) Engineering Thesis Writing in English (3) Telerobotics and Its Applications (3) Fluid Power Control System (3) Advanced Human-Robot Interface (3)

Advanced precision Agricultural Engineering (3) Topics in Tractor Engineering (3)

### Professors

### **Rural System Engineering**

- Kwang-Sik Yoon, Ph.D.
   [Professor, Rural Environmental Water, ksyoon@jnu.ac.kr]
- Woo-Jung Choi, Ph.D.
   [Professor, Environmental Soil Science, wjchoi@jnu.ac.kr]
- Won-Jin Baek, Ph.D. [Professor, Rural Infrastructure Engineering, bwj215@jnu.ac.kr]
- Seung-Hwan Yoo, Ph.D. [Associate Professor, Rural Water Resources Engineering, yoosh15@jnu.ac.kr]
- Se-Woon Hong, Ph.D. [Assistant Professor; Ag. Facilities and Environment, hsewoon@jnu.ac.kr]

# Laboratories Rural System Engineering

#### Irrigation and Drainage Lab

- 1. Supervisor: Kwang-Sik Yoon, Ph.D.
- 2. Research Interests
  - Water resources conservation in rural area
  - Nonpoint pollution modeling and monitoring
  - · Water quality control in rural watershed
  - Engineering hydrology application
  - Rural stream restoration

### Land Remediation and Reclamation Lab

- 1. Supervisor: Woo-Jung Choi, Ph.D.
- 2. Research Interests
  - Exploring C and N cycling in ecosystems using stable isotope techniques
  - Development of technology for enhanced soil C sequestration
  - Prevention and remediation of soil and water pollution

#### **Biosystems Engineering**

- Soo-Nam Yoo, Ph.D.
- [Professor, Farm Machinery, snyoo@jnu.ac.kr]
- Young-Soo Choi, Ph.D. [Professor, Biosystems Machine Control, y-choi@jnu.ac.kr]
- Kyeong-Hwan Lee, Ph.D. [Associate Professor, Sensors and Intelligent Biosystems, khlee@jnu.ac.kr]
- Hyoung Il Son, Ph.D. [Associate Professor, Human-Centered Robotics and Automation, hison@jnu.ac.kr]
- Jangho Kim, Ph.D.
   [Associate Professor, Nanoengineered Biomaterial Systems, rain2000@jnu.ac.kr]
  - Dendrochronology study using tree ring for tracing historical changes in ecosystem under climate change

#### **Rural Infrastructure Lab**

- 1. Supervisor: Won-Jin Baek, Ph.D.
- 2. Research Interests
  - Effect of creep on the settlement-time relation during primary consolidation of clay.
  - An Analysis of secondary consolidation behavior of soft clayey ground
  - · A characteristics of ground improvement method
  - A study on the stability of land slope by FANDA-cone penetration test results
  - A creep behavior of over-consolidated clay including secondary consolidation and influence of over-consolidation ratio

#### **Rural Water Resources Engineering Lab**

- 1. Supervisor: Seung-Hwan Yoo, Ph.D.
- 2. Research Interests
- Modeling of Agricultural water resources
- Analysis of Agricultural drought
- · Climate change impact in rural area
- · Estimation of water footprint and virtual water
- Development of Water-Energy-Food Nexus platform

#### Agricultural Facilities and Environment Lab

- 1. Supervisor: Se-Woon Hong, Ph.D.
- 2. Research Interests
- Environmental controls in agricultural buildings
- Gas, aerosol and disease dispersions in local atmospheres
- Wind engineering in rural areas
- · Fluid dynamic analysis for agricultural structures
- Application of new & renewable energy to agriculture

#### **Biosystems Engineering**

#### Farm Machinery Lab

- 1. Supervisor: Soo-Nam Yoo, Ph.D.
- 2. Research Interests
  - Agricultural mechanization
  - Development and improvement of soil tillage and cultivating implements
  - Development and improvement of crop seeding and transplanting machines
  - Development and improvement of crop harve sting machines
  - Development of a mechanized transplanting system for upland crops
  - Development of a precision seed metering device for direct seeding of rice
  - Development of self-propelled onion, potato, radish and cabbage harvesters
  - Development of an electric-powered agricultural transportation vehicle

#### **Biosystems Machine Control Lab**

- 1. Supervisor: Young-Soo Choi, Ph.D.
- 2. Research Interests
  - Biomechatronics, microprocessor-based control system design, artificial intelligence, agricultural machinery controls
  - · Environmental control of plants/factories
  - Food process controls
  - · Development of harvesting machinery

### Sensors and Intelligent Biosystems Lab

- 1. Supervisor: Kyeong-Hwan Lee, Ph.D.
- 2. Research Interests
  - Instrumentation and Automation for Biosystems
  - · Biorobotics and Autonomous Vehicle
  - Environment-friendly Precision Agriculture Technology
  - Biosensors

### Human-Centered Robotics and Automation Lab

- 1. Supervisor: Hyoung Il Son, Ph.D.
- 2. Research Interests
  - Robotics and Automation: Multi-robot SLAM, Multi-robot Swarm Control
  - Haptics and Teleoperation: Multimodal Shared Teleoperation
  - Agricultural Field Robotics

#### Nanoengineered Biomaterial System Lab

- 1. Supervisor: Jangho Kim, Ph.D.
- 2. Research Interests
- Biomaterials
- · Biologically Inspired Engineering Systems
- Cell and Tissue Engineering
- · Agricultural Micro- and Nanotechnology

Department of Bioenergy Science and Technology *Contact Information* Tel: +82-62-530-2043 Fax: +82-62-530-2047 E-mail: A4705@jnu.ac.kr URL: http://bioenergy.jnu.ac.kr

### Graduate Studies in Department of Bioenergy Science and Technology

After the energy crisis in the 1970s, natural gas and atomic energy have been utilized to supply a portion of the energy demand due to the accelerated increase in the human population and improvement of human life. However, petroleum resources will become depleted within this century. In recent years, the use of biomass (in which solar energy is captured by photosynthesis and stored) as an alternative and renewable energy source has drawn interest as a means of complementing energy needs. Moreover, biomass is considered a useful alternative energy source that could limit the greenhouse gas emissions that drive global climate change. The aim of this grant proposal is to establish basic knowledge that will enable improvement of the yield and quality of cellulosic biofuels by multidisciplinary system approaches, and to develop production technology of bioethanol.

#### Education aim / Operation Plan

Our education aim is to nurture the education and professional development of talented people, whose has creative acumen and problem solving abilities will guide the bio-energy industry sector. Renewable energy of the 21st century knowledge base societies with new growth dynamics project requires international experts in the bio-energy field.

Bio-energy researchers with world-wide research ability and the ability to utilize various academic fields. Multi-disciplinary education and research will synergistically add to the research importance of the department. To operate suitably, six scholars will be invite to carry out education courses.

Grow experts with global talents in the field of Bioenergy Science and Technology

- A. Research Capability Promotion Programs
  - Journal club, Increasing caliber for graduation, Progress report, Joint meeting, Bioenergy student symposium
- B. English Capability Promotion Programs
  - Communication skills, Writing skills, Overseas internship, English certificates, Lectures with English, Presentation with English

#### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits.

### What Do You Study?

Advanced Bioenergy Science (3)	Advanced Molecular Cell Biology (3)
Advanced Molecular Biology (3)	Advanced Molecular Genetics (3)

Advanced Seminar in Plant Systems Biology (3) Advanced Cell Biology (3) Advanced Plant Molecular Biology (3) Advanced Plant Biotechnology (3) Protein Engineering (3) Metabolic Engineering (3) Current Topics in Wood Technology (3) Advanced Microbial Biotechnology (3) Microbial biocatalysis (3) Current Topics in Biodiesel (3) Biomass Material Technology (3) Current Topics in Biomass Pretreatment (3) Advanced Bioenergy Engineering (3) Analytic methodology of bioenergy (3) Current topics on Biorefinery (3) Systems Biology (3) Topics on fermentation engineering (3) Current Topics in Separation Process Engineering (3) Current Topics on Bioprocess Engineering (3) Advanced Biotechnology (3) **Bioinformatics** (3) Advanced Bioinformatics (3) Current Topics in Cell Signaling (3) Systems Biology (3)

# Professors

 Kim, Jungmook, Ph.D.
 [Plant Molecular Cell Biology, jungmkim@jnu.ac.kr]

- Ahn, Sungju, Ph.D.
   [Energy Crop Physiology, asjsuse@jnu.ac.kr]
- Bae, Hyeun-Jong, Ph.D. [Bioenergy & Biotechnology,

### Laboratories

- 1. Plant Cell Signaling & Biomass Control Lab. (Phone: +82-62-530-2042)
- 2. Energy Crop Physiology Lab. (Phone: +82-62-530-2052)
- 3. Bioenergy & Biotechnology Lab.

Plant Metabolic Biochemistry (3) Plant Developmental Molecular Biology (3) Plant Molecular Physiology (3) Special Topics in Plant Physiology (3) Current Trends in Plant Biology (3) Plant-Water Relationships (3) Systemic Approach to Signal Transduction in Plants (3) Plant Seed Physiology (3) Molecular Biology and Biochemistry of Plant Lipids (3) Molecular Biology of Plant Hormones (3) Current Topics in Energy Process Development (3) Research Guidance 1 (3) Research Guidance 2 (3) Research Guidance 3 (3) Current Topics in Gene Expression and Regulation (3) Basic Concepts in Genomics (3) Computational Science (3) Seminar in Seed Production (3) Advanced Methods in Biological Science (3) Current Topics in Ocean Biomass (3) Plant Environmental Stress (3) Advanced enzyme biotechnology (3) Principles of CDM (3)

baehj@jnu.ac.kr]

- Lee, Won-Heong, Ph.D. [Microbial Engineering Process, wonhlee@jnu.ac.kr]
- Cho, Chul-Woong [Environmental Chemical Engineering, choicejoe@jnu.ac.kr]
- (Phone: +82-62-530-0266)
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- 5. Environmental Biotechnology Lab. (Phone: +82-62-530-2045)

## Agricultural Economics

Contact Information Fax: +82-62-530-2179

## What is Agricultural Economics?

The purpose of the Agricultural Economics (AE) major is to enable students to think like economists in solving problems related to the agricultural sector. Thinking like an economist involves using chains of deductive reasoning to help understand phenomena as well as problem-solving and creative skills in the agricultural sector.

Our goals are to increase understanding of economic behavior and improve students' ability to understand and predict agricultural economic phenomena.

The main subjects of the Department of Agricultural Economics are agricultural economics, farm management, agricultural product price analysis, farm statistics, and resource and environmental economics.

## Degree Requirements

Master's degree candidates are required to earn 24 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Students will normally take 2 years to complete a Master's Program, during which they must pass a comprehensive exam in 2 subjects and a foreign language exam (English). Master's theses may be submitted in English or Korean. Ph.D. Candidates are required to earn 36 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Students will normally take a minimum of 3 years to complete a Ph.D. program, during which they must pass a comprehensive exam in 3 fields and a foreign language exam (English). Ph.D. theses may be submitted in English or Korean.

#### What Do You Study?

#### Core Courses

Core Courses	Advanced Food Economics(3)
Seminar in Agricultural Product Price(3)	Research Methodology(3)
Agricultural Marketing(3)	Seminar on Resource Economics(3)
Seminar on Agricultural Marketing(3)	Advanced Regional Economic(3)
Advanced Farm Management(3)	Regional Development(3)
Research Methods in Farm Management(3)	Advanced Statistics(3)
Advanced Farm Management(3)	Econometrics I (3)
Seminar on Agricultural Economics(3)	Econometrics $II(3)$
Advanced Agricultural Economics(3)	Advanced Econometrics I (3)
Advanced Agricultural Finance(3)	Advanced Econometrics II (3)
Advanced Agricultural Development(3)	Advanced Microeconomics I (3)
Advanced Agricultural Production Economics(3)	Advanced Microeconomics $II(3)$
Seminar on Agricultural Policy(3)	Advanced Mathematical Economics I(3)
Advanced Agricultural Policy(3)	Advanced Mathematical Ecomomics $II(3)$
Seminar on Farm Statistics(3)	Advanced Production Economics(3)
Advanced Farm Appraisal and Planning(3)	Advanced Resource Economics(3)

Theory Of Public Choice(3) Project Appraisal(3) Advance International Agricultural Marketing(3) Survey of Farmer Production Cost(3) Advanced Agricultural Marketing Management(3) Advanced Agricultural Marketing(3) Advanced Agricultural Marketing Survey(3) Seminar on Agricultural Finance(3) Advanced Agricultural Cooperative Management(3) Systems Analysis(3) Seminar on Food Economics(3) Applied Mathematical Programming(3) Input-Output Analysis(3) Advanced International Agricultural Marketing Development(3) Advanced Farm Accounting(3) Research Guidance 1(3) Research Guidance 2(3) Research Guidance 3(3) Advanced Food Consumption Economics(3) Advanced agricultural price Theory I(3)Advanced agricultural price Theory II(3)Advanced Resource & Environmental Economics(3)

#### Electives

Rural Sociology (3) Micro-analysis of Agricultural Economics (3) Agricultural Accounting (3) Regional Agricultural Economics (3) Statistics for Agricultural Economist (3) Agricultural Production Economics (3) Study of Korean Economy (3) Agricultural Extension Service (3) Korean Agricultural History (3) Agricultural Math Economics (3) Agricultural Project Appraisal (3) Agricultural Product Trade (3) Agricultural Econometrics (3) Agricultural Systems Analysis (3) Farm Finance (3) Rural Survey (3) Cooperatives (3) Farm Management Analysis (3) Agricultural Development (3) Practice in Economics (3) Agricultural Marketing (3) Agricultural Information (3) Macro-analysis of Agricultural Economics (3) Globalization and Food Security (3)

#### Careers

Possible careers extend to a multitude of organizations including the Rural Development Administration, Agricultural Research and Extension Services, government public institutions, research center, Agricultural Cooperative Association, Agricultural Technology Center, and other private sector firms. It is also possible to enter graduate school or study abroad.

#### Professors

• Suhk-Hyun Kim, Ph.D.	Food Consumption Economics
[Professor, Resource Economics,	hjkang@jnu.ac.kr]
Risk management	• In-Seck Kim, Ph.D.
shane@jnu.ac.kr]	[Associate Professor,
• Gue-Dae Cho, Ph.D.	Agricultural Marketing and Agribusiness
[Professor, Agricultural Policy,	i.kim@jnu.ac.kr]
Agricultural Product Trade	• Yoon-Hyung Kim, Ph.D.
gcho6011@jnu.ac.kr]	[Associate Professor,
• Hye-Jung Kang, Ph.D.	Benefit-cost Analysis, Agricultural Development
[Professor, Farm Management,	yonhk@jnu.ac.kr]
Production Economics,	

International Commerce \_\_Contact Information Phone: +82-61-659-7530 Fax: +82-61-659-7539 E-mail: kikis@jnu.ac.kr URL: http://trade.jnu.ac.kr

## Graduate Studies in Department of International Commerce

Interdisciplinary Program of International Commerce

The graduate program in International Commerce offers education and research aimed at investigating the rapidly changing domestic and overseas business environment. The program cultivates specialized experts in international commerce.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits and pass a comprehensive exam and a foreign language exam as well as submit a master's thesis.

## What Do You Study?

Advanced Corporate Finance Theory (3) Seminar in Regional Studies (3) Special Topics in Finance1 (3) Special Topics in Finance2 (3) Research Training 1 (3) Research Training 2 (3) Topics in Statistics (3) Topics in International Marketing (3) Topics in International Trade Theory (3) Topics in Letter of Credit (3) Topics in International Financial Management (3) Topics in Foreign Direct Investment (3) Topics in Overseas Regional Economics (3) Topics in Economic Integration (3) Topics in International Financial Derivatives (3) Case Study on International Commerce (3) Topics in Electronic Commerce (3) International Trade Contract and Marine Insurance (3)

Case Study on Distribution and Logistics (3)

Topics in International Business Management (3) Topics in Theory of Foreign Exchange (3) Topics in International Business Strategy (3) Topics in International Finance (3) Topics in Multinational Enterprise (3) Topics in Marketing Management (3) Topics in Econometrics (3) Topics in International Trade Policy (3) Topics in International Resource and Environmental Economics (3) Topics in Corporate Foreign Exchange Risk Management (3) Topics in Commercial Practice of International Trade (3) Topics in EDI (3) Case Study on International Logistics (3) International Negotiation and Foreign Commercial Custom (3)

## Professors

- Cheol Lee, Ph.D. [Professor, International Economics, clee1@jnu.ac.kr]
- Bok-jae Park, Ph.D. [Professor, International Commerce, bjpark73@jnu.ac.kr]
- Gil-sung Kim, Ph.D. [Professor, International Business,

## Laboratories

- Internet Trade Practice Lab

kikis@jnu.ac.kr]

- Young-moon Kang, Ph.D. [Professor, International Commerce, wto3@jnu.ac.kr]
- Seok-gang Park, Ph.D. [Assistant Professor, Strategic Management, parksg1214@jnu.ac.kr]
- Trade Incubator Lab

East Asia Studies <u>Contact Information</u> Phone: +82-61-659-7580 Fax: +82-61-654-3560 E-mail: hj7716@jnu.ac.kr URL: http://webgs.jnu.ac.kr

#### Graduate Studies in Department of East Asia Studies

This course concentrates on the culture, economy and politics of East Asian countries including, Korea which is experiencing an increase in national recognition. Students can visualize East Asia by analyzing the East Asian countries from the perspective of a regional frame characterized by East Asia.

#### Degree Requirements

Master's degree candidates must earn 24 credits. All students are able to earn up to 9 credits each semester. Students must also pass a comprehensive exam and a foreign language exam as well as submit a master's thesis.

An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

## What Do You Study?

Studies on International Trade Theories (3) Advanced Marketing (3) Advanced International Marketing (3) Advanced Financial Management (3) Advanced Accounting (3) Advanced Organizational Behavior (3) Advanced International Business (3) Advanced Business Administration Analysis (3) Advanced Personnel Management (3) Advanced Industrial Relations (3) East Asian Regional Studies (3) Studies on Culture Contents in East Asia (3) East Asian Studies (3) East Asian Immigration History (3) History of Chinese and Korean Cultural Exchange (3) Advanced Multimedia System (3) Advanced Topics in Game Development (3) Topics in Convergence System (3)

Topics in Mobile System (3) Topics in Information Retrieval System (3) Topics in Graphic and Moving Image Processing (3) Topics in Web Information System (3) Comparative Study on Classic Korean and Chinese Prose (3) Comparative Study on Korean and Chinese Literature (3) East Asian Tea and Art (3) Study on East Asian Culture (3) Comparative Study on Korean and Chinese Classic Poetry(3) Topics in Internet (3) Image Pattern Recognition (3) Computer Vision (3) Sensor Networks (3) Topics in Mobile Platform (3) Data Mining (3)

## Professors

- Kyung-kuk Kim, Ph.D. [Professor. Sinology, kmkyk@chonnam.ac.kr]
- Seung-hyun Choi, Ph.D. [Professor, Sinology, cchx5278@chonnam.ac.kr]
- Won-il Cho, Ph.D.
   [Professor, Sinology, mengzi@chonnam.ac.kr]
- Young-uk Um, Ph.D. [Professor, Sinology, uyu123@chonnam.ac.kr]
- Jin-hee Song, Ph.D.

[Professor, Sinology, fu286599@chonnam.ac.kr]

- Jun-Suk Lee, Ph.D.
   [Professor, Logistic Information and EC and Games, iexpert@chonnam.ac.kr]
- Hy-Thaek Chong, Ph.D.
   [Associate Professor, Distributed Systems and Multimedia, htceong@chonnam.ac.kr]
- Jeong-Seon Park, Ph.D.
   [Assistant Professor, Multimedia Programming and Pattern Recognition, sunyjsp@chonnam.ac.kr]

Department of Culture Contents <u>Contact Information</u> Phone: +82-61-659-7470 Fax: +82-61-659-7479 E-mail: parks@jnu.ac.kr URL: http://ec.jnu.ac.kr

#### Graduate Studies in Department of Culture Contents?

The graduate course covers the topics of content authoring and distribution.

The purpose of the graduate studies is to provide highly qualified information technology (IT) professionals in the field of electronic commerce.

#### Degree Requirements

Master's degree candidates must earn 24 credits. All students are able to earn up to 9 credits each semester. Students must also pass a comprehensive exam and a foreign language exam as well as submit a master's thesis.

An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

### What Do You Study?

Advanced Computation Theory (3) Advanced Distributed Systems (3) Advanced Electronic Commerce Security (3) Advanced Information Security (3) Advanced Mobile Communication (3) Advanced Multimedia Systems (3) Advanced Operating Systems (3) Advanced Web Programming (3) Computer Vision (3) Data Mining (3) Decision Making Methodology (3) Decision Making Seminar (3) Digital Culture Business Seminar (3) E-Business Strategy (3) High Quality Statistical Analysis (3) Image Pattern Recognition (3) Introduction to E-Business (3) Introduction to Information Security (3) Machine Learning (3)

RFID System Applications (3) Security and Privacy (3) Sensor Networks (3) Software Development Management (3) Special Topics in IS Research (3) Thesis Research (3) Topics in Convergence Systems (3) Topics in Culture Contents Planning (3) Topics in Digital Image Processing (3) Topics in Embedded Systems (3) Topics in Graphics and Video Processing (3) Topics in Information Retrieval Systems (3) Topics in Internet (3) Topics in Mobile Platform (3) Topics in Mobile Systems (3) Topics in Network Game (3) Topics in Web Design (3) Topics in Web Information Systems (3)

## Professors

- Hyug-Hyun Cho, Ph.D.
   [Professor, Database and Security, hhcho@jnu.ac.kr]
- Soon-Hee Han, Ph.D.
   [Professor, Compiler and Mobile Systems, shhan@jnu.ac.kr]
- Young-Man Kang, Ph.D. [Professor, Computer Network and Digital Broadcasting Systems, ymkang@jnu.ac.kr]
- Hy-Thaek Chong, Ph.D.
   [ Professor, Distributed Systems and Multimedia, htceong@jnu.ac.kr]

- Jun-Suk Lee, Ph.D.
   [Professor, Logistic Information and Computer Games, iexpert@jnu.ac.kr]
- Jeong-Seon Park, Ph.D.
   [Associate Professor, Multimedia Programming and Pattern Recognition, sunyjsp@jnu.ac.kr]
- Yong-Min Kim, Ph.D.
- [Professor, Information Security and Electronic Commerce Systems, ymkim@jnu.ac.kr]
- Min-Suk Yoon, Ph.D. [Professor, MS and IS, msyoon@jnu.ac.kr]
  Seung-Bong Park, Ph.D. [Professor, e-Business Models and e-Business Strategy, parks@jnu.ac.kr]

Department of English <u>Contact Information</u> Phone: +82-61-659-7510 Fax: +82-61-654-3512 E-mail: A0430@jnu.ac.kr URL: http://english.jnu.ac.kr

#### Graduate Studies in Department of English

The Department of English teaches English language skills necessary for scholarly research, and provides students with in-depth knowledge of a broad range of subjects in the fields of English linguistics and literature. Students can specialize either in English linguistics or British and American literature.

### Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and foreign language exam as well as submit a thesis.

Ph.D. candidates are required to earn 36 credits and pass a comprehensive exam and foreign language exam. Students must also submit a dissertation. An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

## What Do You Study?

Contemporary Semantics (3)
Seminar in English Phonology (3)
Seminar in British and American Poets before the
20th Century (3)
Seminar in British and American Writers before
the 20th Century (3)
English Literature and Nature (3)
English Literature and Films (3)
History of English Literature (3)
English Phonology (3)
English Syntax (3)
English Pragmatics (3)
Psychological Linguistics (3)
English Linguistics and Literature (3)
Modern American and British Novel (3)
Modern American and British Poetry (3)
Modern American British Drama (3)
Literature & Environment (3)
Special Topics in English Syntax (3)
Topics in Semantics (3)
Special Topics in English Phonology (3)

Modern British and American Poets (3) Modern British and American Writers (3) Comparative Literature (3) Topics on the Contemporary British and American Fiction (3)

## Professors

- Young-Soon Cho, Ph.D.
   [Professor, English Semantics, ysncho@chonnam.ac.kr]
- Sung-Kap Yang, Ph.D. [Professor, English Poetry, yangtop@chonnam.ac.kr]
- Kwan-Young Oh, Ph.D. [Professor, English Phonology,

Seminar 1 (3) Seminar 2 (3) Seminar 3 (3) Modern Literature Theory (3)

okyoung@chonnam.ac.kr]

 Yong-Ki Kang, Ph.D.
 [Professor, English Novel, greening@chonnam.ac.kr]

 Han-Nae Yu, Ph.D.
 [Professor, Translation&Interpretation ambrosia14@gmail.com] Department of Transportation and Logistics <u>Contact Information</u> Phone: +82-61-659-7340 Fax: +82-61-659-7359 E-mail: mihoe@jnu.ac.kr URL: http://logistics.jnu.ac.kr

## Graduate Studies in Department of Transportation and Logistics

Graduate studies in transportation examine issues such as traffic jams, accidents, and air pollution. The Department of Transportation and Logistics nurtures transportation experts able to resolve these

types of problems. Graduate studies in logistics aim to strengthen international competitiveness by strengthening logistics systems. The Department nurtures experts able to plan, design, and operate these types of logistics systems

#### Degree Requirements

Ph.D. candidates must earn a total of 36 credits, while master's degree candidates must earn 24 credits. All students are able to earn up to 9 credits each semester. Students must also pass a comprehensive exam and a foreign language exam as well as submit a master's thesis.

An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

## What Do You Study?

Advanced Transportation Planning (3) Advancse Public Transportation (3) Advanced Study on National and Regional Planning (3) Advanced Study on Transportation Polices (3) Transportation Network Theory (3) Urban Modeling Seminar (3) Global Logistics Seminar (3) Service Management Seminar (3) Performance Management Seminar (3) Network Theory (3) Port Management Seminar (3) Computer Simulation (3) Advanced Analysis of Traffic Flow (3) Advanced Capacity Analysis (3) Advanced Traffic Control (3) Seminar on Traffic Operations (3) Advanced Database Management for Transportation and Logistics (3)

Advanced Logistics Information System (3) Information Technology and Management Innovation (3) Economic Evaluation for Transport Infrastructure Investment (3) Urban Logistics Planning Theory (3) Transportation economics Seminar (3) Transportation Planning Seminar (3) Advanced Green Logistics (3) Logistics Polices Seminar (3) Estimation of Traffic Accident Cost (3) Urban Disaster Prevention (3) Advanced Theory of Urban Planning (3) Urban and Regional Economics (3) International Purchasing Management Seminar (3) Industrial Organization for Logistics (3) Thesis Research (3) Seminar on Traffic Safety (3)

## Professors

- Byung-In Park [Business Logistics, bipark@chonnam.ac.kr]
- Sang-Gu Kim [Traffic Operation, kim-sg@chonnam.ac.kr]
- Jong-Wook Bae [Logistics Systems, jwbae@chonnam.ac.kr]

- Chang-Hyun Kim [Logistics Information Systems, chkim@chonnam.ac.kr]
- Chang-Ho Choi [Freight Transportation, jc1214@chonnam.ac.kr]
- Seung-Sik Chin [Logistics Policy & Environment Logistics,
- shin2han@chonnam.ac.kr]

Department of Education \_\_\_Contact Information Phone: +82-62-530-2340 Fax: +82-62-530-2359 URL: http://educate.jnu.ac.kr

## Overview of Graduate Studies in Education

The main educational goal of the Department of Education is to empower graduate students to become competitive researchers through cutting-edge interdisciplinary research and practices of education. The department offers the following graduate programs: Counseling Psychology, School Psychology, Educational Psychology, Educational Evaluation, Educational Technology, Educational Administration, Educational Philosophy, Educational History, Curriculum, Educational Sociology, and Lifelong Education. Two levels of graduate degrees are awarded at the Department of Education; the Master's of Education, and the Doctorate of Philosophy in Education (Ph.D.). Prospective students are advised by a faculty member to decide upon their specialization area at the initial stage of application for admission.

#### Degree Requirements

Master's degree candidates are required to earn at least 24 credits. Ph.D. candidates are required to earn an additional 36 credits. Students in the combined master's/Ph.D. program must earn 60 credits. Greater requirements may be enforced through internal regulations in specialized areas of study or upon agreement between academic advisors and the Chair of the Department of Education.

Before applying for the comprehensive examination, all graduate students must fulfill course requirements (18 credits for master's students, 27 credits for Ph.D. students, and 51 credits for master's/Ph.D. students) and receive recommendations from their academic advisors. They must also have participated in at least two-thirds of all faculty-graduate student seminars held by the department, submitted their thesis/dissertation proposals on time (and received passing scores), and published a research article in a peer-review journal.

Graduate students should submit a thesis proposal or a dissertation proposal along with recommendations from their respective academic advisors six months ahead of the due date for submission of their thesis or dissertation to the thesis/dissertation committee for review and evaluation. Before theses or dissertations are referred to the committee for review and evaluation, students must have fulfilled course requirements and passed the foreign language test and comprehensive examination.

Both master's and Ph.D. students are assigned to an academic advisor upon entry into their programs. If needed, students can change their academic advisors during their first year. Another co-advisor can be available if a student wants.

## What Do You Study?

#### **General Courses**

Qualitative Research Methods in Education Quantitative Research Methods in Education Intermediate Course in Statistical Methods for Educational Research

#### Electives

[Division of Counseling Psychology, School **Psychology**, & Educational Psychology Theories of Counseling Theories and Practices of Career Counseling Practicum in Counseling Theories and Practices of Family Counseling Counseling Case Study and Supervision Theories and Practices of Group Counseling Counseling of Children & Adolescents Motivation and Emotion, School Psychological Intervention & Consultation Seminar in Positive Psychology School Psychological Assessment Social and Emotional Development Planning School Psychological Intervention Programs Seminar in School Psychology Motivation in Education Cognitive Theory And Education Theories of Human Characteristics and Development Learning Theories Social Psychology and Education Seminar in Educational Psychology Behavior modification and education

#### [Division of Educational Evaluation]

Advanced Educational Statistics Theories of Educational Measurement and Assessment Educational Program Evaluation Seminars in Educational Evaluation Seminars in Educational Statistics

#### [Division of Educational Technology]

Research Methods of Instructional Technology Virtual Reality and Instruction Theory and Practice of Performance Technology Theory of Instructional Design and Development Case Studies of Distance Education Neuroscience and Learning Design Theories of Instruction and Learning Research on New Media and Instruction Practicum in Educational Technology Research Design and Development of e-Learning Policy Development for Educational Informatization Research in Instructional Media Design

#### [Division of Educational Administration]

Theories in Educational Administration Case Studies of Educational Administration Research Methods in Educational Administration Educational Policy Educational Reforms Comparative International Education Theories of Educational Organization Financing of Education Economics of Education Personnel Administration in Education Core Competence Development for Educators Educational Leadership

# [Division of Educational Philosophy & Educational History]

Philosophy of Educational Aims
Epistemology and Education
Philosophy of Educational Methods
Political Philosophy and Education
Studies in Philosophy of Education 1
Studies in Ethics in Education
Studies in Philosophy of Education 2
Studies in Philosophy of Educational Classics
Studies in the Western Educational Thoughts
Studies in Educational Thinkers
The Oriental Traditions of Education
Studies in the Modern Educational Thoughts

#### [Division of Curriculum]

Sociology of Curriculum Contemporary Curriculum Theories I Theories of Latent Curriculum Theory of Liberal Curriculum Curriculum Develpment Contemporary Curriculum Theories II Philosophy of Curriculum Studies in Theory of Curriculum

# [Division of Educational Sociology & Lifelong Education]

Theories of Life-long Education Education and Social Mobility Political Economy

## Professors

- Hoisoo Kim, Ph.D.
   [Professor, Educational Technology, kimh@jnu.ac.kr]
- Sichang Yum, Ph.D.
   [Professor, Educational Evaluation, sichang@jnu.ac.kr]
- Hyeonsook Shin, Ph.D.
   [Professor, School Psychology, shinphd@jnu.ac.kr]
- Min-ho Yeom, Ph.D.
   [Professor, Educational Administration, minho@jnu.ac.kr]
- Jeeheon Ryu, Ph.D.
   [Professor, Educational Technology, jeeheon@jnu.ac.kr]

Methodology of Life-Long Education Research Practice of Educational Sociology New Approaches to Adult Learning

#### Other Courses

Students from other areas of study may need to take additional undergraduate courses in the Department.

- Sung-Hyun Cha, Ph.D. [Associate Professor, Educational Finance, shcha@jnu.ac.kr]
- Ju Ri Joeng, Ph.D. [Associate Professor, Counseling Psychology, jjoeng@jnu.ac.kr]
- Jumi Lee, Ph.D.
   [Associate Professor, Educational Psychology, jlee@jnu.ac.kr]
- Eun-young Hong, Ph.D. [Associate Professor, Philosophy of Education, aporia@jnu.ac.kr]
- Haram Jeon, Ph.D. [Assistant Professor, Sociology of Education, haraming@jnu.ac.kr]

## Laboratories

- Teaching Competency Analysis Lab
- Teaching Competency Practice Lab
- Cognitive Science & Learning Research Lab
- Center for Immersive Learning Technology
- Psychological Assessment Room
- Instructional Media Design & Development Lab
- Lifelong Education Research Lab
- Counseling Psychology Lab
- Educational/School Psychology Lab
- Educational Policy Lab

Early Childhood Education \_\_Contact Information Phone: +82-62-530-2360 Fax: +82-62-530-2369 URL: http:/ecedu.jnu.ac.kr/

## Graduate Studies in Early Childhood Education

Programs for the master's degree and doctoral degree provide advanced professional training in early childhood education. Programs broaden and deepen graduate students' knowledge in the field of early childhood education and/or enable certified early childhood teachers to improve their professional competence in teaching young children.

The department provides diverse lectures and seminar courses as well as research-oriented courses for students in master's and doctoral programs. Our graduates have taken positions as early childhood education center directors, research professionals, university professors, and so on.

## Degree Requirements

Master's degree students are required to earn 24 credits to graduate. Doctoral students are required to earn 36 credits in order to graduate.

#### What Do You Study?

#### **General Courses**

Study on Early Childhood Curriculum Educational Statistics and Research Design in Early Childhood Education Research for Master's or Doctoral Degree

#### Other requirements

Students from other undergraduate majors may need to take a certain number of prerequisite classes from the undergraduate and postgraduate courses in the Department.

#### Professors

- Young-Ok Kim, Ed.D. [Professor, Early Childhood Curriculum and Instruction, yokim@jnu.ac.kr]
- Mi-Sook Choi, Ed.D.
   [Professor, Child Development and Evaluation, mschoi@jnu.ac.kr]
- Kyung-Sook Kim, Ph.D. [Professor, Early

Childhood Inclusive Education, kim2366@jnu.ac.kr] • Kyee-Yum Kwon, Ed.D.

- [Associate Professor, Early Childhood Teacher Education, kwon0301@jnu.ac.kr]
- Hyo-Jin Kim, Ed.D. [Assistant Professor, Early Childhood Curriculum and social emotional learning kimhyoj@jnu.ac.kr]

#### Laboratories

Seminar rooms are available for graduate students to facilitate their research activities.

Social Studies Education <u>Contact Information</u> Phone: +82-62-530-2370 Fax: +82-62-530-2379

## Graduate Studies in Social Studies Education

This program is designed to strengthen educators' theoretical knowledge as well as to provide experience in educational research. The Ph.D. Program is designed to prepare students to become educational scholars in areas of history education, geography education, ethics education, and social science education.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits (a minimum of 12 credits in this department). They must also pass a comprehensive exam (in 2~3 other subjects) and a foreign language exam.

Ph.D. candidates are required to earn 36 credits (minimum of 18 credits in this department). They must also pass a comprehensive exam (in 4 subjects) and a foreign language exam. Furthermore, students must present a thesis proposal and a research paper at a scholarly conference at least once before submitting a thesis.

All students are assigned a supervisor based on research interests and major.

## What Do You Study?

#### **General Courses**

Education Theory for Social Studies Text Analysis for Social Studies Methods and Assessment in Social Studies Education Seminars in Social Studies Education

#### **History Education Major Courses**

Development of History Texts Studies of History Instructional Methods Theory of History Education Studies of History Classrooms I Studies of History Classrooms II Studies of Korean History Texts Recent Studies of Korean History Recent Studies of European History Recent Studies of Asian History Studies of European History Texts Studies of Asian History Texts

#### **Ethics Education Major Courses**

Studies of International Politics Topics in Oriental Thought Studies in Unification Education Studies on Korean Ethical Thought Studies in British and American Ethical Thought Readings on Korean Ethical Thought Studies in North Korean Society Studies on Anthropology Seminar in Economic Education Democracy & Citizenship Education Seminar in Social Culture Education Studies in Modern Ethical Thought Studies in North Korean Education Applied Ethics Seminar Studies on Ethics and Values Education Studies in Theories of Moral and Ethics Education Topics in Logic and Essay of Moral and Ethics

Education Studies in Teaching evaluation of Moral and Ethics Education Studies in Confucian Ethics Studies in Buddhist Ethics Readings of Western Ethics Writings Studies in Western Ethical Thoughts Seminar on Moral Psychology Study of Moral Curriculum and Method

#### **Geography Education Major Courses**

Advanced Lecture of Geosystem Education Advanced Lecture of Structural Geomorphology Education Contemporary Development of Geography Thought Education Education of Field Survey for Geomorphology Information Geostatistical Analysis GIS & Remote Sensing Practices in Geographic Curriculum Research Methodology in Physical Geography Research Methodology in Urban Geography Research Methodology in Economic geography Research of Quaternary Environment Research on Education of Contemporary Cultural Space Research on Education of Cultural Geography Research on Education of Migration and Diaspora

Seminar in Climatic Geomorphology seminar in climatic geomorphology and climatic changes Seminar in Development Studies Seminar in Economic Geography Education Seminar in Location Theory Seminar in Physical Geography Seminar in population Geography Education Seminar in Rural settlement Planning Education Seminar in Urban Geography Education Seminar in Urban Structure Theory Education Seminar in World Urban Region Education Seminar on Educatioin of Social Geography Seminar on education of contemporary human geographic issues Seminar on Education of Critical Geography Seminar on Education of Feminist Geographies Seminar on Education of Historical Geography Seminar on Education of Social Space in the City Seminar on Research Methods of Geographic Education Studies in Curriculum of Geography Education Studies in Industrial Region Studies of Cartography and GIS Studies of Environmental Geography Education Studies of System Analysis if Pedology Studies of World Grography Education Topics on History of Geography Education Thoughts

## Professors

#### **History Education**

- Hee Myeon Yoon, Litt.D.
   [Professor, Modern Korean History, yoonhm@jnu.ac.kr]
- Man Kyu Park, M.A.
   [Professor, Modern and Contemporary Korean History, mkpark@jnu.net]
- Young Hyo Lee, Ph.D. [Professor, Western History/ History Education, leeyh678@hanmail.net]
- Young Ok Lee Ph.D. in History [Professor, Ming & Qing China, youngok@jnu.ac.kr]

### **Ethics Education**

- Kee-Hyeon Kim, Ph.D.
   [Professor, East Asian Ethics, 47korea@hanmail.net]
- Young-Ran Roh, Ph.D. [Professor, Western Ethics, yrroh@hanmail.net]

#### **Geography Education**

- Kyung-Sook Jeon, D.Sc. [Professor, Urban Geography, ksjeon@chonnam.ac.kr]
- Cheol-Wong Park, Ph.D. in Geog. [Professor, Geography Education and Geomorphology, cwpark@chonnam.ac.kr]
- Kyong-Hwan Park, Ph.D. [Professor, Social and

- Tak-Joon Jung, Ph.D. [Professor, Moral Education, jungtj1@hanmail.net] 1
- Gu-Sup Kang, Ph.D.
   [Associate Professor, Unification Education, gusupkang@gmail.com]

Economic Geography, kpark3@gmail.com]

- Yong-Gyun Lee, Ph.D [Associate Professor, Regional and Economic Geography, Geography of Development yonggyunlee@hanmail.net]
- Jin Kwan Kim, Ph.D.
   [Associate Professor, Physical Geography, Geomorphology, jinkwankim77@gmail.com]

## Laboratories

- Research Center for Regional Geographic information
- Multimedia classroom, GIS & Physical Geography Laboratories

## Ethics Education

\_\_\_Contact Information Phone: +82-62-530-2400 Fax: +82-62-530-2409 URL: http://ethicsedu.jnu.ac.kn

## Graduate Studies in Ethics Education

Graduate programs in Ethics Education prepare educators by broadening and deepening students' knowledge in the field of ethics education, and enabling secondary school teachers to enrich their background in teaching and to improve their professional competence. The coursework contains studies in Western ethics and Eastern ethical thoughts, together with studies of North Korea in preparation for national reunification.

## What Do You Study?

- Topics in Oriental Thought
- Studies in Unification Education
- Studies on Korean Ethical Thought
- · Studies in British and American Ethical Thought
- · Readings on Korean Ethical Thought
- Topics in Political and Social Thought
- Studies in Practical Philosophy
- Studies on Korean- Chinese Contemporary
   Philosophy
- · Studies on Anthropology
- Studies in Ethics on the Principle of Gender Equality
- Studies in Modern Ethical Thought
- · Studies in North Korean Society
- Studies in North Korean Education

#### Professors

- Kee-Hyeon Kim, Ph.D. [Professor, East Asian Ethics, 47korea@hanmail.net]
- Young-Ran Roh, Ph.D. [Professor, Western Ethics, yrroh@hanmail.net]

#### Laboratories

- Graduate Seminar Room

- · Applied Ethics Seminar
- Studies on Ethics and Values Education
- Studies in Theories of Moral and Ethics Education
- Topics in Logic and Essay of Moral and Ethics Education
- Studies in Teaching evaluation of Moral and Ethics Education
- Studies in Confucian Ethics
- Studies in Buddhist Ethics
- · Seminar in Theories of Ethics Education in Korea
- · Readings of Western Ethics Writings
- Studies in Western Ethical Thoughts
- · Seminar on Moral Psychology
- Study of Moral Curriculum and Method
- Tak-Joon Jung, Ph.D. [Professor, Moral Education, jungtj1@hanmail..net]
- Gu-Sup Kang, Ph.D.
   [Associate Professor, Unification Education, gusupkang@gmail.com]

# English Education

<u>Contact Information</u> Phone: +82-62-530-2430 Fax: +82-62-530-2449 URL: http://engedu.jnu.ac.kr

## Graduate Studies in English Education

The Department of English Education offers a well-organized training program and in-depth M.Ed. and Ph.D. postgraduate courses in English Language Education. The graduate program of the Department aims to prepare graduates to take a leading role in fields related to English education, English language, and English literature. They will become experts in the interrelated areas of English education. The courses focus on concepts, principles, and theories of English education and provide a general background in English language and literature, with a special focus on ELT. The department's curricula are tailored and structured to appeal to those who are interested in exploring all areas of linguistics and literature. Successful graduates who obtain the degree of Master of Education or Doctor of Philosophy in Education are expected to take the role of researchers and specialists in the fields of English language, English literature, and English education.

#### Degree Requirements

Part-time students are limited to earning less than 9 credits per semester. Ph.D. candidates who require supplementary credits (aside from those who hold Master's degrees in English Language and Literature or English Education) may earn more than 9 credits per semester. A total of 12 credits may be transferred into the program.

All students must pass a qualification examination prior to presenting a thesis. Students must also pass a foreign language test (minimum scores on TOEIC and CBT TOEFL are 730 and 213, respectively). All theses must be handed in for perusal before a thesis is officially submitted for examination. A total of 6 faculty members shall sit on the thesis examining board.

Master's degree candidates must earn 24 credits and Ph.D. candidates must earn 36 credits (18 from Department courses) to graduate. A supervisor is assigned to all students. Faculty members are limited to supervising 3 students and teaching 2 courses each semester.

All students enrolled since 2005 must publish at least 1 paper in a national journal or submit memoirs (co-publications with supervisors are also acceptable).

#### What Do You Study?

#### Major

Research Method in TEFL (3) Testing in TEFL (3) TEFL Methodology (3) ELT Materials Development (3) Theoretical Foundation of TEFL (3) Applied Linguistics (3) English Discourse Analysis (3) Second Language Acquisition (3) Sociolinguistics and TEFL (3) Psycholinguistics and TEFL (3) English Pedagogical Grammar (3) Topics in TEFL Methodology (3) Seminar on TEFL (3) English Applied Phonetics (3) English Phonology (3) English Syntax (3) English Semantics (3) English Pragmatics (3) Topics in English Linguistics (3) English Linguistics and TEFL (3) Seminar on British and American Poetry (3)

## Professors

- Byung Kyoo Ahn, Ph.D.
   [Professor, English Education, ahnbk@jnu.ac.kr]
- Chul Joo Uhm, Ph.D. [Professor, English Education, cjuhm@jnu.ac.kr]
- Hui Sok Yoo, Ph.D.
  [Professor,
  19th Century American Novels,
  yoohuisok@yahoo.com]

Seminar on British and American Novel (3) Seminar on British and American Drama (3) Seminar on British and American Criticism (3) Seminar on EAP(English for Academic Purposes (3) British and American Literature Education (3) British and American Culture and English Education (3) Feminist British and American Literature (3) The Western Classic and Its Pedagogy (3)

- Jee Hyun Ma, Ph. D.
   [Professor, English Education, jeehyun@jnu.ac.kr]
- Mun-Hong Choe, Ph.D.
   [Associate Professor, English Education, munhong@jnu.ac.kr]
- Seung-a Ji, Ph.D. [Associate Professor, English Drama, shange@jnu.ac.kr]

## Physical Education

\_\_Contact Information Phone: +82-62-530-2550 Fax: +82-62-530-2569 URL: http://physicaledu.jnu.ac.kr/

## Graduate Studies in Physical Education

The Department of Physical Education was established in March 1973 with the aim of fostering physical education teachers. In the 33 years since its inception, the Department has produced over 1,000 physical education teachers. The Department has 7 Professors in various branches of learning and there are currently over 100 students enrolled.

#### Degree Requirements

Students are required to earn the required number of credits to graduate. Students must also pass a comprehensive test, a foreign language exam, and fulfill computer certification requirements.

## What Do You Study?

Basis in Kinesiology Research in the Aged Sports Psychology Fitness Prescription for the Aged Research for Master's or Doctoral Degree Topics in Leisure Sport Culture Topics in Public Health Crash Course Research in Social Problem and Sports Topics in Social Problem and Sports Research in Biomechanics Topics in Biomechanics Research in Sports for All Topics in Sports for All Research I in Sports Management and Marketing Seminar II in Sports Management and Marketing Research in Sports Tourism Topics in Sports Tourism Research in Sports Pedagogy Topics in Sports Pedagogy Research in Sports Marketing Topics in Sports Marketing Sports Culture of Walk Literature Research in Social Psychology of Sports

Topics In Social Psychology of Sports Research in Sports Sociology Topics in Sports Sociology Topics in Counseling Psychology of Sport Research in Sports Vital Dynamics Research in Sport Psychology Experiments in Sport Psychology Topics in Sport Psychology Sports History and Phenomenon Topics in Sports History Communication of Sports and Culture Topics in Sports Ethics Research in Sports Medicine Topics in Learning of Sports Sports Philosophy Search Topics in Philosophy of Sport Education Research in Exercise Test and Exercise Exercise and Healthcare Exercise and Neuromuscular Physiology Motion and Senility Exercise and Physiology for the Aged Exercise and Obesity

Exercise, Metabolic and Lifestyle Disease Research in Exercise and Geriatric Disease Exercise and Cardiopulmonary Function Exercise and Ergonomics Exercise and Weight Management Analyzed Method in Sports Technique Research in Exercise Physiology Topics in Exercise Physiology Experiments in Kinesiology Research in Kinesiology Topics in Exercise Science of Nutrition Research in Exercise Hygiene Research in Motor Control Topics in Motor Control Research in Motor Learning Topics in Motor Learning Applied Biomechanics I Application Exercise Dynamics Topics in Teaching Theory of Physical Education Research in Teaching Method of Physical Education

## Professors

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- Jong-Soo Baek, Ph.D.
   [Professor, Sports Pedagogy, bjs0508@jnu.ac.kr]

Research in Curriculum Methods of Physical Education Topics in Curriculum Theory of Physical Education Topics in History of Physical Education Thought Criticism of Physical Education Classes Special Lecture for Criticism of Physical Education Classes Measurement Estimation Experiment I Measurement Estimation Experiment II Research in Measurement and Evaluation of Physical Education Topics in Physical Education Measurement Estimation Statistics in Physical Education I Statistics in Physical Education II Research Method in Physical Education I Research Method in Physical Education II Topics in Training Theory Modern Society Sports Value

- Young-Kwan Kim, Ph.D. [Associate Professor, Motor Mechanics, ykkim01@jnu.ac.kr]
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## Special Education

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## Graduate Studies in Special Education?

Special Education is a form of education that arranges special curricula that fits the characteristics of physically and mentally challenged students who have trouble learning in mainstream schools.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn 36 credits.

## What Do You Study?

Audiology (3) Qualitative Research Methodology (3) Education for Children with Intellectual Disability (3) Research in Psychology of Children with Intellectual Disability (3) Teaching-Learning Theories for Children with Intellectual Disability (3) Seminar in Education for Children with Intellectual Disability (3) Research in Education for Children with Severe Intellectual Disability (3) Research in Cerebral Palsy (3) Advanced Seminar in Children with Moderate Disabilities (3) Seminar in Health Impairments (3) Education for Children with Visual Impairments (3) Research in Psychology of Children with Visual Impairments (3) Teaching-Learning Theory for Children with Visual Impairments (3) Seminar in Education for Children with Visual Impairments (3) Research in Language Development (3) Case Study in Communication Disorders (3) Advanced Seminar in Children with Hearing

Impairments (3) Seminar in Emotional and Behavioral Disorders (3) Seminar in Attention Deficit Hyperactivity Disorder (3) Positive Behavioral Support (3) Research in Social Skills Interventions (3) Research in Augmentative and Alternative Communication (3) Trends and Issues in Emotional and Behavioral Disorders (3) Applied Behavior Analysis (3) Single-Subject Design (3) Autism Spectrum Disorder (3) Psychological Measurements and Testing (3) Practice of psychological tests for children with disabilities (3) Research Methods in Special Education (3) Parents Education for Children with Disabilities (3) Special Education and Lifelong Education (3) Special Education Administration (3) Statistics for Educational Research (3) Seminar in Early Childhood Special Education (3) Seminar in Counseling for Children with Disabilities (3) Research in Special Education System and Policy (3) Special Education and Multimedia (3) Child Neuropsychology and Education (3) Seminar in Managing Early Childhood Special Education Institutions (3) Advanced Seminar in Early Childhood Special Education (3) Research in Special Education Technology (3) Advanced Statistics for Educational Research (3) Education for Children with Multiple and Physical Disabilities (3) Research in Psychology of Children with Multiple Physical Disabilities (3) Seminar on Therapeutic Education for Children with Multiple Physical Disabilities (3) Seminar in Education for Children with Severe and Multiple Disabilities (3) Advanced Seminar in Communication Disorders (3) Research in Language Development of Children with Hearing Impairments (3) Assessment & Evaluation of Students with Learning Disabilities (3) Advanced Seminar in Education for Children

## Professors

- Hyun-Jong Song, Ph.D.
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 Ju-Seok Kwon, Ph.D.
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- Hongjoong Cho, Ph.D.
   [Education of Children with Physical Disabilities, chohj@jnu.ac.kr]
- Soon-Ja Lee, Ph.D.
   [Methodology of Early Childhood Education, jelmana@jnu.ac.kr]
- Eun Ko, Ph.D.

with Learning Disabilities (3) Teaching & Learning Strategies for Students with Learning Disabilities (3) Studies in Mathematics Education for Students with Learning Disabilities (3) Studies in Reading and Writing Disabilities (3) Seminar in Early Childhood Special Education Curriculum (3) Methodology in Qualitative Research (3) Counseling Processes and Techniques (3) Group Counseling for Students with Disabilities (3) Family Therapy for Students with Disabilities (3) Counseling Case Studies for Students with Disabilities (3) Seminar in Communication Disorders (3) Anatomy & Physiology of Speech Organs (3) Diagnosis and Assessment of Communication Disorders (3) Seminar for the Person Hearing Impairments (3) Studies on Psychology of Students with Learning Disabilities (3)

Trends and Issues in Learning Disabilities (3)

[Education of Language Auditory Children with Language and Auditory Impairments, eunko@jnu.ac.kr]

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   [Curriculum for Early Childhood Education, shoh04@jnu.ac.kr]
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## Science Education

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## Graduate Studies in Science Education

The Doctoral Program of science education confers Doctor of Philosophy in Science Education candidates. The program aims to develop professionals in the research and practice of science education. It consists of five majors: physics education, chemistry education, earth science education, biology education and mathematics education, and Science Gifted Education.

#### Degree Requirements

The academic year consists of two semesters, each comprising 15 weeks of instruction. A maximum of 12 credits earned at other universities or colleges with doctoral degree programs, prior to entering the Graduate School, may be transferred for the doctoral degree program. For all students of the program at least 18 credits are required, consisting of 9 credits in science or mathematics education courses, and 9 credits in science or mathematics content courses. (For physics education major students of the program, at least 24 credits are required, consisting of 9 credits in science education courses and 15 credits in science content courses). Doctoral students must give more than two presentations in international or nationwide academic journals before presenting their doctoral thesis. (For physics education major doctoral students, students must give more than two presentations in international or nationwide academic meetings. They must also publish more than one publication in a nationwide academic journal). Doctoral degrees shall be conferred upon the candidate who has fulfilled all the above conditions, passed the comprehensive examination, fulfilled the one foreign language requirement and submitted a thesis for approval.

#### What Do You Study?

#### Common

Teaching and Learning Theory in Science Education Learning Theory for Scientific Inquiry I Learning Theory for Scientific Inquiry II Psychology Methods in Science Education Research Methods in Science Education Issues in Science Education Research History of Science and Science Education Philosophy of Science and Science Education Teaching and Learning Theory for the Gifted in Science

Development of Learning Materials for the Gifted in Science

Teaching Science, Technology and Society Seminars in Science Education I Seminars in Science Education II Study in Science Education I Study in Science Education II Multimedia and Science Education History of Mathematics and Mathematics Education Topics in Mathematics Education Philosophy of Mathematics Education

#### **Physics Education Courses**

Topics in Mathematical Physics

Assessment of Physics Learning Physics Learning and Context Teaching Physics Experiment Advanced Statistical Physics Education Advanced Modern Physics Education Understanding Contemporary Physics Relativity Education Condensed Matter Physics Education Advanced Optics Education Advanced Mechanics Education Advanced Electromagnetism Education Topics in Quantum Physics Advanced Thermal Physics Education Analysis of Physics Curriculum and Development of Teaching Materials Special Topics in Physics Education Advanced Physics Experiment Physics Education and Computers Physics Education and Electronics Seminar on Physics Education Secondary school physics Experiment Research Mechanics Education Electromagnetism Education Quantum Physics Education

#### **Chemistry Education Courses**

Curriculum and Evaluation in Chemical Education Teaching Methods and Material Development in Chemical Education Research Methodology in Chemical Education I Research Methodology in Chemical Education II Teaching and Learning Theories in Science Education Advanced Analytical Chemistry Teaching Methods and Development of Chemical Experiments Special Topics in Instrumental Analysis Electrochemistry Advanced Organic Chemistry Spectroscopy in Organic Chemistry Special Topics in Organic Reactions Advanced Inorganic Chemistry

Special Topics in Coordination Compounds Organometallic Chemistry Advanced Physical Chemistry Advanced Quantum Chemistry Kinetics Inquiry Teaching in Chemistry Education Seminar in Chemistry Education Special Topics In Physical Chemistry Special Topics in Chemistry Education Special Topics in Inorganic Chemistry

#### **Biology Education Courses**

Theory and Practice in Biology Education Research Methodology in Biology Education Biology Curriculum Study Evaluation in Biology Education Seminar in Biology Education Biology Teaching Methods and Materials Inquiry Teaching in Biology Education Data Analysis in Research of Biology Education Biology Education Using Science History Systematic Zoology Education Animal Physiology Education Ecology Education Microbiology Education Molecular Biology Education Vertebrate Anatomy Education Genetics Education Cell Biology Education Systematic Botany Education Plant Molecular Genetics Education Plant Physiology Education Developmental Biology Education Environmental Biology Education Seed Plants Anatomy Education

#### Earth Science Education Courses

Advanced Topics in Earth Science Education Advanced Teaching Materials in Earth Science Education Teaching Methodology in Earth Science Education Curriculum & Evaluation of Earth Science Research Method of Earth science education Inquiry in Cosmology Education Advanced Mineralogy and Educational Experiment Petrogenesis and Educational Experiment Educational Study in Stratigraphy Educational Study in Paleontology Inquiry in Igneous Petrology Educational Methodology on the History of the Earth Study on Geological Structure Education Educational Seminar on Geological Resources Topics on Geology of Korea Inquiry in Synoptic Meteorology Studies on Micrometeorology Advanced Climatology and Education Practice Oceanography Education Geophysics Education Educational Study on Atmospheric Science Atmospheric Science in Ocean Inquiry of Optical Crystallography

#### **Science Gifted Education Courses**

Teaching and Learning Theory for the Gifted in Science Development of Learning Materials for the Gifted in Science Evaluation of Gifted Education in Science Curriculum for Gifted in Science Creativity and Science Education Study of Teaching Material for Gifted in Science Research of Gifted Education in Science Leadership of Gifted in Science Science History and Creativity Development of Physics Program for Science Gifted Development of Chemistry Program for Science Gifted Development of Biology Program for Science Gifted Development of Earth Science Program for Science Gifted

#### **Mathematics Education Courses**

Teaching of Secondary School Mathematics

Curriculum in Mathematics Education Psychology of Mathematics Education Assessment of Mathematics Education Research Methodology in Mathematics Education Mathematically Gifted Education Mathematics Educational Technology Teaching Analysis in Secondary School Teaching Algebra in Secondary School Teaching Geometry in Secondary School Teaching Probability and Statistics in Secondary School Teaching Discrete Mathematics in Secondary School Topics in Algebra and Education Topics in Analysis and Education Topics in Geometry and Education Research for the Doctoral Degree I Research for the Doctoral Degree II

#### Home Economics Education Courses

Advanced Educational Theories in Home **Economics Education** Research Methods in Home Economics Education Exploration of Teach-Learning Method in Home Economics Issue and Seminar in Home Economics Education Evaluation of Home Economics Education Advanced Family Relation Education Advanced Child Development Education Advanced Family Welfare Education Advanced Parent Education Advanced Culture and Consumption Education Advanced on Consumer Decision Making Education Advanced Consumer Information Education Advanced Home Management Education Advanced Nutrition Education Advanced Clinical Nutrition Education Advanced Food Science Education Advanced Experimental Cookery Education Advanced Food Chemistry Education Advanced Clothing Materials Education

Advanced Culture of Costume Education Advanced Clothing Pattern Making & Tailoring Education

#### Professors

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- Won-Young Hwang, Ph.D. Quantum Optics, wyhwang@jnu.ac.kr]
- Jaehyeok Choi, Ed.D.
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- Yung Ho Kahng, Ph.D. [Emerging Materials Devices, yhkahng@jnu.ac.kr
- Jeongwoon Hwang, Ph.D.
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#### **Chemistry Education**

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- Soon Hyung Kang, Ph.D. [Analytical Chemistry, skang@jnu.ac.kr]
- Si Kyung Yang, Ph.D. [Organic Chemistry, sky223@jnu.ac.kr]
- Kyoung Chul Ko, Ph.D. [Physical Chemistry, kcko1982@jnu.ac.kr]

#### **Biology Education**

Advanced Fashion Design Education Research on Apparel Behavior Advanced general Housing Education

- Hyung-Bin Yoo, Ph.D. [Environmental Biology, hbyoo@jnu.ac.kr]
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- Eunyoung Jeong, Ph.D. [Biology Education, jey@jnu.ac.kr]
- Kyung-Bon Lee, Ph.D.
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- Jung-Hyun Lee, Ph.D.
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#### Earth Science Education

- Yeong-Koo Koh, Ph.D. [Geology, ykkoh@jnu.ac.kr]
- Jong-Hee Kim, Ph.D.
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- Suyeon Oh, Ph.D.
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- Tae-Won Park, Ph.D. [Atmospheric Science, park2760@jnu.ac.kr]

## **Mathematics Education**

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- Sik Lee [Professor, Topology, slee@jnu.ac.kr]
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#### **Home Economics Education**

## Laboratories

#### **Physics Education**

- Physics Education Laboratory
- Emerging Materials & Devices Laboratory

#### **Chemistry Education**

- Chemistry Education Laboratory
- Photo and Electrochemical Energy materials Laboratory (PEEL)
- Energy Transfer Laboratory
- Organic Materials Laboratory

#### **Biology Education**

- Plant Molecular Genetics Laboratory
- Biology Education Laboratory
- Animal Embryology Laboratory

- Hyo-Shick Shin, Ph.D. [Family Relationships, hsshin@jnu.ac.kr]
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## Graduate Studies in Mathematics Education

The aim of the Master's or Doctoral course is to educate professionals and researchers so that they can carry out academic investigations into the issues relevant to mathematics education such as teaching and learning, curriculum, psychology, philosophy, technology, and mathematics history. In order to achieve this goal, the curriculum of the course consists of basic and intensive subjects with extensive theories of mathematics education coupled with social sciences and mathematics.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits. They must also pass a comprehensive exam (3 subjects) and a foreign language exam, and present a thesis proposal before submitting a degree-seeking thesis or dissertation. All students are assigned a supervisor based on research interests and major.

## What Do You Study?

Teaching Materials for Algebra Philosophy of Mathematics EducationTeaching of Teaching Materials for Analysis Secondary School Mathematics Pedagogy of Mathematics Curriculum in Mathematics Education Teaching Materials for Geometry Psychology of Mathematics Education Topics in Algebra I Assessment in Mathematics Education Topics in Algebra Ⅱ Mathematically Gifted Education Topics in Analysis I Research Methodology in Mathematics Education Topics in Analysis Ⅱ Mathematics Educational Technology Topics in Geometry Teaching Analysis in Secondary School Topics in Topology Teaching Algebra in Secondary School Topics in Mathematical Statistics Teaching Geometry in Secondary School Combinatorics Teaching Probability and Statistics in Secondary Topics in Applied Mathematics School Mathematics Using Computers Teaching Discrete Mathematics in Secondary Psychology of Learning Mathematics School History of Mathematics Education Topics in Algebra and Education Studies in Mathematics Education Topics in Analysis and Education Mathematics Teaching and Learning materials Topics in Geometry and Education History of Mathematics and Mathematics Education Topics in Mathematics Education

## Professors

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Sik Lee [Professor, Topology, slee@jnu.ac.kr]Bo Mi Shin, Ph.D.,

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- Yeansu Kim, Ph.D. [Assistant Professor, Algebra and Number theory, ykim@jnu.ac.kr ]
- Injo Hur, Ph.D.,
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## Laboratories

- Highly modernized lecture rooms Lecture on theory of mathematics and mathematics education using various multimedia
- Computer laboratory Practice of mathematical theory and teaching & learning of mathematics
- Materials room for teaching & learning of mathematics Articles, Reports, Books, Software, Teaching Aids, etc.
- Materials room for gifted education Materials for gifted education and the practice of gifted education

## Korean Education

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## Graduate Studies in Korean education

The Ph.D. program in Korean Education was established in March 2002 through collaboration with the Department of Education. Then the Department of Korean Education was established in 2008. Since that time, students have, through the program accumulated, expert and intricate knowledge of Korean language and literature in addition to polishing their teaching and leadership skills.

The mission of the Department is to cultivate educational leaders who will work to improve Korean education in local, national, and international settings. This is accomplished through the promotion of critical thought, research, and reflective practice related to teaching and learning, curricula, instruction, policy, and teacher education.

The master's and doctoral programs focus on both theory and practice, along with appropriate research preparation in a collaborative social context, grounded in the realities of schooling. The diversity of students and teachers in the program is led by research-active faculty members who regularly present at various academic conferences each semester and frequently publish their work in leading scholarly journals. Master's and doctoral students will conduct research and critically examine curricula, means of assessment, and the characteristics and politics of learning environments.

Faculty members in the Department of Korean Education believe that Korean language and Korean culture represent the roots of Korea as a nation, and strengthening the field of Korean education will enable the country to better participate and be fully represented in an increasingly globalized world.

#### Degree Requirements

Students must acquire 24 (M.A.) and 36 (Ph.D.) credit hours in major courses and 3 credit hours in thesis research to complete the course. All students must pass graduation qualification examinations (a foreign language exam and a comprehensive exam) before submitting the final copy of the thesis.

## What Do You Study?

Studies in Literary Criticism	Studies on Literary Instruction (Authors & Writings)
Studies in Comparative Literature	Studies in the Instruction of Hyangga & Lyeoyo
Methodologies in Korean Language Instruction	Studies in the Instruction of Sijo & Kasa
Studies on Korean School Grammar Korean	Studies on Instruction in Sino-Korean Poetry
Studies on Sociolinguistic Instruction	Studies on Teaching Materials in Sino-Korean
Studies on Dialects and their Instruction	Literature
Studies on Korean Language Policy	Studies on Drama Instruction
Studies on the Instruction of Literary Criticism	Topics in the Instruction of Literature
Studies on Instruction in Creative Writing	Studies on Evaluating Korean Language Proficiency

Studies on the Instruction of Applied Linguistics Seminar on Korean Criterion Instruction Studies on Issues in Korean Literature Seminar on Literary Instruction Studies on Korean Instruction Curricula Topics in Korean Language Instruction Seminar on Teaching Writing Seminar on Teaching Reading Seminar on Teaching Speech / Speaking Studies on the Instruction of Media Language Studies on the Instruction of Old Korean Essays Studies on the Instruction of Oral Poetry Studies on Teaching Oral Narratives Studies on the Instruction of Old Korean Fiction Studies in Korean Teaching Materials Studies on Dramatizing Literature in Classroom Language Studies on Hunminjungum

Studies on Korean Language History Studies on the Tuition of Middle Korean Grammar & Modern Korean Grammar Studies on the Instruction of Narrative Studies on the Instruction of Lyrics Studies in Teaching Ancient Korean Studies in Teaching Methods for Korean Phonology Studies in Teaching Modern Korean Studies in Teaching Korean Semantics Studies on Grammar Instruction Studies on Lexical Instruction Studies on Teaching Literary History Studies on the Instruction of Modern Poetry Studies on the Instruction of Modern Fiction Studies on Korean Language Teaching Methods Seminar on the Instruction of Korean

## Professors

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- Chil-Seong Im, Ph.D. [Professor, Korean Language Education, Speech Education, csim@jnu.ac.kr]
- Cheol No, Ph.D. [Professor, Korean Modern Poetry, Literary

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- Young-Hee Yang, Ph.D. [Professor, Middle Korean Language, Grammar Education, chamnamu@jnu.ac.kr]
- Keun-Ho Kim, Ph.D. [Associate Professor, Korean Modern Novel, Literary Education, critik7@jnu.ac.kr]
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Political Science \_*Contact Information* Phone: +82-62-530-2620 Pax: +82-62-530-2639 C-mail: 5302620@naver.com JRL: http://politics.jnu.ac.kr

## Graduate Studies in Political Science

Political science is a discipline that aims to find the best way to realize the best political system in which human beings can manage their lives with happiness and freedom. In this sense, political science is a systematically and theoretically academic major. The political science major is also designed to help students to understand political phenomena and to encourage them to become prudent political participants.

In the Department of Political Science, students are encouraged to contribute to the development of political science with theoretical judgment and applicability on political phenomena in the vortex of reality. Students are also expected to develop various political theories and research methods learned by the undergraduate education.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate and maintain an average grade of B or higher (3.0 based on a 4.5 scale). Ph.D. candidates are required to earn an additional 36 credits and maintain an average grade of B or higher.

Students who fulfill all course requirements are to pass both a comprehensive exam and a foreign language exam. Students then may write and submit a thesis.

### What Do You Study?

Ancient and Medieval Political Thoughts (3) Advanced Comparative Political Theories (3) Advanced Korean Politics (3) Advanced Research Method in Political Science (3) Advanced Studies of Political Theories (3) American Politics (3) City and Local Politics (3) Comparative Congressional Politics (3) Comparative Political Economy (3) Comparative Political Parties (3) Comparative Study of Political Culture (3) Contemporary Political Thoughts (3) Cyberpolitics (3) Election Campaign (3) European Politics (3) Gender and Politics (3)

Global Korean Network and International Co-op (3) Global Politics of the Environment (3) Globalization and National Reponses (3) History of International Politics (3) Human Rights and International Relations (3) International Relations of North Eastern Asia (3) International Politics of the Ocean (3) Japanese Politics (3) Korean Political Parties (3) Latin American Politics (3) Media and Politics (3) Modern Political Ideologies (3) Modern Political Thoughts (3) Nationalism and International Relations (3) Oriental Political Thoughts (3) Political Behavior (3)

Political Economy on the International Migration (3) Quantitative Political Analysis (3) Readings in International Relations (3) Research of International Conflicts (3) Russian Politics (3) Seminar in International Political Economy (3) Seminar in Korean Political Economy (3) Seminar on Comparative Labor Politics (3) Seminar on South-North Korea Relations (3) Studies in International Organization (3) Studies in International Political System & Process (3) Studies in Korean Foreign Policy (3) Studies in Korean Unification (3) Studies in North Korean Politics (3)

## Professors

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- Kyung-Taek Oh, Ph.D.
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- Euikyung Park, Ph.D. [Professor, Gender Politics and Political Thoughts, pek2000@chonnam.ac.kr]
- Jung-Kwan Cho, Ph.D.

Studies in Political Change (3) Studies in Political Philosophy (3) Studies of Chinese Politics (3) Studies of International Politics (3) Studies on Elections (3) Studies on Korean Legislative Politics (3) Study on Peace and War (3) Theories of National Security strategy (3) Theories of International Relations (3) Theories of Modern Democracy (3) Theory of the State (3) Topics in Foreign Policy (3) Topics in Korean Political History (3) Topics in Korean Political Thoughts (3) Women and Political Thoughts (3) Research for the Master's or Doctoral Degree (3)

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- Eunjung Choi, Ph.D. [Associate Professor, Comparative Politics, ejchoi76@jnu.ac.kr]
- Youngmi Choi, Ph.D.
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Public Administration

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#### Graduate Studies in this institution of Public Administration

Today, the world has been confronted by the age of globalization. The importance of localized information has increased. In light of these trends, the Department of Public Administration concentrates its efforts on educating future administrative professionals with comprehensive problem-solving capabilities and task performance abilities through theoretical and practical studies on administrative phenomena. The efforts would equip them with various knowledge and skills, including those in planning, policy making, research analysis, organization management, and office management necessary for administrating governments and solving social problems.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate and maintain an average grade of B or higher (3.0 based on a 4.5 scale). Ph.D. candidates are required to earn 36 credits and maintain an average grade of B or higher.

Students who fulfill all course requirements are to pass both a comprehensive exam and a foreign language exam. Students then may write and submit a thesis.

#### What Do You Study

Study of Examples of NGOs The government's budget theory Police administration Government and NGO Measuring analysis I Measuring analysis II Policy theory High class administration Public choice theory Study of example of public policy Public enterprise seminar Bureaucracy theory Local finance theory Regulation policy theory Urban planning theory Marketplace and government Human resource policy Administrative ethics Personnel matters of administration seminar Disaster management theory Electronic Government theory Administrative philosophy

Government accounting theory Policy enforcement theory Policy formulation theory Organization and society Formation design theory Local administration theory Korean administration theory Administrative reform theory Administrative Theory 2 Administration investigation theory 2 Environmental policy Environmental policy seminar History of science of public administration Administration investigation theory 1 Administrative Theory 1 Administration and law Korean administration history Local administration seminar Chinese administration Organizational analysis theory Organization and individual Study of literature of policy studies Policy theory special lecture Policy Analysis and Evaluation Government knowledge management seminar The government's budget seminar

#### Professors

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- Choong-Geun Song, Ph.D. [Professor, Public Policy analysis, solip@chonnam.ac.kr]
- Hou-Gyun Kim, Ph.D.
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Intergovernmental relation theory Disaster management policy Personnel matters of administration Population and future administration Policy of (the) city theory Leadership seminar Cultural policy American public administration Development administration theory Public health administration theory Comparative administration theory Social science methodology 1 Social science methodology 2 Social welfare policy seminar Social policy theory Industrial policy theory

- Joon-Kyo Seo, Ph.D. [Professor, Urban Policy, seo66386@chonnam.ac.kr]
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# Sociology

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## Graduate Studies in Sociology

Sociology is the study of the relationship between humans and human lifestyles and society. Sociologists study the structure of human society as a conglomerate of people who interact with each other.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on research interests.

## What Do You Study?

Classical Sociological Theories (I) Contemporary Sociological Theories (I) Methodology of Social Science Practice of the Social Statistics Research for Master's or Doctoral Degree Classical Sociological Theories (Ⅱ) Contemporary Sociological Theories (II) **Regional Societies** Environmental Sociology **Rural** Societies Sociology of Labor Organization Theory Social Movement Sociology of Family Information and Society Social Survey (I) Social Survey (Ⅱ) Social Change Comparative Sociology Seminar on Asian Thought Regional Studies on Foreign Countries Art and Society Seminar on Visual Sociology Women and Society

Sociology of Economics East Asian Societies Political Sociology Sociology of Knowledge Sociology of Education Sociology of Religion Social Thought Korean Social Thought Literature and Society Social Psychology Korean Social History Special Topics in Sociology I Special Topics in Sociology II Social Control Medical Sociology Sociology of Gender Culture Theory Sociology of Human Rights Social Statistics Seminar on the Minority Sociology of Leisure Seminar on Social Development Social Welfare Seminar on Urban Society

# Professors

- Min-Ho Kuk, Ph.D.
   [Professor, Comparative Sociology, Sociology of Development, mhkuk@chonnam.ac.kr]
- Soo-Jong Yoon, Ph.D. [Professor, Organization, Rural Sociology, sjyoon@chonnam.ac.kr]
- Jun-Woo Kim, Ph.D. [Professor, Urban Sociology, Social Statistics, junewoo@chonnam.ac.kr]
- Jung-Gie Choi Ph.D, [Professor, Deviance and Social Control, jgchoi@chonnam.ac.kr]
- Julia Jiwon-Shin, Ph.D. [Assistant Professor, Industrial Sociology, juliashin@jnu.ac.kr]
- Jin-Yeon Kang, Ph.D.
   [Assistant Professor, Historical Sociology, Sociological Theory jinyeon@jnu.ac.kr]

# Psychology

\_\_\_Contact Information Phone: +82-62-530-2650 Fax: +82-62-530-2659 URL: http://psyche.jnu.ac.kr

### Graduate Studies in Psychology

The Department of Psychology began offering MA programs in 1984 and Ph.D. Programs in 1996. As of 2017, we have conferred 180 MA and 24 Ph.D. degrees. Each year 15-20 new students are enrolled for M.A.s and 4-7 students for Ph.D. programs.

Currently about 70 graduate students in doctoral and Master's Programs are actively engaged in research and educational activities to become professionals in a variety of settings, including academia, government, and industry. The major research areas include: clinical psychology (child psychotherapy, PTSD, etc.), counseling psychology, cognitive-neuropsychology, socio-cultural psychology, learning, psychology of aging, the psychology of sexuality, and industrial/organizational psychology.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate (at least 12 credits from the Psychology Department courses). Ph.D. candidates are required to earn 36 credits (at least 18 credits from the Psychology Department courses). Students not holding a bachelor's degree in psychology are required to take 12 additional credits from the undergraduate psychology programs.

#### What Do You Study?

Both MA candidates who earn 18 credits and Ph.D. candidates who earn 27 credits may take the qualifying exam. Students who are required to earn additional undergraduate course credits may take the exam after earning 30 credits.

Every graduate student is assigned to an academic advisor based on research interests.

History and Systems of Psychology (3)	Advanced Developmental Psychology (3)	
Seminar in Research Methods (3)	Developmental Psychopathology (3)	
Research Methodology (3)	Psychology of Adolescence (3)	
Qualitative Research Methodology (3)	Psychology of Human Sexual Behavior (3)	
Practices in Clinical Psychology (3)	Adult Development and Aging (3)	
Psychopathology (3)	Special Issues in Developmental Psychology (3)	
Psychotherapy (3)	Advanced Industrial Psychology (3)	
Practices of Psychodiagnosis (3)	Psychology of Industrial Culture (3)	
Counseling Techniques I (3)	Special Issues in Industrial Psychology (3)	
Counseling Techniques II (3)	Organizational Behavior and Job Stress (3)	
Group Counseling and Psychotherapy (3)	Psychology of Consuming (3)	
Special Issues in Counseling Psychology (3)	Psychology of Advertising (3)	
Behavior Therapy (3)	Advanced Survey Methodology (3)	

Multivariate Statistics (3) Advanced Statistics (3) Design of Psychological Experiments (3) Advanced Clinical Psychology (3) Advanced Organizational Psychology (3) Advanced Physiological Psychology (3) Psychopharmacology (3) Practices in Clinical Psychology (3) Special Issues in Clinical Psychology (3) Psycho-diagnosis (3) Practices in Psycho-diagnosis (3) Cognitive Therapy (3) Rehabilitation Psychology (3) Art Therapy (3) Advanced Psychology of Personality (3) Advanced Counseling Psychology (3) Seminar on Psychobiology (3) Neuropsychological Assessment (3) Seminar in Biological Psychology (3)

### Professors

- Taejin Park, Ph.D.
   [Professor, Cognitive Psychology & Cognitive Neuropsychology, tpark@jnu.ac.kr]
- Gahyun Youn, Ph.D.
   [Professor, Life-span Developmental Psychology, ghyoun@jnu.ac.kr]
- Munsoo Kim, Ph.D.
   [Professor, Physiological Psychology, mkim@jnu.ac.kr]
- Hyun Kyun Shin, Ph.D.
   [Professor, Clinical Psychology, shk2004@jnu.ac.kr]

#### Laboratories

#### **Psychological Testing Lab**

This Lab is equipped with various psychological testing tools (K-WAIS-Ⅳ, BGT, MMPI-Ⅱ, MMPI-A, Rorschach, SCL-90R, PAI, Sentence

Neuropsychological Assessment (3) Advanced Psychology of Learning (3) Neuropsychology (3) Advanced Cognitive Psychology (3) Psychology of Memory (3) Cognitive Science (3) Cognitive Neuropsychology (3) Special Issues in Cognitive Psychology (3) Social Cognition (3) Psychology of Thought (3) Seminar in Psychology of Learning (3) Advanced Psychology of Language (3) Psychophysics (3) Advanced Social Psychology (3) Advanced Methodology in Social Psychology (3) Special Issues in Social Psychology (3) Cross-cultural Psychology (3) Advanced Cultural Psychology (3)

- Young-Shin Kang, Ph.D.
   [Associate Professor, Counseling Psychology, lavieenrose@jnu.ac.kr]
- Hyejeen Lee, Ph.D.
   [Associate Professor, Clinical Psychology, hjl2013@jnu.ac.kr]
- Samuel Suk-hyun Hwang, Ph.D. [Associate Professor, Neuro Psychology, hwansana@jnu.ac.kr]
- Jieun Shin, Ph.D.
   [Assistant Professor, Social Psychology, jieunshin@jnu.ac.kr]

Completion Test, SNSB-  ${\rm [I]}$  ), camcorder, and voice recorder.

Cognitive Neuropsychology Lab

This Lab is for EEG/ERP and behavioral researches on cognition, attention, emotion, and language. Main experimental equipment include one electromagnetic-wave shielding booth, three sound- proof experimental booths with control booths, one soundproof room for a group experiment, multichannel EEG amplifiers with electrode cap kits (made by BrainProducts), E-Primes with response boxes (made by PST), and PCs with LED monitors.

#### **Clinical Neuropsychology Lab**

This Lab is for bio-signal researches on various abnormal cognition and emotion. Main experimental equipment include one electromagneticwave shielding booth with ta control room, a multi-channel amplifier for physiological indices (e.g., EMG, SCR, HR; made by AD Instruments), Polygraph (made by Grass), MP Data Acquisition System (made by Biopac systems), and PCs with LED monitors.

#### **Behavioral Observation Lab**

This Lab is equipped with behavior observation systems including two soundproof booths, videomonitoring systems, and PCs with LED monitors, and a variety of psychological testing tools, making an ideal environment for research on interpersonal interactions or small group dynamics. In addition, researchers conduct behavioral experiments on an individual basis. Libary and Information Science <u>Contact Information</u> Phone: +82-62-530-2660 Fax: +82-62-530-2669 URL: http://list.jnu.ac.kr

### Graduate Studies in Libarty and information science

The graduate program in Library and Information Science educates students on information theory and the pursuit of scientific knowledge. The studies deal with the ideas and methods of knowledge relation and management and other issues that involve libraries. There is an increasing market for graduate studies in Library Information Systems that has raised the status of librarians, archivists, and academic specialists.

## Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on research interests.

# What Do You Study?

History of Library and Information Science	Exercises in Reading Archives	
Research Methodology in Library and Information	Studies in Korean Calligraphic History	
Science	Seminar in Information System Analysis and Design	
Studies in Comparative Library and Information	Advanced Information Service	
Science	Advanced Subject Heading	
Research for Master's or Doctoral Degree	Practice of Korean Paper Restoration	
Studies in Public Libraries	Advanced Information Processing	
Studies in Textual Bibliography	Information Seeking Behavior	
Studies in DBMS	Studies in Comparative Classification	
Multimedia Production	Studies in Theory of Cataloging	
Theory of Comparative Classification	Studies in Special Media	
Advanced Indexing and Abstracting	Studies in Automatic Cataloging	
Theory of Cataloging	Special Topics in User Studies	
Advanced Information Science	Special Topics in Comparative Library and	
Theory of Information Retrieval	Information Science	
Studies in Collection Development	Bibliometrics	
Theory of Information Network	Studies in Indexing and Abstracting	
Special Topics in Information Related Law	Studies in Information Retrieval	
Studies in Information Center Buildings	Field Work (I)	
Advanced Information Center Management	Field Work (II)	
Assessment of Library and Information Center Series	Archival Preservation	
Studies in Information Services	Research for Public Libraries	

Special Topics in Meta Data Studies in Meta Data Theory of Bibliotherapy Advanced Scholarly Information Information Services Seminar in Information Management Seminar in Library Policy Studies in Information Policy General Study in Information Organization General Study in Information Management General Study in Information Culture General Study in Information Technology Theory of Archival Management Technology of Archival Management

## Professors

- Jun-Min Jeong, Ph.D.
   [Professor, Information Management, wizard@jnu.ac.kr]
- Hyun-Jin Hong, Ph.D.
   [Professor, Bibliometrics, hjhong@jnu.ac.kr]
- Jeong-Hyun Kim, Ph.D.
   [Professor, Knowledge Organization, jhgim@jnu.ac.kr]

## Laboratories

- LIS Graduate Study Room
- Information Processing Lab

Theories in Organization of Archives Development in Value of Archives Development in Information Resources Development in Knowledge Community Special Topics in Regional Culture Information Studies in Systematic Bibliography Studies in Physical Bibliography Research for Information Center Management Advanced Studies in Institutional Information Management Doctorial Seminar in Institutional Information Management Business Information Management

- Myoung-Gyu Lee, Ph.D. [Professor, Information Material Organization, gyulee@jnu.ac.kr]
- Woo-Kwon Chang, Ph.D.
   [Professor, Knowledge Management, wk1961@jnu.ac.kr]
- Ji-Hyeon Kim, Ph.D.
   [Assistant Professor, Information Behavior Science, jihkim@jnu.ac.kr

- LIS Library

# Communication

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## What is Communication?

The discipline of communication focuses on how people use messages to generate meanings within and across various contexts, cultures, channels, and media. The discipline promotes the effective and ethical practice of human communication. Communication is a diverse discipline which includes inquiry by social scientists, humanists, and critical and cultural studies scholars. A body of scholarship and theory about all forms of human communication is the basis for an ever-expanding understanding of how we all communicate.

#### Department of Communication at Chonnam National University

The Department of Communication aims to prepare its students for careers in a variety of journalism and mass communication fields. It is expected that upon completion of the department's programs, students will be able to write, edit, and produce visuals and design for print and digital media.

The department offers both undergraduate and graduate curricula that mix academics with professional experience to ensure that students are well schooled in writing and editing and in analyzing the issues, conventions, and practices of journalism and mass communication. The departmental requirements give communication majors both guidance and flexibility in their selection of courses. Majors can pursue one of following tracks: journalism, advertising and PR, broadcasting, and cultural studies.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on research interests.

## What Do You Study?

Philosophy of Journalism History of Korean Journalism International Communication Studies in Information Society Studies in Community Journalism Studies in Mass Culture Seminar in Advertising Human Communication Political Communication Persuasion in Communication Culture and Interpersonal Communication Seminar in Cultural Studies Seminar in Public Relations Modern Thoughts and Communication Media Law Political Economy of Communication Multi-Media Theories of Broadcasting Journalism Mass Media & Social Movements Media Policy Media Management Media Criticism Dynamics of Advertising Public Relations Media Ethics Seminar in Newspaper Seminar in Broadcasting Visual Communication Education of Media Cyber Communication Modern Communication Studies in Journalism Seminar of Culture Management Audience Studies Qualitative Methodology Quantitative Methodology Speech Communication Online Journalism

## Professors

Eui Jong Lee Human Communication, Media Effects, Research Methods ejlee@chonnam.ac.kr
Jong Won Yoo Press Philosophy and History, Media Law, Media Ethics jwyoo@chonnam.ac.kr
Young Khee Kim Critical Communication, International Communication, Political Communication ykkim@chonnam.ac.kr Communication & Gender Digital media & Society Seminar in Communication Theory Crisis Management Theories CSR Communication Media Entertainment Cultural Policy Culture Creation & Cultural Planning Culture Economics & Cultural Management Studies in Digital Culture Digital Contents & Culture Technology Culture Contents & Media Culture Marketing & Public Relations Macro-Communication Theory Micro-Communication Theory Research Design Understanding of Mass Communication 1 Understanding of Mass Communication 2

- Chungmin Joo New Media, Broadcasting, Media Policy cmjoo@chonnam.ac.kr
- Oh Hyeon Lee Cultural Studies, Media Criticism leohhy@hanmail.net
- Kyun Soo Kim Journalism, PR kimk@jnu.ac.kr
  Jiyang Bae PR
  - jiyang.bae@gmail.com

#### Careers

These job titles are not an exhaustive list, but rather, represent the types of positions most widely recruited for.

Account Associate/Manager	Broadcaster
Advertising Manager	Columnist
Associate Producer	Community Relations

Copy Editor Creative Director Editor Event Coordinator Film Editor Foreign Correspondent Investigative Reporter Journalist Marketing PR Specialist Market Researcher Media Buyer Media Planner Media Relations Coordinator Media Researcher Newscaster Newsletter Editor/Creator News Reporter Press Secretary Professor

Program Coordinator Promotion Manager Public Information Specialist Publishing Assistant/Manager Reporter Sales Associate Scriptwriter Sports Announcer Teacher Video Journalist Website Designer Writer Employment areas are in: Academia Government Private Corporations Non-Profit Organizations Publicly Traded Corporations

# Geography

*Contact Information* Phone: +82-62-530-2680 Fax: +82-62-530-2689 URL: http://altair.chonnam.ac.kr/~geo/

## Graduate Studies in Geography

Geography as a graduate level, students are required on focusing more on spatial analyses in various topics. Students are also trained for critical thinking, problem solving skill, writing report/publication, and communication/presentation skill. Each student will select his/her own thesis or dissertation topic for graduation based on own interest, particularly on topics that the department is specialized such as economical geography, tourism, urban geography, environmental geography, and GIS.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on their research interests.

## What Do You Study?

Advanced Cartography	Research in Historical Geography	
Climate change and natural hazard	Research in History of Geography	
Climatic Geomorphology	Research in Political Economy of Space	
Computer Cartography with GIS	Research in Political Geography	
Development of Environment Thought	Research In Regional Geography	
Development of Geographic Thought	Research in Rural Geography	
Environmental change and human	Research in Social Geography	
Geographical Philosophy and methodology	Research in Spatial and Regional Development	
Geography of Information and Telecommunication	Research in Tourism Geogarphy	
Geography of Labor Market	Research in Urban Geography	
Geography of Underdevelopment	Resources and Environment	
Glacial and periglacial Geomorphogy	Seminar in Behavior Geography	
Land use Analysis	Seminar in biogeography	
Landforms of Korea	Seminar in Cartography	
Political geography in the third world	Seminar in ecological geography	
Practice in Geographic information system	Seminar in Field Geomorphology	
Quantitative Analysis in Geography	Seminar in Financial Geography	
Remote Sensing	Seminar in Geography	
Research in Cultural Geography	Seminar in Geography of Korea	
Research in Economic Geography	Seminar in Geography of North Korea	
Research in Feminist Geography	Seminar in New Geopolitics	

Seminar in Population Geography Seminar in Regioanl Analysis Seminar in Regional Studies Seminar of Regional Development Policy Seminar of Tourism Resources Seminar on Geographic information system Soilgeography Special Area Studies Special Topics in Applied Geomorphology Special Topics in Economic Geography Studies in Location Theory Study in Coastal Geomorphology Synoptic Climatology The city in the Third World Theory of Urban Planning Theory of Urban Renewal Topic in Rural Geography Topics In Cultural Geography Topics in Economic Geography Topics in Environment Conservation

## Professors

- Hyun-Wook Lee, Ph.D. [Professor, Urban Geography, Quantitative Analysis, holee@jnu.ac.kr]
- Jeong-Rock Lee, Ph.D.
   [Professor, Regional Development, Tourism Geography, jrlee@jnu.ac.kr]
- Young-Jin Ahn, Ph.D.
   [Professor, Social-Economic Geography, yiahn@jnu.ac.kr]
- Taesoo Lee, Ph.D.

Topics in European Studies Topics in Feminist Geography Topics in Geography of North East Asia Topics in Geography of North Korea Topics in GIS Application Topics in Historical Geography Topics in New Geopolitics Topics in Regional Transportation and Analysis Topics in Resional Theory Topics In Social Geography Topics in Theory of Industrial Location Topics in Theory of Regional Development and Planning Topics in Tourism Development Planning Topics in Tourism Geography Topics in Urban Social Geography Understanding Earth Environmental System and Manage Urban Economic Geography Urban Land Economics

[Associate Professor, Environmental Geography, taesoo@jnu.ac.kr] • Hwa-hwan Kim, Ph.D.

- [Associate Professor, Geographic Information Systems, h2kim@jnu.ac.kr]
- Yena Song, Ph.D.
  [Associate Professor, Transportation geography, Y.song@jnu.ac.kr]
  Gwan-yong Jeong, Ph.D.
- [Assistant Professor, Soil Geography, gyjeong@jnu.ac.kr]

Cultural Anthropology and Archaeology

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#### Graduate Studies in Anthropology

Anthropology is the study of human and its cultures, and is divided into sub-disciplines of cultural anthropology, archaeology, linguistic anthropology, and physical anthropology. Cultural anthropology is a comparative cultural study of the contemporary societies and attempts to understand other societies in terms of their own cultural values and symbols. Archaeology is a study on the origins and developments of cultures, and focuses on the material remains from the past and people with few or no written documents. Linguistic anthropology explores the relationship between language and culture. Physical anthropology studies human evolution and current health issues.

#### Degree Requirements

Students are assigned to advisors based on their research proposals. The assignment is guided by the graduate thesis committee and will be made in the first year of the program. Graduate students in the master level need 15 or more credits and those in the doctoral level need 27 or more credits to graduate. The credits should be fulfilled by anthropology courses. However, doctoral students may take up to six credits of non-anthropology courses under advisor's supervision. Some students may be advised to take as many as four extra courses based on their previous academic background. All graduate students should take a foreign language exam as a part of their qualification for thesis submission. The exam will be taken in English, German, French, Chinese, Classical Chinese or Japanese. International students may take a Korean exam.

The thesis prospectus should be submitted to the department before the completion of four semesters for master students and eight semesters for doctoral students. The prospectus needs approval from the advisor.

Doctoral students must publish two or more research papers before the review of their doctoral thesis begins. The student must be the first or the corresponding author of at least one paper, which is published in a journal of the KCI (Korea Citation Index) level or above.

## What Do You Study?

Sexuality and Anthropology History of Anthropological Theories Ecological Anthropology Anthropology of Religion Seminar in Anthropology 1 History and Culture East Asian Culture Readings in Oriental Archaeology History of Archaeology Field Methods in Archaeology Research Methods in Archaeology Seminar in Anthropology 2 Ethnoarchaeology Special Topics in Prehistoric Archaeology of Korea Special Topics in Western Archaeology Special Topics in Oriental Archaeology Archaeology of Mahan Special Topics in Historic Archaeology of Korea Topics of Consumption and Culture Advanced Regional Studies Understanding of Festivals and Culture Documenting the Life through Ethnographic Films Ethnicity and Nationality Archaeology of Technology Research of Honam Culture Research Methods in Cultural Anthropology Memory and Representation of Culture

## Professors

- Young-Jin Yim, Ph.D. [Professor, Archaeology, yjyim@chonnam.ac.kr]
- Young-Jin Yim, Ph.D. [Professor, Archaeology, yjyim@chonnam.ac.kr]
- Sung-Heup Hong, Ph.D.
   [Professor, Cultural Anthropology, sibung@chonnam.ac.kr]

# Chinese Culture Comparative studies in prehistory Subsistence Economy and Culture Political Anthropology Studies in Mahan Culture Anthropology of Religion Area Studies of South Asia Area Studies of Northeast Asia Urban Anthropology Political Anthropology Anthropology of Ethnicity Economic Anthropology Minority Culture Consumption and Culture Urban Anthropology

- Ki-Jung Lee, Ph.D. [Professor, Visual Anthropology, kjunglee@chonnam.ac.kr]
- Jin-Son Cho, Ph.D.
   [Professor, Archaeology, jojinseon@hanmail.net]
- Minkoo Kim, Ph.D.
   [Professor, Archaeology, minkoo@jnu.ac.kr]

#### Laboratories

#### Archaeobotany Lab

Archaeobotany is the study of human and societies through the analysis of plant remains from archaeological sites. The research emphases of this lab include food procurement, domestication, landscape transformation, and social complexity. The types of plant remains studied include macrobotanical (seed and wood) and microbotanical (pollen and phytolith) remains.

Family Environment and Welfare <u>Contact Information</u> Phone: +82-62-530-1320, 138 Fax: +82-62-530-1329 E-mail: A0250@jnu.ac.kr URL: http://welfare.jnu.ac.kr

## Graduate Studies in Family Environment and Welfare

The goal of the Department of Family Environment and Welfare is to contribute to the improvement of family welfare and quality of life through the systematic studies of interaction between humans and family environment. To achieve this goal, the Department educates students about the basic theories and practical courses in the fields of human & family environment and also trains professionals who manage to solve special tasks and social problems on family welfare. The department's Major fields consist of consumer economics, housing and interior design, child care and counseling, family studies and social welfare, and family resource management. Graduates from our department work as professors and researchers in their major fields, college instructors and professional public workers human service.

#### Degree Requirements

Master's degree candidates are required 24 credits for graduation. Ph.D. candidates are required an additional 36 credits.

Graduate students are also required to pass a comprehensive exam and a foreign language exam, and to submit a thesis or dissertation for approval

#### What Do You Study?

• Consumer economics Seminar in Household Welfare Family Financial Counseling Research on Living Cost Advanced Course in Consumer Economics Consumer Competencies and Education Seminar in Consumer Affairs Advanced Course in Comsumer Protection and Policy Advanced Course in Consumer Counseling Advanced Course in Comsumer Decision Making Theories of Decision Making Advanced Course in Financial Management Electronic commerce Theory Investment Theory Advanced Course in Korean Households

· Housing and interior design Multi Family Housing Planning and Design Management of Multifamily Housing Facility Management and Design for Welfare Facilities History on Western Interior Design Advanced Principles in Interior Design Interior Design Studio 1 Housing Welfare Internship in Housing Welfare Advanced Course In Housing Environment Housing and Community Housing Planning for Special Groups History on Korean Interior Design Contemporary Interior Design Analysis Environmental Psychology & Behavior

· Child care and counseling

Play Therapy Supervision Practice Practice in Play Therapy Theories of Play Therapy Theories and Practices of Sandplay Therapy Assessment and evaluation for children Research on Dav Care Program Seminar in Child Care Theories of Parent - Education Studies in Filial Play Therapy Psychology Of Personality Child and Environment Seminar on Child Development Advanced the child welfare Theorise of Child Counseling Child Psychopathology Administration and Organization of Early Childhood Education and Care Center Policies of Early Childhood Education and Care Art Therapy Narrative Therapy Cognitive learning therapy Theory and Practice of Group Counseling

• Family studies and Social welfare Advanced Course in Family Relationships Advanced Course in Family Development Advanced Course in Family Welfare Family Counseling the case study Family Life Education and Research Topics in Family Communication Advanced Family Therapy and Practice Advanced Family Studies Advanced Course in Social Service for the Elderly

### Professors

- Duck-Soon Hwang, Ph.D. [Professor, Consumer Economies, hds420@jnu.ac.kr]
- Mi Hee Kim, Ph.D.
   [Professor, Housing Planning and Design, mhk@jnu.ac.kr]

• Sook Lee, Ph.D. [Professor, Child Counseling, Social Problems Skills and Techniques for Social Work Practice Social Work Practice Theories Social Welfare Policy Social Welfare Research Method Advanced Social Welfare Social Welfare Administration Advanced Seminar in Social Service Advanced female Welfare Human Behavior & Social Environment Advanced Community Welfare Studies in Korean Family

Family resource management
 Topics in Household Activities
 Management the case study
 Advanced Course in Management Theories
 Advanced Course in Management and
 Environment
 Special Topics in korean Traditional Living
 Lifetime Planning
 Research on Time
 Women and Labor
 Human Resource Management
 Analysis on Family Resources Management
 Special Topics on Institutional Home
 Management

 Common(Methodology/Statistics) Advanced Statistics
 Research Method 1
 Research Method 2
 Research and Ethics
 Data Analysis

sooklee@jnu.ac.kr] • Kyeong-Shin Kim, Ph.D. [Professor, Family Welfare, kks@jnu.ac.kr] • Eun-Sil Hong, Ph.D. [Professor, Consumer Sciences, esmail@jnu.ac.kr] • Jeong-Hwa Lee, Ph.D. [Professor, Welfare for the Elderly, jhlee2@jnu.ac.kr]Joo-Yeon Lee, Ph.D.[Professor, Child Development & Child Care,

# Laboratories

- Consumer Financial Management Lab
- Housing Planning and Design Lab
- Child Care and Counseling Lab
- Family Studies Lab

idscot@jnu.ac.kr] • Jeong-Ha Hwang, Ph.D. [Associate Professor, Social Welfare, jeonghah@jnu.ac.kr]

- Consumer Education Lab
- Family Welfare Lab
- Child Development Lab
- Social Welfare Lab

Interdisciplinary Program of Social Welfare *\_\_\_Contact Information* Phone: +82-62-530-1320, 1380 Fax: +82-62-530-1329 E-mail: A4952@jnu.ac.kr URL: http://welfare.jnu.ac.kr

### Graduate Studies in Interdisciplinary Program of Social Welfare

It was established to educationally train social workers and nurture multidisciplinary social welfare talents linked to various disciplines such as family welfare, child welfare, sociology, nursing, etc.

It has also been targeted with the purpose of training social welfare personnel with social welfare philosophies and beliefs.

#### Degree Requirements

Master's degree candidates are required to obtain 24 credits for graduation. Ph.D. candidates required an additional 36 credits.

Graduate students are also required to pass a comprehensive exam and a foreign language exam, and to submit a thesis or dissertation for approval

### What Do You Study?

Seminar in Household Welfare Family Nursing and Family Therapy Advanced Course in Family Relationships Advanced Course in Family Development Advanced Course in Family welfare Topics in Family Communication Advanced Family Therapy and Practice Advanced Child Health Nursing and Practice Advanced Rehabilitation Nursing and Practice Management of Multifamily Housing Advanced community mental Health Nursing and practice Special Topics on Institutional Home Management Management of Multifamily Housing Correctional Social Work Advanced Course in Social Service for the Elderly East-Asian Society and Korean Welfare Theories of Welfare State Facility Management and Design for Welfare Facilities Seminar on the Welfare Finance Seminar on Welfare Administration Research of Social Problems

Social Security Social Welfare History of Social Welfare Social Welfare and the Law Seminar on Social Welfare Skills and Techniques for Social Work Practice Social Work Practice Theories Social Welfare & Poverty Social Work Ethics and Philosophy Social Welfare Policy Seminar on Social Welfare Policy Social Welfare Research Method Social Welfare Administration Field Practicum in Social Welfare Research on Living Cost Seminar on Child Development Theorise of Child Counseling Child Psychopathology Women and Labor Research Training 1 Research Training 2 Social Work in Health Setting Human Resource Management Human Behavior & Social Environment

Theory of human behavior Human Rights and Welfare Data Analysis Voluntaries Studies for the People with Disability Information Society and Welfare Mental Hygiene Social Work in Mental Health Housing Welfare Advanced Course In Housing Environment Housing in Other Culture

## Professors

- Duck-Soon Hwang, Ph.D. [Professor, Consumer Economics, hds420@jnu.ac.kr]
- Mi-Hee Kim, Ph.D. [Professor, Housing Planning and Design, mhk@jnu.ac.kr]
- Sook Lee, Ph.D. [Professor, Child Counseling, sooklee@jnu.ac.kr]
- Kyeong-Shin Kim, Ph.D. [Professor, Family Welfare, kks@jnu.ac.kr]
- Eun-Sil Hong, Ph.D.
   [Professor, Consumer Sciences, esmail@jnu.ac.kr]
- Jeong-Hwa Lee, Ph.D. [Professor, Welfare for the Elderly, jhlee2@jnu.ac.kr]
- Joo-Yeon Lee, Ph.D.
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- Jeong-Ha Hwang, Ph.D. [Associate Professor, Social Welfare, jeonghah@jnu.ac.kr]
- Sang-Eun Oh, Ph.D. [Professor, Child Nursing,

## Laboratories

- Social Welfare Lab

Advanced Community Welfare Qualitative Research in Nursing Theory and Practice of Group Counseling Youth Welfare Development and Assessment on Day Care Program School Social Work Studies in Korean Family Environmental Psychology & Behavior

- seoh@chonnam.ac.kr]
  Jeong-Sun Kim, Ph.D. [Professor, Geriatric Nursing, kjs0114@jnu.ac.kr]
  Min-Ho Guk, Ph.D. [Professor, Eastern Sociology / Comparative Sociology / Social Change, mhkuk@chonnnam.ac.kr]
  Jeong-gi Choi, Ph.D. [Professor, Deviation and Control / Korean
- [Professor, Deviation and Control / Korean History / Social Movement, jgchoi@chonnam.ac.kr]
  Ho-Gyun Kim, Ph.D.
  [Professor, Public Administration Organization Theory / Public Value Theory / Public Leadership Theory / Public Human Resource Development Theory / Administrative Theory / Public Administration and Cultural Diversity, khg@chonnam.ac.kr/khg@jnu.ac.kr]
  Mi-Seung Shim, Ph.D.
- [Associate Professor, Welfare administration/Welfare Policy/Community Welfare, msshim@chonnam.ac.kr]

Interdisciplinary Program of Interior Design \_\_\_*Contact Information* Phone: +82-62-530-1320, 1380 Fax: +82-62-530-1329 E-mail: A4952@jnu.ac.kr URL: http://welfare.jnu.ac.kr

## Graduate Studies in the Interdisciplinary Program of Interior Design

The Interdisciplinary Program of Interior Design is operated collaboratively between the Department of Family Environment and Welfare, the Department of Architecture, and the Department of Fine Arts at in Chonnam National University. The program focuses on the life environment in a macroscopic sense, including architecture, housing, and welfare facilities as well as interior design, going beyond the fine arts.

The Interior Design Program offers design education to develop creative and practical living and cultural spaces by exploring the relationship between people and the environment in detail for the diversified living environments of a state-of-the-art information society. Students study how to construct space, focusing on the living environment. The Interior Design Program aims to offer spaces meeting the demands of new living environments for the 21st century, and ultimately improve quality of life.

#### Degree Requirements

Master's degree candidates are required to gain 24 credits for graduation. Ph.D. candidates are required to obtain an additional 36 credits.

Graduate students are also required to pass a comprehensive exam and a foreign language exam, and to submit a thesis or dissertation for approval

#### What Do You Study?

Furniture Design Study Theory of Architectural Space Advanced Theory of Architectural Design The Planning of regeneration Multi Family Housing Planning and Design Theory of Craft Arts Theories of Urban Cultural Landscape Design Marketing Design Management Theory of Design Media Research Methodology in Interior Design Topics in Design and Form Advanced Presentation Technique Theory in Digital Architecture Aesthetics Commercial Space Desing History on Western Interior Design Structure of Interior Architecture

Advanced Principles in Interior Design Interior Design Studio 1 Interior Design Studio 2 Materials for Interiors Color Study on Interior Environmen Studies in Interior Environment Research Training 1 Research Training 2 Lighting Design Internship in Housing Welfare Housing and Community Environmental Friendly Architectural Housing Planning for Special Groups History on Korean Interior Design Contemporary Interior Design Analysis History of Contemporary Interior Design Environmental Psychology & Behavior

# Professor

- Mi Hee Kim, Ph.D. [Professor, Housing Planning and Design, mhk@jnu.ac.kr]
- Duck-Soon Hwang, Ph.D. [Professor, Consumer Economics, hds420@jnu.ac.kr]

Eun-Sil Hong, Ph.D.
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Joo-Yeon Lee, Ph.D.
[Professor, Child Development & Child Care, idscot@jnu.ac.kr] Food & Nutrition \_\_\_Contact Information

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## Graduate Studies in Food and Nutrition

The graduate program in Food and Nutrition aims to offer outstanding educational and research programs covering fundamental and applied aspects in the field of food science and human nutrition.

The program provides in-depth knowledge of clinical nutrition, nutritional aspects of exercise, sensory and instrumental evaluation of food quality, nutrition and disease interactions, food chemistry, food microbiology, biotechnology, food processing, and functional foods. Students are provided with collaborative research opportunities in conjunction with hospitals, industry, and other research institutes. Faculty members have earned a reputation for distinguished education and research programs in the field of food science and human nutrition. Graduates are prepared for scientific and technical careers in educational institutions, government agencies, healthcare facilities, and industries.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits for graduation. Ph.D. candidates are required to earn an additional 36 credits.

Graduate students are also required to pass a comprehensive exam and a foreign language exam, and to submit a thesis or dissertation to qualify for graduation.

### What Do You Study?

Advanced Food Chemistry Advance in Science of Functional Food Advanced Food Hygiene Advanced Food Microbiology Advanced Food Preservation Advanced Food Processing Advanced Food Science Advanced Molecular Nutrition Advanced Nutrition Education Advanced Statistics for Natural Scientists Animal Experiments in Nutrition Amino Acid and Protein Metabolism Bioenergetics Baking Science **Bioinformatics** Biotechnology of Foods Carbohydrate Chemistry Carbohydrate Metabolism

Chemistry in Food Flavors Clinical Nutrition Current Topics in Food Science Current Topics in Nutrition Evaluation of Functional Materials Experiments in Food and Nutrition Enzymology Evaluation of Food Fermented Foods Food Biochemistry Food Marketing Food Toxicology Food and Pollution History of Foods History of Nutrition Hormone and Nutrition Immunity and Nutrition Instrumental Analysis

Lipid Chemistry Lipid Metabolism Malnutrition Mineral Metabolism Molecular Biology Nutrition and Behavior Nutrition and Environment Nutrition for Fitness and Sports Nutrition in Aging Nutrition in Infancy and Childhood Nutrition in the Community Nutritional Biochemistry

## Professors

- Deok-Young Jhon, Ph.D. [Professor, Food Microbiology, dyjhon@jnu.ac.kr, 062-530-1335]
- Malshick Shin, Ph.D.
   [Professor, Food Science, msshin@jnu.ac.kr, 062-530-1336]
- Chang-Bum Ahn, Ph.D. [Professor, Food Chemistry and Processing, ahn321@jnu.ac.kr, 062-530-1351]
- Bok-Mi Jung, Ph.D [Professor, Food Service, jbm@jnu.ac.kr 062-530-1353]
- Tai-Sun Shin, Ph.D. [Professor, Food Analysis, shints@jnu.ac.kr, 062-530-1352]
- Woojin Jun, Ph.D.
   [Professor, Functional Food, wjjun@jnu.ac.kr, 062-530-1337]

#### Laboratories

- Food Microbiology Lab
- Carbohydrate Materials Lab
- Food Processing Lab
- Food Analysis Lab
- Cookery Science Lab
- Biomaterials for Functional Food Lab
- Metabolism of Functional Materials Lab
- Food Chemistry Lab
- Metabolomics Lab
- Nutritional Epigenetics Lab
- Clinical Nutrition Lab

Nutritional Epidemiology Nutritional Physiology Nutrition for Infants and Children Physical Chemistry of Foods Phytochemicals Pigments Chemistry Protein Chemistry Research for Master's or Doctoral Degree Research in Food Science and Nutrition Rheology of Foods Vitaminology World Food Problem

- Young-Ran Heo, Ph.D.
   [Professor, Nutrition, yrhuh@jnu.ac.kr, 062-530-1338]
- Hyun-Jung Chung, Ph.D. [Associate Professor, Food Chemistry, hchung@jnu.ac.kr, 062-530-1333]
- Young-Shick Hong, Ph.D. [Associate Professor, Nutritional Metabolomics, chtiger@jnu.ac.kr, 062-530-1331]
- Jung-Mi Yun, Ph.D. [Associate Professor, Nutritional Epigenetics, sosung75@jnu.ac.kr, 062-530-1332]
- Clara Yongjoo Park, Ph D. [Assistant Professor, Clinical Nutrition, parkcy@jnu.ac.kr, 062-530-1354]
- Ok-kyung Kim, Ph.D. [Assistant Professor, Nutritional Biochemistry, 20woskxm@jnu.ac.kr, 062-530-1334]
- Nutritional Biochemistry Lab

#### Facilities

- Experimental Foods Lab
- Food and Nutrition Lab
- Nutrition Counseling Lab
- Nutrition Assessment Lab
- Cell Culture Lab
- Instrumental Analysis Lab
- Animal Lab
- Sensory Evaluation Lab

Interdisciplinary Program of Cultural Assets

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#### Graduate Studies in History

The Interdisciplinary Program in Cultural Assets was established to develop creative and original culture by cultivating the experts and professionals who excavate and conserve Korean culture in the 21st century, the age of culture. For the program, interdisciplinary cooperation was made with nine related departments including Architecture, Korean Music, Korean Language Education, Korean Literature, Fine Arts, History, Food and Nutrition Science, Clothing, and Anthropology. We have offered a master's degree since 2003 and doctor's degrees since 2005.

Cultural Assets Studies is the science covering research on all kinds of culture, cultural assets or national properties, tangible heritage, and intangible, lost heritage. This interdisciplinary Program aims to develop knowledgeable professionals and experts in cultural heritage studies who are equipped with related expertise and skills through our field-centric systematic educational approach, studying general topics related to culture and cultural properties.

### Degree Requirements

Through the program, we expect to see our future scholars, experts, and professionals equipped with research capabilities in cultural heritage or knowledge in national cultural properties for the related institutes, international and domestic museums, and art galleries.

#### What Do You Study?

Research for the Master's or Doctoral Degree

#### Generals

Appraisal of Cultural Properties (3) Cultural Properties Protection Law (3) Methodology of Cultural Properties (3) Theory of Cultural Properties Policy (3) Methodology of Cultural Heritage Designation (3) Cultural Heritage Festival and Tourism (3) Development of Cultural Heritage Contents (3) Methodology of Excavation and Investigation (3) Methodology of Conservation Science (3) Methodology of Restoration (3) Methodology of Earth Surface Investigation (3) Korean Cultural Sphere (3) History of Korean Culture (3) Materials of Korean history (3) Korean Religious Culture (3)

#### **Tangible Cultural Heritage**

Architectural Heritage (3) Ancient Official Documents (3) Modern Cultural Heritage (3) Mahan Cultural Heritage (3) Collection of Literary Works (3) Buddhist Literature (3) Buddhist Art (3) Buddhist Pagoda (3) Ancient Private Documents (3) Stone Cultural Heritage (3) Underwater Cultural Heritage (3) Tomb and Funerary Heritage (3) Traditional Clothing (3) Traditional Calligraphy (3) Traditional Painting (3)

#### Intangible Cultural Heritage

Metal Craft (3) Ceramics and Pottery (3) Woodworking (3) Folk Games (3) Masonry Stone Construction (3) Music Literature (3) Traditional Korean Instruments (3) Traditional Korean Instruments (3) Traditional Food Recipes (3) Korean Clothing Construction (3)

## Professors

- Byoung-In Kim, Ph.D.
   [Professor, Medieval Korean History, Honam Studies, Historical Culture Design, kimbi36@jnu.ac.kr]
- Kyung-Soo Na, Ph.D.
   [Professor, Intangible Cultural Heritage, Ethnography, ksna@jnu.ac.kr]
- Dae-Hyun Kim, Ph.D. [Professor, Korean Classical Literature, Ancient and Old Documents, kdh@jnu.ac.kr]
- Young-Jin Yim, Ph.D.
   [Professor, Mahan-Baekje Archaeology, Northeast Asian Exchange Archaeology, mahan@hanmail.net]

#### Monument

Livelihood Activities (3) Annual Customs (3) Dietary Life (3) Clothing Culture (3) Residential Life (3) Scenic Sites and Monument (3) Historic Sites Heritage (3) Natural Monument (3)

#### World Culture

World Cultural Heritage (3) World Natural Heritage (3) Memory of the World (3) Intangible Cultural Heritage (3) Development of Traditional Food Culture (3) Theory of Traditional Asian Culture (3)

- Malshick Shin, Ph.D.
   [Professor, Traditional Dietary Culture, Foods, msshin@jnu.ac.kr]
- Eun-jung Kim, Ph.D. [Professor, Traditional Clothes Culture kimej@chonnam.ac.kr]
- Yong-ui Kim, Ph.D.
   [Professor, Japanese Culture, yukim@chonnam.ac.kr]
- Cheol-Woo Kim, Ph.D. [Professor, Craft, dogong63@hanmail.net]
- Yong-Shik Lee, Ph.D. [Associate Professor, Theory of Korean Music, yongshiklee@hanmail.net]

#### Laboratories

- Study Room
- Research Center for History and Culture

Clothing & Textiles \_\_\_Contact Information

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#### Graduate Studies in Clothing and Textiles

The Department of Clothing and Textiles offers both Master's and Ph.D. degree programs in Textile Science, Social Psychology of Clothing, Fashion Marketing, Clothing Ergonomics, Fashion Design, Clothing Engineering, and Traditional Korean-Western Costume. These programs are designed to prepare graduates for research, teaching and administrative positions in universities, companies, the clothing industry, and the government.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits (15 credits from Department courses) to graduate. Ph.D. candidates are required to earn an additional 36 credits (24 credits from Department courses). All graduate students are required to take the research for Master's or Doctoral Degree course. To graduate, master's degree candidates must pass a qualifying exam (3 subjects). Ph.D. candidates must also pass a qualifying exam (3 subjects). All graduate students must pass a foreign language exam.

## What Do You Study?

3D Design of Virtual Clothing Active Sports Wear Design Advanced Course of Dyeing Advanced Fashion Textiles Advanced Korean Costume Construction (I) Advanced Principle of Clothing Construction Advanced Textile Evaluation Advanced Textile Finishing (I) Advanced Textile Science Art Wear Design Workshop Clothing Design and Human Morphology Clothing Ergonomics Clothing Sizing System Creative Design & Venture Studio Design of Traditional Korean Costume Digital Fashion and Research Ethnic Art Wear Design Fashion and Art Fashion Design Culture Seminar Fashion Journalism Fashion Product Design Studio

Folk Costume Field Workshop Garment Production Global Outsourcing and Technical Design History of 20th Century Fashion Human Morphology (Ⅱ) Integrative Fashion Communication Studio Intellectual Properties and Fashion Startup Korean Clothing Design Planning Modelism Workshop **On-Line Fashion Business** Research for Fashion Design Inspiration Research in Dyeing Techniques and Design Research in Fork Costume (I) Research in Korean Costume Construction (I) Research in Natural Dyeing Research Methods in Clothing & Textiles Research Methods in Clothing Construction Science of Human Sensibility Seminar in Clothing Seminar in History of Oriental Costume Senior Design Studio

Silhouette Design Studio Size Standardization (II) Special Problems in Textiles Special Tasks in Clothing and Textiles (I) Special Topics in Clothing and Textiles Special Topics in Fashion Retailing Study in Technotextiles & Application Study in Textile Design Study in Up-cycling Fashion Design Study on Fashion Designers and Collections Sustainability & Fashion Industry Sustainable Fashion Textiles Technical Wear Design Textile Science Seminar Theory of Global Fashion Cultural Industry Seminor Thermophysiology Topics in Aesthetics of Costume Topics in Consumer Behavior of Clothing Topics in Environmental Factors in Clothing (I)

#### Professors

- Younsook Shin, Ph.D. [Professor, Textile Science, yshin@jnu.ac.kr]
- Soojeong Bae, Ph.D.
   [Professor, Fashion Design, sjbae@jnu.ac.kr]
- Misuk Lee, Ph.D. [Professor, Fashion Design, ms1347@jnu.ac.kr]
- Wolhee Do, Ph.D.
   [Professor, Clothing Engineering, whdo@jnu.ac.kr]

## Laboratories

- Textile Science Lab
- Fashion Marketing/Psychology Lab
- Clothing Human Engineering Lab
- Fashion Design Lab
- Clothing Engineering Lab
- Traditional Korean Costume Lab

Topics in Environmental Factors in Clothing (II) Topics in Fashion Color Topics in Fashion Design Topics In Fashion Marketing Topics in Fashion Merchandise Planning and Buying Topics in History of Korean Costume (I) Topics in History of Korean Costume (II) Topics in History of Oriental Costume Topics in History of Western Costume & Culture (I) Topics in History of Western Costume & Culture (II) Topics in Image Making Topics in Social-Psychology of Clothing Topics in Stage Costume Design Topics in Statistics (I) Topics in Statistics ( I I )Understanding of Traditional Clothing Works

- Eunjung Kim, Ph.D. [Professor, Traditional Costume, kimej@jnu.ac.kr]
- Sookyoung Ahn, Ph.D.
   [Professor, Fashion marketing] skahn@jnu.ac.kr]
- Seokho Cho, Ph.D. [Professor,Wearable Electronics jsh818@jnu.ac.kr]

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## ■ Graduate Studies in Power System Engineering

The Department of Power System Engineering is committed to educating future leaders in the field of engineering. The graduate program focuses on training experts in the marine system industry, a field which requires familiarity with state-of-the-art technology. It also nurtures skills in power generation, as well as in both the mechanical and electrical engineering fields.

#### Degree Requirements

The graduate program aims at the instruction at the highest level of academic theory and development of capabilities to perform original research work. Applications for the Master's Program should have achieved a good standard in an undergraduate degree course in an engineering discipline.

Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Assessment of M.S. students include a combination of at least 24 credit hour course work, and a thesis based on the research project. These requirements should be fulfilled between two and three years of enrollment.

## What Do You Study?

Image Visualization Engineering	Advanced Linear Control System	
Advanced Computer-Aided Control System Design	Advanced Numerical Analysis	
Advanced Solid Mechanics	System Engineering	
Advanced Measurement System	Advanced Sequence Control	
Advanced Engineering Mathematics	Advanced Combustion Engineering 1, 2	
Advanced Engineering Thermodynamics	Advanced Heat Management Engineering	
Advanced Machine Tools	Advanced Thermal Power Engineering	
Advanced Machine Design	Advanced Heat Transfer 1, 2	
Advanced Mechanical Vibration	Advanced Hydraulic-Pneumatic Control	
Advanced Gas-Dynamics	Advanced Hydraulic Engineering	
Advanced Internal Combustion Engines 1, 2	Advanced Fluid Machinery	
Advanced Dynamics	Advanced Fluid Mechanics	
Advanced Dynamic Structural Design	Finite Element Method	
Control of Dynamic System	Advanced Lubrication Engineering	
Advanced Laser Materials and Processing	Design and Control of Automatic System	
Advanced Microprocessor Applications	Theory of plates and shells	
Advanced Mechatronics	Adaptive Control Algorithm	
Advanced Nonlinear Control System	Advanced Electric Machinery	

Advanced Computational Fluid Dynamics Advanced Optimal Design Advanced Computer Controlled System Advanced Elasticity Thesis Research Advanced structural vibration Variable Structure Control Algorithm Advanced Gas Turbine Boundary Layer Theory Advanced Air Conditioning Advanced Manufacturing Processes Advanced Mechanical System Dynamics Advanced Mechanical Dynamics Turbulence Multi-Phase Flow Analysis of Dynamic System Advanced Robotics Advanced Numerical Control

## Professors

- Dong-Jun Yeo, Ph.D. [Professor, Dynamics of Machines, djyeo@jnu.ac.kr]
- Kyong-Uk Yang, Ph.D.
   [Professor, Hydraulic-Pneumatic Control, yangku@jnu.ac.kr]

## Laboratories

- Internal Combustion Engine Lab
- Heat-Fluids Lab
- Applied Mechanics Lab

Advanced Energy Engineering Research Training 1, 2 Research Guidance 1, 2, 3 Advanced Combustion Measurement System Continuum Mechanics Advanced Heat Exchanger and Design Advanced Thermodynamics 2 Advanced Joining and Welding Engineering Transport Phenomena Advanced Materials Strength Advanced Motor Control Theory Advanced Computational Solid Mechanics Advanced Metal Cutting Theory Advanced Accurate Machining Study on Computer Simulation Theory of Elastic Stability Rotor Dynamics

- Myung-Soo Choi, Ph.D. [Professor, Mechanical Vibration, engine@jnu.ac.kr]
- Woo-Gyeong Wang, Ph.D.
   [Professor, Internal Combustion Engine. wangwk@jnu.ac.kr]
- Hydraulic-Pneumatic Control Lab
- Automatic Control Lab
- Dynamics of machines Lab

Fisheries Science <u>Contact Information</u> Tel: +82-61-659-7160 Fax: +82-61-659-7169 E-mail: kkh@jnu.ac.kr URL: http://aqua.jnu.ac.kr

## Graduate Studies in Fisheries Science

The aim of the Department of Fisheries Science is to contribute to the development of the nation and human society by advancing academic theories and applicable methods, and producing human resources with leadership and great creative talent. The Graduate School fosters excellent talent who will advance fisheries industries with professional knowledge. Students carry out theory and practice together, and study fishery, harbors, shipping and aquaculture. The Department of Fisheries Science consists of 2 majors: Marine Production Management, and Fishery Biology and Aquaculture.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam.

Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

#### What Do You Study?

Taxonomy Invertebrate (3) Adhesion Biology (3) Advanced Fisheries Oceanography (3) Benthos Ecology (3) Marine Invertebrate Zoology (3) Aquafarm Environmental Ecology (3) Endocrinology (3) Advanced Developmental Biology (3) Advanced Biochemistry (3) Advances Cell Biology (3) Advances Fish of Fresh Water Culture (3) Advanced Marine Fish Culture (3) Advanced Taxonomy Algal (3) Trait and Group Genetics (3) Breeding Technoscience (3) Advances Algae Physiology Ecology (3) Algae Cultivation Technoscience (3)

Island Biology (3) Zooplankton Feed Biology (3) Phytoplankton Feed Biology (3) Advances Marine Invertebrate Seed Production (3) Marine Restoration Ecology (3) Marine Invertebrate Zoology Culture (3) Advances Fish Seeds Production (3) Advances Aqua System (3) Advanced Science of Aquatic Resources (3) Systematic Ichthyology (3) Biology of Fish Larva (3) Advanced Marine Ecology (3) Fish Ecology (3) Advanced Conservation Biology (3) **Biological Statistics (3)** Invertebrate Physiology Ecology (3) Advanced Ichthyology (3)

Algal Culture Technoscience (3) Advanced Agriculture and Fisheries Market Structure (3) Advanced Food Economics (3) Advanced Fisheries Administration (3)

## Professors

- Woon Kyo Lee, Ph.D. [Professor. Reproduction organism wklee@jnu.ac.kr, +82-61-659-7161]
- Gwan Sik Jeong, Ph.D. [Professor. Fish Culture and Nutrition ksjeong@jnu.ac.kr, +82-61-659-7162]
- Kyeong Ho Han, Ph.D. [Professor. Ichthyology Ecology and Taxonomy. aqua05@jnu.ac.kr, +82-61-659-7163]

## Laboratories

- Reproductive Biology Lab • Reproductive Cycle of Marine Organisms
- Fish Thremmatology Lab
- · Nutritional Studies of Fish
- Reproductive Biology Lab
- · Basic Disciplines of Fish
- Marine Ecological Restoration Lab
- · Biological Components of Marine Ecosystems,

Advanced Fisheries Law (3) Fishing Ground Management (3) Advanced Biology (3) Fish Physiology (3) Advanced Molecular Biology (3)

- Kyeong Ho Kang, Ph.D. [Professor. Invertebrate Culture mobidic@jnu.ac.kr, +82-61-659-7165]
- Sang Duk Choi, Ph.D. [Professor. Aquaculture Environment Ecology choisd@jnu.ac.kr, +82-61-659-7166]
- Kang Hee Kho, Ph.D.
   [Professor. Molecular Physiology kkh@jnu.ac.kr, +82-61-659-7168]

Ecological Studies

- Form Environmental Ecology Lab
  - Chemical Ecology and Marine Invertebrate Ranch Development
- Resource Biology Physiology Lab
  - Fisheries Biological Studies on Physiology of the Body

Department of Aqualife Medicine <u>Contact Information</u> Tel: +82-61-659-7170 Fax: +82-61-659-7179 **E-mail:** ljs@jnu.ac.kr URL: http://fishpath.jnu.ac.kr

#### Graduate Studies in Aqualife Medicine

The Department of Aqualife Medicine enables students to launch professional careers in the field through exposure to balanced research and education. Generally, we study fish and shellfish, pathogenesis, disease factors, fish medicine, water environment, and host defense of aquatic organisms. Research projects cover a broad range of needs including fish medicine, fisheries industries, and food safety of fish and shellfish.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam.

Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

## What Do You Study?

Research Guidance 1	Medical Applicati
Research Guidance 2	Genetics of Patho
Research Guidance 3	Molecular Bases
Experimental Theory of Immune Biochemical	Ecology of Drug
Techniques	Microanatomy of
Cell Biology of Fish Established Cell Lines	Morphogenesis
Biochemistry of Fish Viruses	Microanatomy of
Virulence Theory of Fish Pathogenic Viruses	Cell Pathology
Molecular Epidemiology of Fish Viruses	Advanced Fish D
Pharmacokinerics in Fish	Diagnosis of Aqu
Fusion Research Design	Diagnosis of Aqu
Planning of Research Project	Fish Virology
Management of Fish Hospital	Fish Parasitology
Field Management of Fish Diseases 1	Ecology of Aquat
Field Management of Fish Diseases 2	Health Control of
Field Management of Fish Diseases 3	Advanced Enviror
Natural Products Chemistry	Environmental An
Current Topic in Bacterial Fish Pathogens	Experimental Data

Medical Application of Molecular Biology Genetics of Pathogenic Microorganim Molecular Bases of Bacterial Pathogenesis Ecology of Drug Resistance Bacteria Microanatomy of Fish Morphogenesis Microanatomy of Invertebrates Cell Pathology Advanced Fish Diseases and Nutrition Diagnosis of Aquatic Animal Diseases 1 Diagnosis of Aquatic Animal Diseases 2 Fish Virology Fish Parasitology Ecology of Aquatic Pathogens Health Control of Fishery Products Advanced Environmental Disease Environmental Analysis Advanced Animal Physiology Environmental Physiology Advanced Aquatic Toxicology Research Methodology Prevention of Epizootics Advanced Fish Immunology Advanced Fish Pathology Immunological Methodology Invertebrate Immunology Clinical Pathology Applied Instrument Analysis Applied Fish Pharmacology Safety Control of Fisheries Products Advanced Diseases of Inveterates Principles of Fisheries Drug

## Professors

- Eunheui Kim, Ph.D. [Professor, Pathogenic Bacteriology and Genetics, ehkim@jnu.ac.kr]
- Jung Sick Lee, Ph.D.
   [Professor, Fish and Shellfish Anatomy, ljs@jnu.ac.kr]
- Myung Joo Oh, Ph.D.
   [Professor, Fish Virology and Parasitology, ohmj@jnu.ac.kr]
- Heung Yun Kim, Ph.D.
   [Professor, Fish Physiology and Toxicophysiology, hykim@jnu.ac.kr]

## Laboratories

- Microbiology Lab
- Histopathology Lab
- Fish Disease Diagnostics Lab
- Environmental Physiology Lab

- Topics in Bio-Active Natural Products Topics in Microbial Technology Introduction of Bioinformatics Cell Ultrastructure Advanced Diagnostic Methodology Topics in Anti-Infectives Current Topics in Immunostimulants Current Bacteriology of Aquatic Organisms Biosecurity in Aquatic Organisms Biological Control Mechanisms of Fish Virus Infection Vaccinology of Fish Viral Infection ImmunoHistoChemistry Molecular Virology
  - Sungju Jung, Ph.D. [Professor, Fish Pathology and Immunology, sungju@jnu.ac.kr]
- So Young Kang, Ph.D.
   [Professor, Fish Pharmacology and Pharmacognosy, sykang1@jnu.ac.kr]
- Toyohiko Nishizawa, Ph.D.
   [Professor, Virology and Cell Biology, jjnishi@jnu.ac.kr]
- Wi-Sik Kim, Ph.D. [Assistant Professor, Clinical diseases, wisky@jnu.ac.kr]
- Fish Disease Prevention Lab
- Pharmacology Lab
- Fish Virology Lab
- Clinical Lab

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# Graduate Studies in Food Technology & Nutrition

The objectives of the Department of Food Technology and Nutrition are i) to educate and research various disciplines as well as new theories and application technology related to food technology and nutrition in more depth, and ii) to nurture talent students with adaptability against rapidly changing food environment and nutritional problems.

# Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. Candidates are required to earn 36 credits. Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Graduate students are also required to pass the comprehensive exam, foreign language exam and submit a thesis.

# What Do You Study?

Advanced Food Chemistry (3) Advanced Food Science (3) Carbohydrate Chemistry (3) Lipid Chemistry (3) Principles of Nutrition Interaction (3) Advanced Food Preservation (3) Advanced Nutrition (3) Advanced Nutritional Biochemistry (3) Analytical Chemistry (3) Chemistry of Food Color & Pigments (3) Chemistry of Food Flavor (3) Advanced Instrumental Analysis (3) Advanced Biochemistry (3) Advanced Nutritional Chemistry (3) Food Toxicology (3) Nutrition for Fitness and Sports (3) Nutrition in Life Cycle (3) Community Nutrition (3) Nutritional Research 1 (3) Nutritional Research 2 (3)

Advanced Nutrition Theory (3) Mineral Nutrition (3) Vitamin Nutrition (3) Nutrient Metabolism (3) Clinical Nutrition Research (3) Animal Experiments in Nutrition (3) Advanced Nutrition Education (3) Sensory Evaluation of Food (3) Food Service Industry (3) Diet & Disease (3) Advanced Nutrition Counseling Education (3) Advanced Cooking Science (3) Physiopathology (3) Advanced Statistics for Natural Scientists (3) Clinical Nutrition Treatment 1 (3) Clinical Nutrition Treatment 2 (3) Clinical Nutrition Practice 1 (3) Clinical Nutrition Practice 2 (3) Evaluation of Functional Materials (3) Advanced Functional Foods (3)

Physiological Active Substances (3) Advanced Protein Chemistry (3) Advanced Food Enzymes (3) Advanced Natural Products Chemistry (3) Advanced Enzyme Chemistry (3) Molecular Biology (3) Advanced Fermentation Technology(3) Advanced Food Microbiology (3) Management for Food Hazard Point (3) Advanced Antibiotics (3) Advanced Food Additives (3)

# Professors

- Tae-jin Bae, Ph.D.
   [Professor, Seafood Processing, bae5658@jnu.ac.kr]
- Dong Soo Kang, Ph.D. [Professor, Fisheries Chemistry, dskang@jnu.ac.kr]
- Sun-jae Kim, Ph.D. [Professor, Food Safety,

Advanced Applied Microbiology (3) Advanced Food Hygiene (3) Advanced Food Engineering (3) Physical Properties of Foods (3) Food Rheology (3) Advanced Marine Resources Processing (3) Advanced Seaweed Processing (3) Food Stuff Technology (3) Advanced Fisheries Chemistry (3) Advanced Seafood Processing (3) Food Resources Processing (3)

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- Gin-Nae Ahn, Ph.D.
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- Sun-Hee Cheong, Ph.D. [Associate professor, Functional Foods, sunny3843@jnu.ac.kr]

Naval Architecture and Ocean Engineering <u>Contact</u> Information Tel: +82-61-659-7150 Fax: +82-61-659-7159 E-mail: parkih@jnu.ac.kr

# Graduate Studies in the Department of Naval Architecture and Ocean Engineering

Naval architecture and ocean engineering focuses on research and education in a variety of areas from basic theory to advanced technology on ship and offshore structures. The final goal of the Department lies in the design and production of the reliable and cost-effective transport systems and offshore structures which can carry out missions successfully in harsh ocean environments. The research scopes of naval architecture consist of resistance and propulsion, propulsor, structures and materials, motion and maneuverability, noise and vibration, and welding. Ocean engineering involves various scopes of technical problems that arise during the design, construction, load-out, and operation of various forms of structures developed to meet the needs of offshore petroleum and construction industries. Research on the ocean environment itself is also one of the major research fields of the Department. To meet increasingly complex technical demands, the Department extends research fields to cover rigorous analysis of detailed subjects using powerful computers. In particular, it offers on-board training courses on university-owned research and training ships.

# Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam. Students who gain 4.0 in a semester are allowed to take up to 12 credits in the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

# What Do You Study?

- Boundary Layer Theory(3) Advanced Structural Dynamics(3) Advanced Structural Design(3) Advanced Structural Analysis(3) Advanced Ecological Engineering(3) Advanced shipbuilding process(3) Advanced Marine Auxiliary Machinery(3) Advanced theory of ship motion and control(3) Advanced ship outfitting(3) Advanced hull corrosion protection(3) Advanced hull manufacturing automation(3) Advanced shipbuilding welding(3)
- Advanced theory of ship vibration(3) Advanced theory of noise control(3) Advanced Fisheries Physics(3) Advanced Numerical Methods(3) ReliabilityandProbabilisticEngineeringDesign(3) Advanced Hydrodynamics(3) Finite Element Method(3) Advanced Applied Mechanics(3) AdvancedComputationalStructuralAnalysis(3) Computational Fluid Mechanics(3) Advanced Optimal Design(3) SedimentTransportandLittoralProcesses(3)

AdvancedCoastalandHarborEnginering(3) Coastal and Ocean Numerical Modelling 1(3) Coastal and Ocean Numerical Modelling 2(3) Advanced Marine Measurement(3) On-siteandProjectStudyonOceanEngineering(3) SpecialTopicsonMarineSurveyTechniques1(3) Analysis of Offshore Structure(3) Introduction to Ocean Thought(3) Advanced Ocean Ecosystem Modelling(3) Advanced Dynamical Oceanography(3) Advanced Operational Oceanography(3) Advanced Ocean Remote Sensing(3) Ocean Data Assimilation and Inverse Method(3) Advanced Ocean Information Analysis(3) Advanced Ocean Informatics(3) Advanced Marine Geographical Information System(3) Advanced Water Wave Mechanics(3) Turbulent Diffusion Theoryinthe Ocean(3) Environmental Planning Methods(3) Advanced Marine Environmental Engineering(3)

# Professors

- Ok-Sam Kim, Ph.D. [Professor, Manufacturing Engineering of Ship, kos@jnu.ac.kr]
- Il-Heum Park, Ph.D.
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Environmental Oceanography <u>Contact</u> Information Tel: +82-61-659-7140 Fax: +82-61-659-7149 E-mail: shinhc@jnu.ac.kr

# Graduate Studies in Environmental Oceanography

The graduate program in Environmental Oceanography utilizes scientific and technological education and the application of marine environment studies. Students wishing to be advanced researchers in the field may choose from among 8 majors offered through the program.

# Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam.

Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits in the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

# What Do You Study?

Advanced Aquatic Environmental Advanced Marine Pollution (3) Processes (3) Advanced Marine Pollution Control (3) Advanced Biology of Water Pollution (3) Advanced Marine Pollution Ecology (3) Advanced Chemical Oceanography (3) Advanced Marine Sedimentology (3) Advanced Coastal Oceanography (3) Advanced Marine Zooplanktology (3) Advanced Community Ecology (3) Advanced Ocean Bio-Genetics (3) Advanced Ecology of Fisheries Resources (3) Advanced Ocean-Ecotoxicology 1 (3) Advanced Estuary Ecology 1 (3) Advanced Ocean-Ecotoxicology 2 (3) Advanced Estuary Ecology 2 (3) Advanced Ocean Environmental Condition (3) Advanced Evolutionary Ecology (3) Advanced Physical Oceanography 1 (3) Advanced Fisheries Oceanography (3) Advanced Physical Oceanography 2 (3) Advanced Geological Oceanography 1 (3) Advanced Red Tides (3) Advanced Geological Oceanography 2 (3) Environment Analysis of Fishing Area (3) Advanced Intertidal Ecology (3) Environment of Fisheries Oceanography (3) Advanced Marine Biology of Benthos (3) Fisheries Physical Oceanography (3) Advanced Marine Conservation Biology (3) Fluid Dynamics for Oceanography (3) Advanced Marine Conservation Ecology (3) Instrumental Analytical Chemistry (3) Advanced Marine Ecology (3) Marine Environmental Ecology (3) Advanced Deep Sea Biology (3) Ocean Animal Behavior (3) Advanced Marine Planktology (3) Ocean Eco-informatics (3)

Paleo Oceanography 1 (3) Paleo Oceanography 2 (3) Regional Oceanography (3)

# Professors

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- Hyo-Sang Choo, Ph.D.
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• Hyun Chool Shin, Ph.D. [Professor, Marine Benthic Ecology,

# Laboratories

- Bio-environmental Science Lab
- Marine Geology Lab
- Physical Oceanography Lab
- Benthic Ecology Lab

Water Quality Control of Aquatic Culture Systems (3)Zooplankton Taxonomy (3)

shinhc@jnu.ac.kr]

- Hyeon Seo Cho, Ph.D. [Professor, Chemical Oceanography, hscho@jnu.ac.kr]
- Ho Young Soh, Ph.D.
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- Ihn-Sil Kwak, Ph.D. [Professor, Zoology, iskwak@jnu.ac.kr]
- Chemical Oceanography and Environmental Pollution Lab
- Species Diversity and Ecology Lab
- Animal Behavior and Observation Lab

Fisheries and Ocean Policy \_\_\_*Contact Information* Tel: +82-61-659-7160 Fax: +82-61-659-7169 E-mail: kkh@jnu.ac.kr URL: http://aqua.jnu.ac.kr

# Graduate Studies in Fisheries and Ocean Policy

The Department of Marine and Fisheries Policy in the field of marine fisheries management and economic development through the theoretical framework and industrial research and Professors of practical applicability and practical knowledge based on this field, the expertise and practical knowledge acquisition combines the global marine industry in the field of conductive management trains professionals.

# Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam. Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

# What Do You Study?

e-Supply Chain Management Seminar (3) Service Management Seminar (3) Performance Management Seminar (3) Port Management Seminar (3) Computer Simulation (3) Freight Movement Theory (3) Advanced Industrial Location Theory (3) Advanced Fisheries Administration (3) Experimental Data Analysis (3) Fisheries Environmentalism (3) Advanced Marine Ecology (3) Advanced Biodiversity and Conservation Biology (3) Advanced Molecular Genetics (3) Advanced Science of Aquatic Resources (3) Advanced Fisheries Oceanography (3) Advanced Aqua System (3) Aquafarm Environmental Ecology (3) Advanced Algal Taxonomy (3)

Algae Cultivation Technoscience (3) Advanced Marine Fish Culture (3) Marine Restoration Ecology (3) Advanced Nutritional Chemistry (3) Advanced Aquatic Prices (3) Marine Environmental Policy (3) Maritime Investment Analysis (3) Advanced Lipid Chemistry (3) Advanced Food Hygiene (3) Advanced Fisheries Chemistry (3) Food Resources Processing (3) Seminar 1 (3) Seminar 2 (3) Seminar 3 (3) Advanced Agriculture and Fisheries Market Structure (3) Advanced Food Economics (3) Advanced Fisheries Law (3) Advanced Compensation Method for

Fishing Right (3) Advanced Fishing Ground Management (3) Industrial Organization for Logistics (3) Advanced Fisheries Economics (3) Advanced Economics Form (3) Advanced Fisheries Policy (3) Advanced Fishing Informatics (3)

# Professors

- Woon Kyo Lee, Ph.D.
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- Gwan Sik Jeong, Ph.D. [Professor. Fish Culture and Nutrition. ksjeong@jnu.ac.kr, +82-61-659-7162]
- Kyeong Ho Han, Ph.D.
   [Professor. Ichthyology Ecology and Taxonomy. aqua05@jnu.ac.kr, +82-61-659-7163]

# Laboratories

- Reproductive Biology Lab The reproductive cycle of marine organisms
- Fish thremmatology Lab Nutritional studies of fish
- Reproductive Biology Lab Basic disciplines of fish
- Marine ecological restoration Lab Biological components of marine ecosystems, Ecological Studies
- Form environmental ecology Lab Chemical ecology and marine invertebrate Ranch Development
- Resource Biology Physiology Lab Fisheries Biological Studies on physiology of the body

International Marine Management System (3) Advanced Cooperative (3) Coastal Environmental Management (3) Advanced Fishery Trade (3) Advanced Marine Fisheries Control (3)

- Kyeong Ho Kang, Ph.D.
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# Graduate Studies in Veterinary Medicine

The College of Veterinary Medicine offers graduate studies leading to the Master of Science and Doctor of Philosophy degrees in Veterinary Medical Sciences to prepare students for careers in biomedical science. The professional DVM Program is not a graduate degree program, and applications are handled separately from the graduate program. The graduate program provides training in basic and applied veterinary medical research for qualified students with a baccalaureate degree or a DVM or equivalent degree.

The major areas of concentration in graduate studies are administered by three departmental programs: Basic Veterinary Science, Preventive Veterinary Science and Veterinary Clinical Sciences. Within these departmental programs, training includes appropriate coursework and research in areas such as Comparative Anatomy and Physiology, Pharmacology, Biochemistry/Molecular Biology, Comparative Toxicology, Immunology, Pathology, Parasitology, Epidemiology, Infectious Diseases, Veterinary Internal Medicine, Surgery, Theriogenology, Veterinary Medical Imaging and Laboratory Medicine.

The educational direction of the College embraces teaching knowledge and techniques to produce highly-trained veterinarians, for service in advanced basic medical sciences, clinics, and public health areas.

# Degree Requirements

The length of coursework for graduate programs shall be 2 years or more for the master's degree program, 3 years or more for the Ph.D. Program, and 4 years or more for the joint master's and Ph.D. degree program.

Master's degree candidates are required to earn 24 graduate and Ph.D. candidates are required to earn 60 graduate credits including credits already earned for the master's degree. Students may not take more than 12 credits a semester. A grade of C or better is acceptable in the master's degree program, and a grade of B or better in the Doctoral Program.

# What Do You Study?

Adult Stem Cells Advanced Medical Informatics Advanced Molecular Biology Advanced Morphological Techniques Advanced Public Health Advanced Veterinary Anatomy Advanced Veterinary Bacteriology Advanced Veterinary Biochemistry Advanced Veterinary Clinical Pathology Advanced Veterinary Embriology Advanced Veterinary Histology Advanced Veterinary Pharmacology Advanced Veterinary Reproduction and Obstetrics in Large Animals Advanced Veterinary Surgery Advanced Veterinary Toxicology Advanced Veterinary Virology Advanced Wild Animal Disease Animal Breeding and Infertility Antibody Engineering Applied Veterinary Anatomy Avian Anatomy Avian Immunology Avian Pathology Avian Theriogenology Bacterial Disease of Poultry Bacterial Diseases of Domestic Animals Biochemical Analysis of Cells **Biochemical Methods** Biotechnology and Veterinary Medicine Bovine Disease Canine and Feline Clinical Reproduction and Obstetrics Canine Disease Cell Aging Cell Imaging Cell Membrane Biology Cell Physiology Cell Signaling Cell Therapy Cells Cellular Immunology Cellular Neurophysiology Clinical Immune Diseases Companion Animal Virus Infectious Disease Comparative Veterinary Histology Culture of Animal Cells Current Diagnostic Techniques of Avian Diseases Diagnostic Ultrasonography in Large Animals Diagnostic Ultrasonography in Small Animals Domestic Animal Virus Infectious Disease Embryo Stem Cells Embryo Transfer Environmental Microbiology Environmental Toxicology Equine Medicine Experimental Animal Disease Experimental Animal Theriogenology

Farm Animal Theriogenology Farm Animal Vaccinology Feline Disease Fish Morphology Fish Pathology Fish Vaccinology Food Hygiene Food-borne Parasitic Diseases Herd Health Herd Reproductive Management Humoral Immunology Large Animal Anatomy Large Animal Dermatology Large Animal Surgery Male Theriogenology Management of Laboratory Animals Metabolism of Energy in Body Methodology in Animal Experiments Methods in Molecular Biology Methods in Toxicology Microbial Engineering Molecular Endocrinology Molecular Virology Morphology of Laboratory Animals Mucosal Immune Vaccinology Neurotoxicology Pathology of Laboratory Animals Pathology of Zoo and Wildlife Pathophysiology Poultry Vaccinology Research for Master's or Doctoral Degree Safety Evaluation of Chemicals Sheep and Goat Disease Small Animal Anatomy Small Animal Dermatology Small Animal Orthopedics Small Animal Surgery Swine Disease Swine Pathology Target Organ Toxicology Techniques in Experimental Parasitology Therapeutic Biology

Toxicologic Mechanism Trends of Recent Vaccine Development Veterinary Alimentary Pathology Veterinary Anesthesia Veterinary Arthropodology Veterinary Chemotherapy Veterinary Clinical Diagnostics Veterinary Clinical Pharmacology Veterinary Dentistry Veterinary Dermatopathology Veterinary Diagnostic Pathology Veterinary Endocrinology and Reproduction Veterinary Endodontics Veterinary Epistemology Veterinary Helminths Veterinary Immunopathology Veterinary Molecular Pathology Veterinary Neuroanatomy Veterinary Neuropathology Veterinary Neurosurgery Veterinary Oncopathology

# Professors

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- Hong-Bum Koh, Med.D.
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- Jae-Il Lee, Ph.D. [Professor, Vet. Public Health, jaeil@chonnam.ac.kr]
- Sung-Ho Kim, Ph.D. [Professor, Vet. Anatomy, shokim@chonnam.ac.kr]
- Chang-Ho Son, Ph.D. [Professor, Vet. Theriogenology, chson@chonnam.ac.kr]
- Sung-Shik Shin, Ph.D.

Veterinary Operative Surgery Veterinary Ophthalmology Veterinary Periodontics Veterinary Pharmacology of Autonomic Nervous System Veterinary Pharmacology of Central Nervous System Veterinary Protozoology Veterinary Respiratory Pathology Veterinary Surgery of Abdominal Organs Veterinary Surgery of Cardiovascular System Veterinary Surgery of Obstetrics Veterinary Surgery of Urogenital Organs Veterinary Topographic Anatomy Veterinary Toxicopathology Veterinary Vaccinology Viral Disease of Poultry Viral Immunology Wild Animal Theriogenology Zoonosis and Exotic Disease

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- Sang-Ik Park, Ph.D. [Associate Professor, Vet. Pathology, sipark@chonnam.ac.kr]
- Jong-Hwan Park, Ph.D.

# Laboratories

# Avian Diseases Lab

The multi-disciplinary study on avian diseases regards not only poultry but also pets and wildlife birds. Our mission is the education of undergraduate, graduate, professional, and post-doctoral students in effective disease control, precise prevention strategies, and rapid and accurate diagnostic methods to meet current and future societal needs for avian medicine and public health.

### Main Research Interests:

The major research interest focuses on the cellular virology of viral enteritic and viral hepatitis, and its correlation with bile acids in both humans and animals.

# Main Research Interests:

The major research interest focuses on the cellular virology of viral enteritic and viral hepatitis, and its correlation with bile acids in both humans and [Associate Professor, Lab. Animal Medicine, jonpark@chonnam.ac.kr]

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- Chang-Min Lee, Ph.D. [AssistantProfessor, Vet. Laboratory, cmlee1122@jnu.ac.kr]
- Woon-Sung Na, Ph.D. [AssistantProfessor, Vet. Virology, wsungna@jnu.ac.kr]
- Se-Eun Kim, Ph.D. [AssistantProfessor, Vet. Surgery, ksevet@jnu.ac.kr]

animals.

# Veterinary Anatomy Lab I

The Veterinary Anatomy Lab focuses on and researches the structure of animals. Basic data is collected through the approaches to macroo and micro-morphological study to understand the normal animal body.

### Main Research Interests:

- 1) Biological dosimetry of radiation
- 2) Radioprotection
- 3) Radioecology

### Veterinary Anatomy Lab II

#### Main Research Interests:

- 1) Neuroimmunology
- 2) Infrared sensory systems
- 3) Testicular ischemia
- 4) Learning and memory

#### Veterinary Biochemistry Lab

Veterinary biochemistry is a field of life sciences that studies various life phenomena in animals by physical and chemical methods. It forms the foundation of all other veterinary medicine.

In particular, veterinary biochemistry examines molecular structures, functions, and metabolisms of macromolecules in animals, and helps to clarify other veterinary sciences on a molecular level. Furthermore, this subject provides the theoretical basis to be applied to veterinary preventive medicine and other clinical fields.

#### Main Research Interests:

1) Development of early diagnostic methods for liver diseases using cytochrome P450 family as a biological marker.

2) Establishment of a database for cytorome P450 proteomes in disease-induced animal models.

3) Development of cytochrome P450 protein micro-arrays using cytomimetic phosphopid monolayers.

4) Study of the interaction between cytochrome P450 family and molecular chaperones.

5) Development of efficient production methods of recombinant proteins using the regulation of protein translocation mechinaries in Escherichia coli.

### Veterinary Infectious Disease Lab

The Lab researches the characterization and analysis of causative agents of infectious animal diseases and effective methods of preventing and controlling infectious animal diseases caused by viruses or bacteria.

### Main Research Interests:

1) Application of molecular and immunological methods to epidemiological studies and analysis of causative agents of infectious diseases of animals.

2) Development of rapid and accurate diagnostic methods by application of molecular and serological methods.

3) Application of modern vaccine technology to prevent infectious diseases that cause economic problems.

4) Research on molecular immunology to enhance the immune response of vaccines by activation of host immune systems.

#### Veterinary Medicine Lab I

This Lab is divided into five units containing clinical recording, relationships between veterinarian and owner, drawing up prescriptions, methods of drug administration, and routes of administration for therapeutic agents. The courses also consider physical examination and diagnostic and therapeutic techniques for small and large animal diseases.

#### Main Research Interests:

- 1) Milk quality of dairy goats
- 2) Udder characteristics of Saanen dairy goats
- 3) Disease in the dairy goats
- 4) Alcohol positive milk in dairy goats
- 5) Disease of mammary gland in dogs

#### Veterinary Medicine Lab II

This Lab teaches skilled clinical techniques. It considers the handling and restraint of animals, classic clinical diagnosis for major organs, methods of sampling for diagnosis, and field practice of herd health. The final goal is for students to be capable to diagnose animal diseases.

#### Main Research Interests:

1) Production and Metabolic disease in dairy cattle and Hanwoo

2) Mastitis in dairy cows

3) Prevention of neonatal disease and acquire of immunity in neonatal

4) Heard health management

5) Complementary and alternative veterinary medicine

# Veterinary Microbiology Lab

This Lab's current research work is focused on the respiratory and enteric diseases in swine and poultry and on the immunological responses to biologically activity materials. The Lab uses luminometers and flow cytometers to assay phagocyte activity and conducts lymphocyte analysis.

### Main Research Interests:

1) Development of vaccines using specific gene deletion

2) Studies on Mycoplasmal disease

3) Immunological assessment on the biological activity materials for industrial animals

#### Veterinary Theriogenology Lab I

Reproductive performance is one of the most important factors in determining the profitability and longevity of animals. Some animals have a longer postpartum interval and may still be acyclic during the period when they should be inseminated. Average individual and herd fertility is far from the reproductive and economic optimum. Therefore the Lab is concerned with improving reproductive efficiency and control of diseases in animals.

#### Main Research Interests:

1) Understanding and confirming reproductive status using vaginal cytology, reproductive hormones (Progesterone, Estrogens) analysis and ultrasonography (optimal breeding and mating time, initial detection of gestational features, prediction table of parturition day, postpartum period).

2) Differential diagnosis and treatment of reproductive dysfunctions using reproductive hormones (Progesterone, Estrogens) analysis and ultrasonography (pregnancy diagnosis, abortion, ovarian and uterine disorders, examination of reproductive organs).

### Veterinary Theriogenology Lab II

### Main Research Interests:

1) Differential diagnosis and treatment of reproductive dysfunctions using ultrasonography

and reproductive hormones (Progesterone, Estrogens) analysis in farm animals.

2) Understanding and confirm of reproductive status using vaginal cytology, reproductive hormones analysis and ultrasonography in small animals.

#### Veterinary Parasitology Lab

The Veterinary Parasitology Lab is committed to the clinical diagnosis and consulting of parasitic diseases of pets and livestock animals of Korea, as well as teaching veterinary students parasitology. Particular research interests lie in study of the dirofilariasis of dogs and cats, zoonotic parasites, and wild animal diseases.

#### Main Research Interests:

1) Canine and feline dirofilariasis

2) Parasitic diseases of wild animals

3) Zoonotic parasites of pet and wild animals4) Elecromagnetic biology in infection and immunity

### Veterinary Pathology Lab I

The Department of Veterinary Pathology is primarily responsible for running undergraduate courses (5) in the College of Veterinary Medicine, and the graduate courses (12) in the Graduate School. This Lab has been actively providing qualified diagnostic services on animal diseases as requested mainly from the Chonnam National Veterinary Education Teaching Hospital, small animal clinics, field veterinarians, practitioners, farmers, city zoos, and animal shelters.

### Main Research Interests:

1) Diagnostic services of animal diseases

2) Development of diagnostic methods and pathogenesis of viral diseases in ruminants

3) Development of vaccine and pathogenesis of zoonotic viral diseases in animals

4) Clinicopathological approaches to zoonotic

and contagious infections in small animals

### Veterinary Pathology Lab II

The Department of Veterinary Pathology is primarily responsible for running the undergraduate courses in the College of Veterinary Medicine and graduate courses in the Graduate School. Recent research interests are focused on the development of diagnostic tools using DNA chips, and protein chips and multiplex PCR for important socioeconomical diseases such as enteric diseases of swine fever virus infection, bovine tuberculosis, and PMWS.

#### Main Research Interests:

1) Development of DNA chips and protein chips system for the diagnosis of animal diseases

2) Development and application of PCR based methods (RT-PCR, real-time PCR) for the diagnosis of zoonotic diseases

### Veterinary Pharmacology Lab

Veterinary Pharmacology is the study of the properties of chemicals used as drugs for therapeutic and diagnostic purposes in veterinary medicine. Students study the scientific basis of chemicals and practice drug therapy in this Lab. They also learn experimental techniques to measure smooth muscle contractilities and systemic blood pressure.

# Main Research Interests:

- 1) Mechanism of the smooth muscle contraction
- 2) Cardiovascular effects of drugs
- 3) Toxic effects of drugs

#### Veterinary Physiology I

Physiology is a branch of biology that deals with function and coordinated activities of cells, tissues, and organs. The study of physiology offers students not only the satisfaction of knowing something about the workings of the body, but it also provides students with a deep, perhaps even profound, understanding of it. The study of physiology broadens students' scientific interests and widens the scope of their outlook.

#### Main Research Interests:

1) Regulatory functional mechanisms of embryonic stem cells

2) Hormonal regulation of cell function

3) Measurement of physiological parameters of bio-organs

### Veterinary Physiology II

This Lab researches physiological functions of animals as it relates to mechanisms from molecular to body levels. We aim to establish basic conceptions of normal physiology to understand the study of the abnormal function of the body. Thus, veterinary physiology is introduced first in the veterinary curriculum.

### Main Research Interests:

Molecular mechanism of metabolic syndrome
 Pathogenesis of nephropathy under abnormal conditions

3) Study of the regulation of growth factors in vivo and in vitro

#### Veterinary Public Health Lab

The principal task of veterinary public health is the protection of human health by the applications of veterinary medicine. This Lab was established to introduce the fields of research, knowledge, training, and education of veterinary public health. Veterinary public health comprises many aspects of veterinary science and the Lab covers the role of veterinarians and other related professionals in the protection of human health through the safe production of foods of animal origin, control of zoonotic diseases, and environmental contamination.

#### Main Research Interests:

1) Diagnosis, surveillance, and elimination of zoonoses

2) Quality and safety assurance in food production

(meat, milk, and eggs)

3) Genetic characterization of Jindo for preservation of the species' purity

4) Development of recombinant protein vaccine

## Veterinary Surgery Lab I

The Department of Veterinary Surgery researches and teaches surgical diseases and anesthesia in animals. General surgery includes the general principles of anesthesia, treatment of shock, presurgical management, aftercare of patients, wound healing, and various surgical diseases which occur in animals.

The Lab has special experience in a full range of surgery related to the gastrointestinal system, respiratory system, cardiovascular system, urogenital system, nervous system, and muscular-skeletal system, as well as general surgical techniques. In clinical rotations, students will experience physical examination and diagnosis, surgical treatment, and management during surgery in real clinical situations.

### Main Research Interests:

- 1) Wound healing and nerve regeneration
- 2) Osteoporosis and osteoporosis related fractures
- 3) Orthopedic and soft tissue surgery
- 4) Polycystic Ovary (PCO)

#### Veterinary Surgery Lab II

Main Research Interests:

- 1) Oral mucosa wound healing
- 2) Inhibition of plaque formation and gingivitis
- 3) Arthritis diagnosis and therapeutic measures

### Veterinary Toxicology Lab

Toxicology is the study of the adverse effects that result from the interactions between chemicals and biological systems. We educate and research toxicological characteristic chemicals and biological toxins encountered by domestic animals and pets.

Emphasis is placed on 1) toxic effects on target organs, toxic mechanism, and detoxification of toxins, 2) developing a diagnosis of intoxication, and 3) identification of appropriate treatment strategies for each toxicosis.

### Main Research Interests:

1) Study on reproductive and developmental toxicity evaluation and toxic mechanisms

2) Safety evaluation and risk assessment of chemicals

3) Study on oxidative damage and toxic mechanisms

4) Development of consultation of new functional drugs and foods

# Pharmacy

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# Graduate Studies in Pharmacy

The mission of the Department of Pharmacy is to create highly qualified pharmaceutical scientists and healthcare professionals. Graduate program of the College focuses on introducing up-to-date scientific knowledge and cutting-edge technologies in various areas to graduate students to better equip them for collaborative and/or independent research. Areas of academic specialization of the faculties in the College include Pharmacognosy, Medicinal chemistry, Physical pharmacy, Toxicology, Applied pharmacology, Bioanalytical chemistry, Biopharmaceutics, Natural products chemistry, Pharmaceutical chemistry, Pharmacology, Molecular pathology, Molecular biology, Immunology, Structural biochemistry, and Bionano-pharmaceuticals, Pharmacotherapy, and Applied pharmacology.

# Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate, including seminar 1. Ph.D. candidates are required to earn additional 36 credits, including seminar 2. Half of the required credits must come from Department courses. Students must also pass the foreign language exam and final exam (based on 2 subjects for master's degree candidates and 3 subjects for Ph.D. candidates).

Graduate students are also encouraged to publish their research at the SCI level. All students are assigned an academic advisor based on research interests.

# What Do You Study?

Advanced Physical Pharmacy	Advanced Pharmaceutical Chemistry I
Advanced Biophysical Pharmacy	Advanced Pharmaceutical Chemistry II
Pharmaceutical Polymer Science	Computer Modeling for New Drug Development 1
Advanced drug delivery system 1	Computer Modeling for New Drug Development 2
Advanced drug delivery system 2	Computer Modeling for New Drug Development 3
Structure Elucidation of Natural Products	Molecular Methodologies in Pharmacological
Research Techniques in Natural Products Chemistry	Studies
Advanced Medicinal Natural Products Chemistry 1	Receptor Pharmacology
Advanced Medicinal Natural Products Chemistry 2	Cellular Pharmacology
Natural Product Drug Development	Signal Transduction and Regulation
Advanced Biopharmaceutics	Experimental Models and Design in Research
Advanced Pharmacokinetics	Advanced Pathophysiology I
Advanced Pharmaceutics	Advanced Pathophysiology II
Advanced Pharmacodynamics	Molecular Pathophysiology
Advanced Pharmacogenomics	Biochemistry of Signal Transductions

Advanced Molecular Biology I Advanced Molecular Biology II Molecular Endocrinology Experimental Molecular Biology Molecular Oncology Immunological Methodology 1 Immunological Methodology 2 Advanced Immunology 1 Advanced Immunology 2 Herbal Pharmacotherapy 1 Herbal Pharmacotherapy 2 Pathogenesis of infectious diseases Research Techiques of Immunomodulatory Drugs 1 Research Techiques of Immunomodulatory Drugs 2 Structural Biochemistry Advanced Topics in Protein Structure Protein Biochemistry **Bioinformatics** Protein Structure Determination and Analysis Advanced Drug Delivery System for Bionanopharmaceutica Advanced Biomaterials-Based Pharmaceutical/ Therapeutical Sciences Advanced Analytical Biotechnology/ Nanotechnology/Information Technology Advanced Site-specific Drug Targeting Advanced Topics in Biopharmaceuticals/

# Professors

- In Joon Oh, Ph.D.
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- Ik-Soo Lee, Ph.D.
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- Yong-Bok Lee, Ph.D. [Professor, Pharmaceutics, leeyb@jnu.ac.kr]
- Won-Jea Cho, Ph.D. [Professor, Organic Pharmaceutical Chemistry, wjcho@jnu.ac.kr]

Biomedicines Pharmacology of metabolic diseases 1 Pharmacology of metabolic diseases 2 Translational Research 1 Translational Research 2 Pharmacology of reactive oxygen species Preventive Toxicology Advanced Toxicology Molecular Toxicology Methods for Neurotoxicology Advanced Pharmacognosy 1 Advanced Pharmacognosy 2 Biological Evaluation of Natural Products Biosynthesis of Natural Products Advanced Medicinal Plant Advanced Medicinal Chemistry I Advanced Medicinal Chemistry II Total Synthesis of Natural Products 1 Total Synthesis of Natural Products 2 Advanced Course of Instrumental Analysis Advanced Spectrophotometry Advanced Analytical Biochemistry Advanced Chromatography Current Trends in Analytical Biochemistry Seminar on Pharmaceutical Science 1 Seminar on Pharmaceutical Science 2

- Kyeong-Man Kim, Ph.D. [Professor, Pharmacology, kmkim@jnu.ac.kr]
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# Laboratories

- Physical Pharmacy Lab
- Natural Products Chemistry Lab
- Pharmaceutics Lab
- Organic Pharmaceutical Chemistry Lab
- Pharmacology Lab
- Pathophysiology Lab
- Molecular Biology Lab
- Immunology Lab

- Young-Chang Cho, Ph.D. [Assistant Professor. Preventive Pharmacy. yccho@jnu.ac.kr]
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- Structural Biochemistry Lab
- Bionano-Pharmaceuticals Lab
- Applied Pharmacology Lab
- Preventive Pharmacy Lab
- Pharmacognosy Lab
- Medicinal Chemistry Lab
- Pharmacotherapy 2 Lab

# Korean Music

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# Graduate Studies in Korean Music

The Department's 30 faculty members offer lectures in more than 30 master's and doctoral courses on special education in the theories and practice of Korean music.

# Degree Requirements

### Master's Degree

Students can take 9 course units per semester for a total of 27 units. It is necessary to conduct a musical performance after finishing three terms for major practice.

Upon earning 18 credits, excluding transfer credits, and with the recommendation of the supervisor, a student may take the foreign language exam (in English, French, German, Chinese, or Japanese, or Korean for international students).

Upon earning 18 credits, and with the recommendation of the supervisor, students may take the general exam (based on 2 subjects).

# Ph.D. Degree

Students can take 9 course units per semester for a total of 36 units.

Upon earning 27 credits, excluding transfer credits, and with the recommendation of the supervisor, a student may take the foreign language exam (in English, French, German, Chinese, or Japanese, or Korean for international students).

Upon earning 27 credits, and with the recommendation of the supervisor, students may take the general exam (based on 3 subjects).

# What Do You Study?

Koryeo Dynasty Music	Ethnomusicology
Old Literature and Musical Scores	Studies and Analysis of Sanjo
Major of Traditional Korean Music	Poetry and Music
Major (1-8)	Modern History of Korea
Folk Music	Music History of Choseon Dynasty
Analysis of Thesis	Korean Musical Iconography
Research for Master's or Doctoral Degree	Korean Folk Music
Korean Shamanistic Rhythm	History of Korean Arts
Analytical Study on Thesis	Musical Instrument and Acoustics
Asian Music	Musical Literature
Korean Folk Music Orchestra	Philosophy of Art

Esthetics of Music Theory and Method in Music Anthropology Musicology Aesthetics of Korean Music Music of Choseon Dynasty History of Contemporary Music

# Professors

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- Hee-Bong An [Haegeum, haeguman@jnu.ac.kr]
- Hye-jin Yoon [Composition, humanias@jnu.ac.kr]

Pansori and Literature Studies and Analysis of Pansori Ancient and Medieval History of Music Korean Musical Palaeography Analysis of Korean Music Korean Musicology

- In-Sam Jeon [Pansori, insam3052@jnu.ac.kr]
  Yong-Shik Lee [Theory, yongshiklee@jnu.ac.kr]
- Sang-yeon Kim [Daegeum, sy5979@jnu.ac.kr]

# Laboratories

Over 35 training rooms, individual exercise rooms, Orchestra Lab, Chamber Orchestra Lab, Korean Classical Opera, Phonograph Record Room, 450- seat, Professional Performance Hall, 1600-seat Auditorium.

# Music

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# Graduate Study on Music

The Department of Music cultivates talented individuals in order to produce professional musicians and educators. The department offers students exceptional opportunities to develop their musical skills and expand their artistic horizons.

# Degree Requirements

### **Credit Requirements**

Master: at least 27 credits Doctor: at least 36 credits

# **Comprehensive Examinations**

Qualifying Examinations Master: at least 2 courses including history, literature of each major Doctor: at least 3 courses including history, theory, literature of each major

### Language Examination

possible to take after the completion of at least 1 semester

# **Recital Requirements**

Master's: completion of 1 degree recital Doctorate:

- String, Wood, Brass, Percussion Major: solo recitals (3 times) chamber recital (1 time) concerto (1 time)
- Voice Major: solo recitals (4 times) leading role in opera or grand choir (1 time)
- Composition Major: doctoral composition chamber recital (2 times), composition and recital of solo or chamber works (2 times), composition and recital of grand composition work (choir, orchestra, opera)
- Piano Major: solo recitals (3 times), chamber recital (1 time), concerto with orchestra or ensemble (1 time)

# What Do You Study?

# Master

Music History of the Baroque and Classical Period Music History of the Romantic and 20<sup>th</sup> Century Period Music Analysis Chamber Music Literature Vocal Seminar 1, 2 Composition Seminar 1, 2 Conducting Seminar 1, 2 Piano Seminar 1, 2 Orchestral Seminar 1, 2 Study of Computer Music Beethoven Studies Research Seminar Studies in Conducting Symphonic Literature Collaborative Piano 1, 2, 3 Instrument Major 1, 2, 3 Voice Major 1, 2, 3 Composition Major 1, 2, 3 Piano Major 1, 2, 3 Orchestral Conducting 1, 2, 3

# Professors

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- Sukyung Shin, D.M. [Professor, Piano, sushin@jnu.ac.kr]
- Hyun-Sue Chung, Ph.D. [Professor, Composition, music@jnu.ac.kr]
- Kyung-Jin Han, Ph.D.
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- Byung-Kil Yoon, Diplom [Associate Professor, Voice corelliyoon@jnu.ac.kr]

# Doctor

Music History of the Baroque and Classical Period Music History of the Romantic and 20<sup>th</sup> Century Period Music Analysis Chamber Music Literature Vocal Seminar 1, 2 Composition Seminar 1, 2 Conducting Seminar 1, 2 Piano Seminar 1, 2 Orchestral Seminar 1, 2 Study of Computer Music Beethoven Studies Resarch Seminar Studies in Conducting Symphonic Literature Collaborative Piano 1, 2, 3 Instrument Major 4, 5, 6, 7, 8, 9, 10 Voice Major 4, 5, 6, 7, 8, 9, 10 Composition Major 4, 5, 6, 7, 8, 9, 10 Piano Major 4, 5, 6, 7, 8, 9, 10

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- Yun-Joo Na, D.M.A.
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# Laboratories

- Yehang Hall is a professional concert hall with 300 seats.
- Jieum Hall has 100 seats and is also used for lectures and master classes.
- 50 soundproof practice rooms
- Orchesra rehearsal room

- Music listening room with more than 10,000 CDs and 3,000 scores.
- Computer music lab with 20 computers with various midi systems.
- Chorus room

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# Graduate Studies in Medical Science

Established in 1952, the Faculty of Medicine is the oldest graduate course of medical science in the south-western part of the nation. It's Basic Science courses provide research opportunities for students who want to study on biomedical science. The Clinical Science courses are conducted at the Chonnam University Hospital as well as other affiliated hospitals throughout the province of the nation.

In the spirit of Truth, Creativity, and Service which are the missions of the Chonnam National University, Faculty of Medicine in the Graduate School programs is committed to developing the medical scientist who have the personality and virtue necessary to handle human life, who have the leadership in the field of medical science, and who have the attitude to contribute to the welfare of human beings.

To meet the missions of the Faculty of Medicine in the Chonnam National University Graduate School, students should

- 1. Develop humanity required to a medical scientist
- 2. Develop research spirit to try to understand medical problems
- 3. Develop the attitude to solve any problems both rationally and creatively with his/her own knowledge and skills
- 4. Develop the capability to perform an independent research and education.
- 5. Develop a sense of duty on the community and nation's health welfare.

# Degree Requirements

- Master's degree candidates are required to earn 24 credits (two core courses and 6 electives), up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis.

Doctoral degree candidates are required to earn 36 credits (two core courses and 10 electives), up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis. They also have to publish at least one article (impact factor≥1.0) in a journal listed in science citation index (SCI(E)).

# What Do You Study?

Seizure Disorder	Arthroscopic Surgery
Joint Replacement Arthroplasty	Medical Care
Advanced Biochemistry	Regional Anesthesiology
High-risk Obstetrics	Diagnostic Radiology of Musculoskeletal System
Bone Pathology	Acute And Chronic Renal Failure
Bone Tumors	Differential Diagnosis and Treatment of Hearing

Loss Andrology Pathology of Endocrine System Endocrine Physiology Endourology Geriatric Anesthesiology Cardiopulmonary Cerebral Resuscitation Cross-Sectional Anatomy Colorectal Surgery Toxicologic Pathology Epidemiology of Chronic Disease Microbial Genetics Basic Microbiology Tumor Virus Basic Virology Developmental Biology Leukemia Cytogenetics Current Trends of Leukemia Study Forensic Pathology Management &Control of Hospital Infection Hospital Managment Health Statistics Health Administration Orthotics and Prosthetics Molecular Pathology Diagnostic Molecular Biology Rhinology Pathology of Urinary System Diagnostic Radiology of Urogenital System Adolescent Medicine Obstetric Anesthesiology Industrial Health Pathology of Genital System Reproductive Endocrinology Cell Pathology Pediatric Anesthesiology Pediatric Pathology Pediatric Urology Pediatric Neurosurgery Pediatric Neurology Pediatric Ophthalmology Pediatric Orthopedics

Pediatric Hematology Gastrointestinal Motility Diagnostic Radiology of Digestive System Pathology of Digestive System Digestive Physiology Sleep Medicine Transfusion Medicine Pathophysiology of Circulatory System Esophageal Surgery Infectious Disease in the Nervous System Neuororadiology Nerovascular Surgery Neuro-Ophthalmology Neuroanesthesiology Neurological Diagnosis Neuroanatomy Renal Pathology Renal Pathophysiology Renal Physiology Epidemiology Treatment of Inflammatory Bowel Disease Urologic Injury Urinary Tract Infection Urologic Stones Degenerative Lumbar Diseases Physiology of Motor Nervous system Gastrointestinal Bleeding Breast Surgery Applied Anatomy Health Economics Current Trends of Medical Science (II) Current Trends of Medical Science (I) Abnormal Labor and Delivery Transplantation Surgery General Opthalmology Clinical Toxicology Clincal Electrophysiology Clinical Systemic Mycology Physiology of Autonomic Nervous System Communicadle Disease Control Vestibular Physiology Psychopathology

Orthopaedic Traumatology-Frature and Dislocation Tumor Immunology Tumor Pathology Interventional Radiology Community Medicine Spine Surgery Physiology of Somatic Sense Fluid and Electrolyte Balance Pancreatic Surgery Therapeutic Endoscopy Therapeutic Ophthalmology Diagnosis of Lung Cancer Collagen Diseases of the Skin Structure and Function of the Skin Immunology of the Skin Skin Pathology Microbiology of the Skin Physiology of the Skin Cutaneous Oncology Fungal Diseases of the Skin The Theory and Practice in the Treatment of Dermatologic Diseases **Behavioral Pediatrics** Hemodialysis and Peritoneal Dialysis Pathology Of Respiratory System Diagnostic Radiology of Respiratory System Pharmacology of Chemotherapy Environmental Toxicology Environmental Pathology Environmental Health Environmental Medicine Patient Monitoring Enzymology Anesthesia for Thoracic Surgery Pathology of Hepatobilary System Molecular Endocrinology Otoneurology Outpatient Anesthesia Ocular Tumors Spine Injury Surgical Diseases of the Lung and the Pleura Ocular Immunology

Dental Anesthesiology Molecular Microbiology Neurooncology( I ) Brain Tumor Pathology of Hematopoietic System Metabolic and Endocrine Disorders in Children Infection &Immunity advanced Human Anatomy Histology of the Endocrine System Geriatric Psychiatry Sudden Deafness Molecular Oncology Tumors of Nose and Paranasal Sinuses Occupational Epidemiology Morphology of Congenital Cardiac Anomalies Pathophysiology of Congenital Heart Diseases. Cell Signalling Pediatric Echocardiography Neonatal Respiratory Physiology Basic Pharmacology1 Basic Pharmacology2 Cardiovascular Pharmacology Physiology and Defense Mechanism of External Auditory Canal Clincal Epidemiology Clinical Occupational Medicine Otitis Media Fetal Cardiology Exposure Assessment Respiratory Allergy Environment and Health Environmental Carcinogenesis Surveillance System on Environmental Medicine Environmental Epidemiology Brain tumor Pathology Radioisotope Therapy Advanced Cardiac Life Support Advanced Traumatic Life Support Heat Emergencies Research Methodology in Medicine 1 Research Methodology in Medicine 2 Research Methodology in Medicine 3 Research Methodology in Medicine 4

Current Trends of Medical Science 3 Current Trends of Medical Science 4 Female Urology The Principle and Application of Nuclear Medicine Technology Neurodegenerative Pathology Cardiovascular Pathology Head and Neck Pathology General Gynecology Cell Age Chemistry Extracellular Matrix Clinical Microbiology Intravenous Anesthesia Clinical Psychopharmacology Heart Anesthesia **Bioinformatics** Experimental Methods in Cell Biology Pathology of Dementia Pathology of Cerebrovascular System Pain Medicine Ophthalmologic Examination Cardiac Radiology Toxicogenomics Geriatric Rehabilitation Medicine Stroke Rehabilitation Pediatric Rehabilitation Medicine Rehabilitation in Spinal Cord Injury Pain Rehabilitation General Introducion in Rehabilitation Medicine Neurotraumatology Urologic Oncology Advanced Cellular Biology Treatment Guideline of Dementia Research Methodology in Psychiatry Clinical Research of Depression Osteoporosis and Metabolic Bone Diseases Electrodiagnostic Medicine Pancreatittis Mitochondrial Pathology Digestive Disease and Nutrition Radiation Oncology Critcal Care Medicine

Medical Oncology Diagnosis and Treatment of Arrhythmia Treatment of Lung Cancer Chronic Obstructive Pulmonary Disease Pathogenesis of Tuberculosis Clinical Ultrasonography Diagnosis and Treatment of Rheumatoid Arthritis Systemic Lupus Erythematosus Diagnosis and Treatment of Ankylosing Spondylitis Fibromyalgia Syndrome Diagnosis and Treatment of Osteoarthritis Pathology of Hepatobiliary System Ocular Surface Diseases Cataract and Geriatric Ophthalmology Ocular Infection Surface Anatomy Gastrointestinal Oncology Laparoscopic Surgery Anorectal Physiology The Foot and Ankle Comparative Embryology & Anatomy Cardiovascular Pharmacology Clinical Pharmacology Cochlear Implant and Implantable Hearing Aid Current Trend in Radiology Drug Toxicology Endocrinology and Metabolism Geriatric Otolaryngology Immunopharmacology Introduction to Clinical Medicine Research Neural Cell Biology Neuropharmacology Pathology of Hepatobiliary System Pediatric Otolaryngology Physiology of Cental Nervous System Research Methods for Clinical Medicine Research Training 1 Research Training 2 Treatment of Acute and Chronic Heart Failure

# Professors

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### Forensic Medicine

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# **Medical Education**

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### Gastroenterology

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# **Endocrinology and Metabolism**

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# Colon and Rectal Surgery

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### Hepaticobiliary and Pancreatic Surgery

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#### **Endocrine Surgery**

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## Graduate Studies in Biomedical Sciences

The goals of the graduate program in Biomedical Sciences are:

- 1. Training of basic researchers specializing in medical science to identify the causes of human diseases and to study the development of diagnosis and treatment technologies
- 2. Training of future global talent through clinical-basic medical convergence training courses that enhance medical school characteristics
- 3. Training creative medical scientists through specialized education

## Degree Requirements

- Master's degree candidates are required to earn 24 credits (4 major subjects), up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis.
- Doctoral degree candidates are required to earn 36 credits (4 major subjects), up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis. They also have to publish at least one article in a journal listed in science citation index (SCI(E)).

Introduction to Clinical Medicine Research	Molecular Endocrinology
Research Methods for Clinical Medicine	Molecular Pathology
Photomedicine	Molecular Urology
Advanced Structural Biology	Molecular Bioinformatics
Basic Research Tools	Molecular Biology
Aging Biology	Molecular Reproductive Medicine
Proteomics	Molecular Neurobiology
Rheumatology	Molecular Neurotraumatology
Immunology	Molecular Neuroophthalmology
Developmental Biology	Molecular Biology for Kidney Disease
Forensic Medicine	Molecular Cardiology
Health Service	Molecular imaging
Health Administration	Molecular Genetics
Molecular Bone Biology	Molecular Reproductive Medicine

Molecular Oncology Molecular Pathobiology Molecular Diagnostics Skin Moleculobiology Industrial Cooperation with Medical School **Biological** Psychiatry Statisticsfor Biology Biochemistry Cell Biology Cell Damage and Differentiation Cell Signalling Cell and Tissue Biology Pediatric Neurology Receptor and Cell Signaling Introduction to Neuroscience Neuropathology Neurophysiology Neurobiochemisty Neuropharmacology Neurooncology Pharmacotherapy Drug Delivery Special Topics on Epidemiology Research Ethics Research Guidance 1 Research Guidance 2

Research Guidance 3 Urinary Tract Infection Genetics Recent Mothods in Molecular Genetics Medical Experimental Zoology Trends in Medical Sciences(I) Trends in Medical Sciences(II) Trends in Medical Sciences(Ⅲ) Trends in Medical Sciences( $\mathbb{N}$ ) Transplantation Biology Cognitive Neuroscience Clinical Immunology Statistical Methods for Clinical Trials Advances in Clinical Pharmacology Tumor Immunology Oncology Seminar on Current Medical Progress Seminars in Medical Advances(I) Seminars in Medical Advances(Ⅱ) Seminars in Medical Advances(Ⅲ) Seminars in Medical Advances(IV) Pain Medicine Dermatopathology Free Radical Biomedicine Enzymology

## Professors

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# Graduate Studies in Korean Language and Literature

In the Department of Korean Language and Literature, history and structures of Korean spoken and written language are studied scientifically. Also, classical and modern literature are appreciated, criticized, and researched. Spoken language and written language are the most basic methods to express the human mind and a resource to construct the mental system. Therefore, we study the nature of language with the usage of Korean language in life and Korean literature, the essence of language art. The graduate program enables students to understand the history, modes, and rules of Korean language and literature in a deeper sense.

The Department educates students on the theory of speech skills, the theory of literature appreciation, the theory of general writing, and the theory of creative writing, and allows them to put them to practical use to help students improve their language skills, aesthetic sentiments, and writing skills. That is, general studies and education concerning Korean language and literature, development of language skills, and culture of aesthetic appreciation are the aims of this Department.

## Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. The exact courses are determined after consultation between students and academic advisors. Students may earn up to 9 credits per semester, or up to 6 credits per semester for those students with a full-time job. Up to 9 credits may be transferred into the Master's Program, and up to 12 credits into the Ph.D. program.

In order to be eligible for thesis submission, all graduate students must pass a foreign language exam. There are three thesis examiners for smaster's degree candidates and five for Ph.D. candidates. Of the five examiners of a Ph.D. thesis, two come from outside Chonnam National University. All graduate students are assigned an academic advisor based on research interests.

Korean Linguistics Major Courses	Studies In Korean Morphology (3)
Studies in Old Korean (3)	Studies in the Trends of Literary Thoughts (3)
Studies in the History of Korean Language (3)	Studies in 'Hunminjongum' (3)
Studies in Korean Lexicology (3)	Philological Studiesof Korean Linguistics (3)
Studies In Korean Semantics (3)	Studies in Modern Korean (3)
Studies In Korean Syntax (3)	Studies in Sociolinguistics (3)
Studies in the History of Korean Linguistics (3)	Studies in Cultural Linguistics (3)
Reserch Methodolgy of Korean Linguistics (3)	Studies in Korean Education (3)

Studies in Textlinguistics (3)
Research of Local Language (3)
Literary Language & Metaphor (3)
Local Languages and Culture Research (3)
Studies in Discourse Analysis and Pragmatics (3)
Studies in the Historical Grammar of Korean (3)
Studies in Korean Phonology concept (3)
Further research in Korean Phonology (3)
Studies in the Loan Character System (3)
Studies in Contemporary general semantics (3)
Studies in Contemporary general Syntax (3)
Further research in the History of Korean Language (3)
Introduction to Studying Korean Linguistics (3)

#### Korean Classic Literature Major Courses

Studies in 'Ka-sa' (3) Research Methodology of Classical Korean Literature (3) Studies in Old Korean Poetry (3) Studies in Korean Folklore (3) Studies in 'Hayng-Ka' (3) Studies in Poetry of the 'Korea' Dynasty (3) Studies in 'Si-Jo' (3) Seminar in SinoKorean Literature (3) Studies in Classical Korean Novels (3) Studies in Classical Korean Essays (3) Studies in Classical Korean Literary Works (3) Studies in Classical Korean Authors (3) Topics in Classical Korean Novels (3) Studies in the History of Classical Korean Novels (3) Studies in Oral Poetry (3) Studies in the Korean Folk Narratives (3) Studies in Sino-Korean Literary Criticism (3) Studies in the History of SinoKorean (3) Study of Korea Hansi (3) Works of Classical Korean Literature (3) History of Classical Korean Literature (3) History of Research in Classical Korean Literature (3) A Study on PANSORI Literature (3) Studies in Old Korean Literature (3) Research of Local Culture's Law Data (3) Research Methodology of Korean Folklore & Oral Literature (3)

Modern Korean Literature Major Courses Studies in Stylistics (3) Studies in Middle Korean (3) Studies In History Of Modern Korean (3) Studies in Modern Korean Novels (3) Studies in Modern Korean Poetry (3) Research Methodology of Modern Literature (3) Studies in Modern Korean Drama (3) Studies in Koren Literary Criticism (3) Studies in the Enlightenment Period Korean Literature (3)Studies in the Theory of the Poetry (3) Studies in the Theory of the Novel (3) Studies in the Theory of Modern Literary Criticism (3) Studies in Descriptive Methodology of Modern Korean Literary History (3) Studies in History of Korean Poetry (3) Studies in History of Korean Novels (3) Studies in the History of Modern Korean Literary Criticism (3) Topics in Modern Korean Poets (3) Topics in Literary Theory (3) History of Studies in Modern Korean Literature (3) Studies in Theory of Modern Korean Drama (3) Seminar in Contemporary Korean Literature (3) Studies in Drama (3) Studies in the History of Korean Modern Theatre (3) Topics in the Honam Literature (3) Topics in Modern Korean Author (3) Fiction Writing Theory (3)

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## Graduate Studies in English Language and Literature

The Department of English Language and Literature has a thriving postgraduate program. The Department's program aims primarily to train future teachers of all kinds, from those who wish to work in large public universities and small undergraduate colleges to those who will engage themselves in English language teaching in various types of institutions. The program emphasizes the ability to develop analytical and critical thinking, as well as the ability to master innovative and scholarly work in specialized fields.

The program comprises two core areas of study: Linguistics and Literature in English. The area of Linguistics in English includes specializations in English Syntax, English Semantics, and English Phonology. The area of Literature in English includes specializations in English Poetry, English Novels, and English Drama. The department offers many courses that focus on literary genres and critical theories, as well as studies in the chronological periods of British literature, American literature, and Anglophone world literature.

The program is now in the process of expanding its field of study, so that it may become more inclusive of contemporary interdisciplinary studies such as cultural studies, gender studies, and film studies. Another important change in the program will be to integrate Applied Language Studies in order to offer a diploma in English as an International Language.

#### Degree Requirements

Master's degree candidates must earn 24 credits and pass a foreign language exam and a qualifying exam based on the list of subjects provided by the Department. Students must also submit a thesis of original scholarly and critical work, signed and approved by the committee of three faculty members.

Ph.D. candidates must earn an additional 36 credits and pass two foreign language exams and a qualifying exam based on a list of subjects provided by the Department. Students must also submit a dissertation, an original and substantial work of scholarship, signed and approved by the committee of five faculty members.

## What Do You Study?

#### Literature in English Major Courses

16th and 17th-Century English Poetry (3)
18th-Century English Novel (3)
18th-Century English Poetry (3)
19th-Century American Novel (3)
19th-Century English Novel (3)
19th-Century English Poetry (3)

20th-Century American Novel (3) 20th-Century English Novel (3) 20th-Century English Poetry (3) Modern American Poetry (3) Twentieth-century British Drama (3) Early Modern British Drama (3) Special Topics in American Novel (3) Ethnic American Literature (3) Studies in American Poetry (3) Studies in Old English (3) American Poetic Traditions (3) American Drama (3) Special Topics in American Literature (3) Milton (3) Victorian Prose (3) Shakespeare's Tragedies (3) Shakespeare's Comedies (3) Special Topics in English Novel (3) Studies of Major Authors (3) Special Topics in British Literature (3) History of British and American Literary Trends (3) British and American Literacy Criticism (3) Research Methods in English Literature (3) Topics in English & American Literature 1 and 2I(3)Special Topics in British and American Culture (3) Special Topics in British & American Novel (3) Special Topics in British & American Literature (3) Special Topics in English Novel (3) Special Topics in British & American Drama (3) English-speaking World Literature 1 and 2 (3) Medieval English Literature (3) Contemporary American Fiction (3) Contemporary American Poetry (3) Contemporary British Novel (3)

Contemporary British and American Drama (3) Contemporary Literary Theory I and II (3) Seminar on Western Classics (3)

#### **English Linguistics Major Courses**

Sociolinguistics (3) Psycholinguistics (3) Teaching English as a Foreign Language (3) English Teaching Method (3) Modern English Grammar 1 and 2 (3) English Phonology I and II (3) Topic in English Phonology (3) English Semantics I and II (3) English Syntax I and II (3) Research Methods in English Linguistics (3) English Morphology (3) English Pragmatics (3) General Linguistics (3) Second Language Acquisition (3) Laboratory Phonology (3) Formal Language Theory (3) Applied Linguistics Seminar (3) Research Method in Applied Linguistics(3) English Education Seminar (3) English Pedagogic Grammar (3) Testing in TEFL (3) Historical Linguistics (3)

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  Mark W. Murdauch M A
- Mark W. Murdaugh, M.A. [Visiting Professor, EIL, mwmurdau@hotmail.com]
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Japanese Language and Literature <u>Contact Information</u> Phone: +82-62-530-3210 Fax: +82-62-530-3219 URL: http://altair.chonnam.ac.kr/~japan

## Graduate Studies in Japanese Language and Literature

Graduates can pursue careers in business, the media, the Ministry of Foreign Affairs, trading, and high school and university education systems.

## Degree Requirements

Characterized by being systematic and in-depth, graduate programs in Japanese Language and Literature and Japanese Studies aim to produce experts able to contribute to the study of Japanese in Korea.

All students may earn up to 9 credits per semester. The Faculty Committee may decide to add to the requirements of graduate students based on their prior transcripts. Master's degree candidates may earn up to 15 additional credits while Ph.D. candidates may earn up to 9. Up to 9 credits may be transferred into a Master's Program and up to 12 credits into the Ph.D. program.

In order to be eligible to submit a thesis, Ph.D. candidates must have at least two papers published in academic journals, including one in an international journal. A master's degree candidate must earn 3 credits from 2 courses outside his/her area of specialization. All students must pass a foreign language exam. There are three examiners for master's degree theses and five for Ph.D. theses. One or more examiners for Ph.D. theses must come from outside of Chonnam National University.

Ph.D. applicants must pass a foreign language entrance exam in English or another foreign language, including German, French, Chinese, Japanese, or Chinese characters.

Each faculty member is limited to teaching 2 courses per semester, with the exception of co-teaching duties. Master's degree candidates are required to earn 24 credits in order to graduate. Ph.D. candidates are required to earn an additional 36 credits. The exact courses are determined by the Department Head. The student's supervisor is normally determined near the end of a student's first semester. A supervisor is assigned based on their research interests. In this regard, students are encouraged to provide the Department with a statement of interest no later than one month before the appointment deadline.

Candidates for degrees first submit their thesis proposals to their respective supervisors. Then, their supervisors arrange for them to present their proposals at department-wide meetings.

Japanese Language Major Courses	Reading in Classical Japanese Reading
Japanese Grammar	Materials
Research Methods in Japanese Linguistics	The History of Japanese Language.
Japanese Linguistics I	Japanese Phonology
Japanese Linguistics II	Japanese Phonetics
Theories of Japanese Language Teaching	Ancient Japanese

Modern Japanese Sociolinguistics Classical Japanese Language General Linguistics Seminar in Japanese Linguistics I Seminar in Japanese Linguistics II Sino-Japanese Phonology Introduction to Interpretation and Translation Introduction to Applied Linguistics Second Language Acquisition Theory and Practice Studies on Modern Japanese Verses

#### Japanese Literature Major Courses

Method of Japanese Literature I Method of Japanese Literature II Comparative Literature of Korean and Japanese Seminar in Comparative Literature of Korean and Japanese Modern Japanese Literature I Modern Japanese Literature II Japanese Popular Culture I Japanese Popular Culture II Classical Japanese Poetry Classical Japanese Prose Classical Japanese Drama Comparative Studies in Korean and Japanese Classical Literature Japanese Literature and Film Japanese Women's Literature Sino-Japanese Literature Special Topics in Modern Japanese Literature Modern Japanese Novels Seminar in Basic Translation Special Topics on Comparative Study of Korean and Japanese Literature Studies on Japanese Literary Theories Studies on History of Japanese Poetry and Religion Studies on Modern Japanese Literary Criticism Studies in Modern Japanese Religious Literature Seminar on East Asian Poetry Seminar on Traditional Japanese Play Translation Studies in Contemporary Japanese Poetry Seminar in Translation for Specific Areas Translation Studies in Modern Japanese Poetry Seminar on Japanese Translation

#### Japanese Culture Major Courses

Seminar in Korean and Japanese Comparative Culture History of Cultural Exchange between Korea and Japan Research Methods in Japanese Culture Japanese Folklore Literature Seminar in History of Japanese Thoughts Japanese History Special Study of Japanese Society Seminar in Modern Japanese Culture Seminar in Japanese Folk Belief Seminar in Japanese Community Society Seminar in Korean and Japanese Mass Culture Intercultural Communication Special Lecture Japanese Education and Information Research Methods in Japanese Education 1 Research Methods in Japanese Education 2 Seminar in Japanese Folklore Seminar in Japanese Culture Seminar on Japanese Studies Seminar on East Asian Culture Seminar on Contemporary Japanese Society Seminar on Japanese Language and Thoughts Seminar on Japanese Culture and Thoughts Seminar on Japanese Society and Culture Seminar on Religious Culture in Japan Seminar on Korea-Japan Relations Seminar in Korean and Japanese Comparative

# Professors

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- Dae-Sung Kim, Ph.D. [Professor, Japanese Linguistics, hanbyeol@chonnam.ac.kr]
- Sung Un Jeong, Ph.D. [Associate Professor, Japanese Literature, sujeong@chonnam.ac.kr]

- Seong-Eun Kim, Ph.D. [Assistant Professor, Japanese Thought, jnu2012@chonnam.ac.kr]
- Jiyoung-Lim, Ph.D.
   [Professor, Japanese Linguistics, jy-lim@jnu.ac.kr]
- Hyeon Il Moon, M.A. [Guest Professor, Japanese Linguistics, moonhagi@chonnam.ac.kr]
- Iida Saroi M.A. [Guest Professor, Korean Linguistics, saori77@chonnam.ac.kr]

## Laboratories

The Seminar Room (room 409 in Liberal Arts Building 2) is reserved for graduate students' seminars. This room can also be used as a study space.

The resource room (room 114 in the Liberal Arts Building 2) houses theses from Korean and overseas universities, periodicals published abroad and at home, and a variety of visual materials and related equipment.

Chinese Language and Literature <u>Contact Information</u> Phone: +82-62-530-3200 Fax: +82-62-530-3209 URL: http://china.jnu.ac.kr

## Graduate Studies in Chinese Language and Literature

By training students in analytic skills across general and particular academic areas, the Department produces professionals in Chinese Language and Literature.

#### Degree Requirements

The Department of Chinese Language and Literature provides a program in comparative literature as part of graduate studies. The program aims to equip students with the skills needed to apply their expertise in Chinese in Language and Literature as well as to advance studies in Korean Language and Literature.

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. The exact courses will be selected by their upon consultations between supervisors and students. All students are not allowed to take more than 9 credits per semester.

Students in joint master's and Ph.D. programs are not required to earn additional credits. Up to 9 credits may be transferred into a Master's Program, and up to 12 into a Ph.D. program.

In order to be eligible to submit a thesis, students must pass a foreign language exam. There are three committee members for master's degree theses and five for the Ph.D. dissertation.

GRADUATE COURSES	and Chinese (3)
Contemporary Chinese Literature (3)	History of Chinese Linguistics (3)
Modern Chinese Novels (3)	History of Chinese Literary Thoughts (3)
Modern Chinese Literary Criticism (3)	History of Chinese Speech Sound (3)
Modern Chinese Prose (3)	Introduction to Chinese Culture (3)
Modern Chinese Poems (3)	Methodology of Classical Chinese Literature (3)
Ancient Chinese Phonology (3)	Modern Chinese Grammar (3)
Archaic Chinese Phonology (3)	Practical Exercise in Chinese Language and
Chinese Commentariology (3)	Culture 1 (3)
Chinese Dialectology (3)	Practical Exercise in Chinese Language and
Chinese Ideography (3)	Culture 2 (3)
Chinese Linguistics (3)	Research for Master's or Doctoral Degree (3)
Chinese Mythology and Primitive Culture (3)	Research on Chinese Cultural Narrative (3)
Chinese Phonology (3)	Seminar in Literary Debates in Modern
Chinese Semantics (3)	Chinese Literature (3)
Classical Chinese Grammar (3)	Seminar in May Fourth Literature (3)
Comparative Studies in Culture of Korean	Seminar in Methods of Research in Modern

Chinese (3) Seminar in Modern Chinese Literature (3) Seminar in New Era Literature (3) Special Studies in Classical Chinese Drama (3) Special Studies in Chinese Culture (3) Special Studies in Chinese Prose (3) Special Studies of Classical Chinese Novels (3) Special Studies of Chinese Classics (3) Special Studies of Chinese Grammar (3) Special Studies of Chinese Ideography (3) Special Studies of Chinese Linguistics (3) Special Studies of Chinese Literary Criticism (3) Ancient Literary Criticism Works (3) Chinese Regional Culture (3) Ancient Chinese Poems (3) Arts Performance (3) Bone Inscription and Bronze Inscription (3) Chinese Aesthetics (3) Chinese Cinema History (3) Chinese Classic Drama (3) Chinese Classic Drama Criticism (3) Classical Chinese Novels (3) Classical Chinese Prose (3)

## Professors

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- Joo-No Lee, [Ph.D./ Professor/ Chinese Literature/

Chinese Folklore (3) Chinese Life Culture (3) Chinese Literary History (3) Chinese Literature and Film Arts (3) Chinese Novel Criticism and Theories (3) Chinese Publication History (3) Chinese Rhetoric and Lexicology (3) Chinese TV Drama (3) Ci-Fu (3) History of Culture Exchange between Korea and China (3) Jiang-chang (recite-chant) Literature (3) Modern Chinese Drama (3) Modern Chinese Literature (3) Modern Chinese Works (3) Original Types in Chinese Culture (3) The Cultures of Minority Nationality (3) Modern Chinese Writers (3) Chinese Verse Literature (3) Ci-qu (3) Rhyme Dictionaries (3) Rhyme Tables (3) Tang-Song Prose (3)

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# Laboratories

A seminar room (room #409 in the Liberal Arts Building #2 and room #206 in Liberal Arts Building #1) houses master's and doctoral thesis from overseas or Korean universities, Korean and foreign periodicals, and various visual resources.

German Language and Literature <u>Contact Information</u> Phone: +82-62-530-3170 Fax: +82-62-530-3179 URL: http://german.jnu.ac.kr

## Graduate Studies in German Language and Literature

The Department of German Language and Literature provides a graduate program in comparative literature. The program is aimed to equip students with the skills needed to apply their expertise in German Language and Literature while advancing studies in Korean Language and Literature.

## Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. The exact courses are determined upon consultation between students and supervisors. All students may earn up to 9 credits per semester.

Up to 9 credits may be transferred into the Master's Program, and up to 12 into the Ph.D. program. In order to become eligible to submit a thesis, students must first pass a foreign language test. A Ph.D. candidate must pass tests in German and English.

There are three external examiners for the master's degree and five for the doctoral degree. Of the five examiners of a Ph.D. thesis, two come from outside of Chonnam National University.

All students are assigned to academic advisors based on their research interests.

## What Do You Study?

#### GRADUATE COURSES

Comparison of Korean and German Literature (3) Contemporary German Novels (3) German Kinder und Jugendliteratur (3) German Classical Literature (3) German Classicism and Romanticism (3) German Literature and Arts (3) German Literature and German Philosophy (3) German Literature in the 20th Century (3) Modern European Drama and Play (3) Modern German Literature (3) Modern German Poetry (3) Modern German Theater (3) Recent German Drama and Theater (3) Special Studies in German Literature I (3) Special Studies in German Literature II (3) Special Topics in German Literature I (3)

Special Topics in German Literature II (3) Special Topics in German Literature III (3) German Drama (3) German Eco-Literature (3) German Feminist Literature (3) German Literature Engagement (3) German Modern Literature (3) German Novels (3) German Poetry (3) Korean and German Comparative Literature (3) Literary Criticism and Essays (3) German Contemporary Literature (3) German Writers I (3) German Writers II (3) German Writers III (3) German Writers IV (3) Themes in German Literature I (3)

Themes in German Literature II (3) Theory of Comparative Literature (3) Theory of Trends of German Literature (3) Theory on German Literaturwissenschaft (3) Modern German Literature I (3) Modern German Literature II (3)

# Professors

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- Dong-Jung Kim, Ph.D. [Professor, German Poetry, kimdj@chonnam.ac.kr]
- Ja-Kyung Cho, Ph.D.
   [Associate Professor, German Linguistics, jkcho@chonnam.ac.kr]

German Realism and Naturalism (3) German Romantic Literature (3) German Literature in the 20th Century I (3) Hermeneutics (3) Literature and Text Linguistics (3) Modern Critical Theory (3)

- Hong-Sup Kim, Ph.D. [Professor, German Literature, hongskim@hotmail.com]
- Myeong-Sun Jeong, Ph.D.
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- Chirin Eisele
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## Laboratories

The Department has one seminar room (room #307 in the 2nd Humanities Building), which doubles as a study space for graduate students.

The resource room (room #103 in the 2nd Humanities Building) houses theses from overseas and Korean universities, periodicals published abroad or at home, and a variety of visual materials.

French Language and Literature

\_\_\_Contact Information Phone: +82-62-530-3190 Fax: +82-62-530-3199 URL: http://french.jnu.ac.kr

## Graduate Studies in French Language and Literature

The Department has contributed to cultural exchanges between Korea and France, thus advancing Korean culture. Graduates have also played an important role in improving Korea's relationships with Europe and Africa.

#### Degree Requirements

Characterized by being systematic and in-depth, the Department's graduate programs aim at producing experts in French Language and Literature. These experts can also contribute to advancing studies in Korean Language and Literature.

In order to establish eligibility for degrees, master's degree and Ph.D. candidates have to earn at least 12 and 18 credits, respectively. In principle, full-time students and part-time students can respectively earn up to 9 and 6 credits per semester. Supplementary credit requirements for a student may be made based on the student's previous transcripts. Master's degree and Ph.D. candidates may earn up to 12 and 9 supplementary credits respectively.

In order to be eligible to submit a thesis, graduate students must pass a foreign language exam. Ph.D. candidates must pass both French and English language exams.

There are three examiners for the master's degree and five for the Ph.D. theses. Up to three (master's) and four (Ph.D.) thesis examiners come from within the Department. At least one or more thesis examiners for the Ph.D. must come from outside Chonnam National University.

All students are assigned a supervisor based on research interest. A faculty member can supervise up to three master's students and up to five Ph.D. students from the same class.

The Late 19th Century Novel (3)	Philosophy of Language (3)
Special Topics in Structural Linguistics (3)	Semantics (3)
The Problem of Writing (3)	Feminist Literature (3)
Nouveau Roman (3)	Pragmatics (3)
Methods of Discourse Analysis (3)	Sociology of Novel (3)
Conversational Analysis (3)	Medieval Poetry (3)
Sociolinguistics (3)	Medieval Roman (3)
Existentialist Novel (3)	The Aesthetics of 18th Century (3)
Psycholinguistics (3)	Studies in Methodology of French Language
Lexicology (3)	Education (3)

Lexicography (3) The Critics of Mythology and Hermeneutics of Text (3) The Early 20th Century Novel (3) Theories of French Versification (3) French Poetics of the Lyric (3) Studies in French Films (3) Nouvel Vague (3) Myth and Literature (3) Literature and Psychoanalysis (3) Literature of War (3) The Mordern Art of French (3) French Area Studies (3) Studies in French Popular Culture (3) European Culture Analysis (3) Research on the space cultural and communication (3) Studies in French Cultural Administration and Policy (3) Studies in french culture marketing (3) Topics in comedy (3)Topics in tragedy (3) Drama and performance (3) Topics in reception of French drama (3) Special Topics in Semantics (3) Topics in French cultural cities (3) Topics in French cultural industries (3) Topics in French complex cultural space (3) Topics in French performing art (3) Special topics in cultural area of French language (3) Renaissance literature (3) Topics in literature of enlightenment (3) Topics in fiction of early-romanticism (3)

## Professors

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- Min Choi, M.A.
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Topics in fiction of romanticism (3) Topics in fiction of realism (3) Topics in fiction of naturalism (3) Topics in poetry in the sixteenth century (3) Topics in poetry of romanticism (3) Topics in poetry of symbolism (3) Topics in poetry of surrealism (3) Topics in French present poetry (3) Topics in classical drama in the middle ages (3) Topics in modern/present drama (3) Topics in moralist literature (3) Topics in fiction authors (3) Special topics in literary criticism (3) Topics in structuralism (3) Topics in modern literary criticism (3) Methods of fiction analysis (3) Methods of poetic analysis (3) Topics in drama analysis (3) Topics in new criticism (3) Theory of modern language (3) Research methods in linguistic study (3) History of French language (3) History of French language study (3) Phonology (3) Special topics in phonology (3) Studies in phrase (3) Methods of syntactical analysis (3) Special topics in syntax (3) Theory of modern grammar (3) French stylistics (3) Interpretation and translation studies (3)

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## **Laboratories**

The Seminar Room (Room #205 in the 1st Humanities Building) is reserved for graduate students' seminars. This Seminar Room can be also used as a study space. The Resource Room (Room #102 in the 2nd Humanities Building) holds theses from domestic and overseas universities, domestic and overseas periodicals, and a variety of visual materials and related equipment.

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# Philosophy

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## Graduate Studies in Philosophy

The objective of the Department of Philosophy is to explore the origins of the world and the nature of human beings. The graduate program in Philosophy educates students to be qualified faculty members, researchers, or equivalent professionals.

## Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and foreign language exam as well as submit a thesis.

Ph.D. candidates are required to earn 36 credits and pass a comprehensive exam and foreign language exam. Students must also submit a dissertation. An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

Contemporary Korean Thoughts (3)	Theory of History (3)
Economy management and Philosophy (3)	Natural philosophy of Eastern and Western nations (3)
Studies in Philosophy of Confucius and Mencius (3)	Special Lecture on Eastern and Western natural
Science Technology and Philosophy (3)	Philosophy (3)
Special lecture on The Glocal humanities (3)	Seminar in Comparative Philosophy (3)
Human Right in Glocal Culture (3)	Comparative Studies on Eastern and Western
Glocal Communication and Solidarity (3)	Philosophical Research Method (3)
Studies in Philosophy of Lao-Tzu and Chung-Tzu (3)	Special Lecture on Eastern and Western Modern
logic and communication (3)	Philosophy (3)
Studies of "Discussion Theories" (3)	Metaphysics of Eastern and Western Philosophy (3)
Mahayana Buddhism (3)	Study on Metaphysics of East and West (3)
Topics in Taoism Philosophy (3)	Trans-metaphysics special lecture (3)
Eastern and Western nation's values and Moral	East Asian Buddhism (3)
philosophy (3)	The Study of East Asia Thought Exchanges History (3)
Study on Philosophy of Law of East and West (3)	Culture Art and Philosophy (3)
Comparative Studies in East and West Thought (3)	Topics in Culture Art and Philosophy
Eastern and Western nations with Philosophy of	Studies in Cultural Philosophy (3)
law (3)	Seminar in Cultural Philosophy (3)
The arts of Eastern and Western nations with	Studies in Aesthetics (3)
Aesthetics (3)	Studies in Legal Philosophy (3)
Special Lecture on Eastern and Western Ethical	Philosophical Study of Welfare Society (3)

Paradigm of Welfare and Philosophy (3) Topic in Analytic Philosophy (3) Studies in Buddhism Philosophy (3) Seminar in the Buddhist Scriptures (3) History of Buddhist Thought (3) Buddhist Ethics (3) Studies in Critical Philosophy Social Welfare and Humanities and welfare (3) Social exclusion and solidarity (3) Society · Politics and Philosophy (3) Education Seminar in Social Philosophy (3) Seminar in Social Philosophy (3) Seminar in Chinese Madhyamaka Thoughts (3) Seminar in Bioethics (3) Seminar in Ancient Western Philosophy (3) Topics in Ancient Western Philosophy (3) Seminar in Modern (3) Studies in Zen Thoughts (3) Cross-cultural world and Philosophy (3) Study of classics on The world's intercultural philosophy (3) Philosophical Education for Estrangement class 1 (3) Philosophical Education for Estrangement class 2 (3) Philosophical Education for Estrangement class 3 (3) Philosophic academy for Citizen 1 (3) Philosophic academy for Citizen 2 (3) Studies in Pragmatism (3) Studies in Existential Philosophy (3) Seminar in Practical Science Thought (3) Studies in Philosophy of Mind (3) Aristotle I (3)Aristotle II (3) Studies in Philosophy of Wang Yangming (3) Language · Communication and Philosophy (3) Education Seminar in Philosophy of Language (3) Topics in the Philosophy of Language (3) Education Seminar in Philosophy of History (3) Education Seminar in Education Philosophy of Art (3) Studies in Philosophy of Art (3) Seminar in Won-hyo's Thoughts (3) Topics in Confucianism Philosophy (3) Studies in Yogacara Philosophy (3)

Applied Buddhism (3) Seminar in Applied Ethics (3) Theory and Praxis (3) Human Rights and Welfare (3) Study In Indian Philosophy (3) Special lecture on Education of philosophy for The welfare of humanity (3) The theory and practice of Humanities and welfare (3) Study on Paradigm of Humanistic Social Welfare (3) Topics in Epistemology (3) Studies in Political Philosophy (3) Seminar in The Hundred Schools of Thought (3) Seminar in Korean Confucianism in Yi-Dynasty (3) Special Seminar on the Late Joseon Practical-Learning (3) Topics in Ontology (3) Topic in Philosophy of Religion (3) Studies in Madhyamaka Philosophy (3) Studies in Chinese Buddhism (3) Studies in Chinese Neo-Confucianism (3) Local classical literature translation and interpretation I (3) Local classical literature translation and interpretation II (3) Studies in Tien-tai and Hua-Yem Thoughts (3) Philosophical Education for Teenager 1 (3) Philosophical Education for Teenager 2 (3) Studies in Kant's Practical Philosophy (3) Studies in Kant's Ethics (3) Study on Kant's theoretical philosophy (3) Study on French Phenomenology Plato I (3) Plato II (3) Interdisciplinary Philosophical Research Method (3) Studies in Korean Buddhism (3) Studies in Korean Neo-Confucianism (3) Study on Korean Practical-Learning (3) Seminar in Comparative Seminar in Confucianism, Taoism and Buddhism (3) Seminar on Korean Confucianism (3) Study in Hermeneutics (3) Study of Hegel's Logic (3) Hegel's Philosophy (3) Topics in Hegel's Philosophy (3)

Seminar in Contemporary German Philosophy (3)

Studies in Modern Legal Philosophy (3)
Study on Changes of Modern Society and Paradigm of Social Welfare (3)
Seminar in Contemporary Anglo-American Philosophy (3)
Seminar in Contemporary Europe Philosophy (3)
Studies in Contemporary Ethics (3)

# Professors

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- Kang-Seo Rhee, Ph.D. [Professor, Ancient Western Philosophy, gsrhee@chonnam.ac.kr]
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- Yoon-Ho Cho, Ph.D. [Professor, Chinese Buddhism, choyh@chonnam.ac.kr]
- Ku-Yong Park, Ph.D.
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- Sang-Bong Kim, Ph.D. [Professor, Kant and Aesthetics

Seminar in Contemporary France Philosophy (3) Studies in Phenomenology (3)

Crossing Studies & Research Ethics(doctor course) (3)

Crossing Studies & Research Ethics(master course) (3)

Study in Greek Philosophy (3)

Seminar in Greek Philosophy (3)

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- Hyoung-Seok Ham, Ph.D.
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# History

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## Graduate Studies in History

Since its establishment along with Chonnam National University in 1952, the Department of History has grown to be one of the most respected departments within the University and in Korea. The Department is certainly the most prestigious in the field of history in the south-western region of Korea.

The Department has 11 full-time faculty members, 17 part-time instructors, 30 full time graduate students. All faculty members are committed to helping students think critically and independently about the human past, and understand how cultures evolved into what they are today. Divided into three areas of study, Korean History, Asian History, and Western History, the areas of expertise among faculty members range across the major geographical and chronological fields in the discipline from ancient Korean History to contemporary US History. The Department enjoys a reputation for excellence in both undergraduate and graduate teaching. The Department offers bachelor's, master's, and Ph.D. degrees in History.

## Degree Requirements

Master's candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All students are required to pass foreign language exams and a qualifying exam. Prior to submitting a thesis, students must deliver more than one presentation at a Department seminar.

Students are also required to publish more than one paper in an academic journal.

All students are assigned a supervisor after their first semester based on research interests.

## What Do You Study?

Research for the Master's or Doctoral Degree

#### East Asia Major Courses

Studies in Reforms and Revolutions in Modern	Studies in the History of Medieval and Ancient
Chinese History (3)	Chinese Thought (3)
Seminar in Asian History (3)	Studies in Medieval and Ancient Chinese Political History (3)
Topics in Asian History I (3)	Studies in Contemporary Political Thought and
Topics in Asian History II (3)	Intellectual History of China (3)
Studies in the History of Asian Historiography (3)	Studies in Government Organizations of Sung,
Studies in the History of Chinese Movement (3)	Yuan, Ming, and Ching Dynasties (3)
Studies in Chinese Modernization (3)	Studies in Socioeconomic History of Medieval and
Studies in Chinese Cultural History (3)	Ancient China (3)
Topics in Chinese Institutional History (3)	Studies in Japanese Political History (3)
Studies in the Aristocratic Institutions of Medieval	Studies in Socioeconomic History of Japan (3)

and Ancient China (3)

Studies in Chinese Pre-modern History (3)
Studies in Chinese Gentry (3)
Studies in Socioeconomic History of Modern China (3)
Studies in Japanese Feudal Society (3)
Studies in Intellectual History of Japan (3)
Studies in the History of East Asia International Relations (3)

#### Western History Major

Studies in German History (3) Studies in Russian History (3) History of the Renaissance (3) Studies in American History (3) Studies in Nationalism (3) Studies in Western Feudalism (3) Seminar in Ancient Western History (3) Seminar in Modern Western History (3) Studies in History of Western Thought (3) Studies in Korean Economic History (3) Topics in Korean Economic History (3) Studies in Ancient History of Korea (3) Topics in Ancient History of Korea (3) Studies in Korean Paleography (3) Topics in Korean Paleography (3) Studies in Modern Korean History (3) Topics in Modern Korean History (3) Topics in Pre-modern History of Korea (3) Studies in Korean Epigraphy (3) Studies in the History of Korean Thought (3) Topics in the History of Korean Thought (3) Studies in Korean Historiography (3) Studies in Korean Social History (3) Topics in Korean Social History (3) Studies in Korean Political History (3)

## Professors

- Kang-Lae Lee, Ph.D. [Professor, Ancient Korea kllee@jnu.ac.kr]
- Young-Tae Choi, Ph.D. [Professor, Modern Germany

History of Western Historiography (3) Seminar in Medieval Western History (3) Seminar in Contemporary Western History (3) Theories of History (3) Studies in British History (3) History of European Labour Movement and Socialism (3) Studies in Imperialism (3) Studies in French History (3) History of Rome (3) Studies in Totalitarianism (3) History of the Reformation (3) History of American Foreign Policy (3) History of Revolution (3) History of Ancient Greece (3) Research for the Master's or Doctoral Degree (3)

#### Korean History Major

Topics in Korean Political History (3) Studies in Medieval History of Korea (3) Topics in Medieval History of Korea (3) Topics in the History of Korean Historiography (3) Topics in Korean Epigraphy (3)Studies in the History of Korean Foreign Relations (3) Studies in Pre-modern History of Korea (3) Topics in Contemporary History of Korea Studies in Contemporary History of Korea (3) Topics in Korean Institutional History (3) Seminar in Korean Historical Records 1 (3) Seminar in Korean Historical Records 2 (3) Studies in Modern Korean Nationalism (3) Studies in Local Korean History (3)

ytchoi@jnu.ac.kr]

- Bong-Joong Kim, Ph.D.
   [Professor, Modern and Contemporary U.S., bjkim@jnu.ac.kr]
- · Seon-Ja Yoon, Ph.D.

[Professor, Modern and Contemporary Korea, yoon0929@jnu.ac.kr]

- Hae-Young Choi, Ph.D. [Professor, Ancient Greece and Rome chyoung@jnu.ac.kr]
- Han-Yong Song, Ph.D. [Professor, Modern and Contemporary China songhy@jnu.ac.kr]
- Sang-Chul Park, Ph.D.
   [Professor, Modern Russia sachpak@jnu.ac.kr]
- Byoung-In Kim, Ph.D. [Professor, Medieval Korean History,

# Laboratories

- Library
- Seminar Room
- Research Center for History and Culture

kimbi36@jnu.ac.kr]

- Chong-Myong Im, Ph.D. [Professor, Modern Korea imcmyong@jnu.ac.kr]
- Sung-Won Lee, Ph.D. [Associate Professor, Ancient History of China luxlee68@jnu.ac.kr]
- Eun-Young Kang, Ph.D. [Associate Professor, Ancient History of Japan kuare@jnu.ac.kr]
- Pae-Hwan Seol, Ph D. [Assistant Professor, History of the Mongol Empire, shah@naver.com]

# Mathematics

<u>Contact</u> Information Phone: +82-62-530-3330 Fax: +82-62-530-3349 URL: http://math.jnu.ac.kr

# Graduate Studies in Mathematics

The graduate program in the Department of Mathematics offers advanced studies of quality instruction and research in pure and applied mathematics, which leads to master's and doctoral degrees in Mathematics. The Master's Program in Mathematics involves fundamental graduate coursework on various subjects and gives students opportunities to carry out research visions or plans. The Ph.D. program in Mathematics offers students wider and deeper theoretic training for various abstract materials and guides them to become professional mathematicians. Research fields of the Department include algebra, analysis, geometry, topology, applied mathematics, and mathematics for graduate students.

## Degree Requirements

Upon completion of required courses in the first semester, students are expected to select a thesis advisor and begin research.

Master's degree candidates may take the qualifying exam upon earning 18 credits, and take the foreign language exam upon earning 9 credits.

Ph.D. candidates may take the qualifying exam upon earning 27 credits, and take the foreign language exam upon earning 9 credits.

Master's degree candidates are required to earn 24 credits from electives, 1 credit from a research course, and 9 credits from undergraduate mathematics courses for candidates where majors are not mathematics.

Ph.D. candidates are required to earn 36 credits from electives, 1 credit from a research course, and 9 credits from undergraduate mathematics courses for candidates whose majors are not mathematics.

Algebra I (3)	Representation Theory $II$ (3)
Algebra II (3)	Special Topics in Algebra (3)
Topics in Algebra I (3)	Algebraic Geometry I (3)
Topics in Algebra II (3)	Algebraic Geometry II (3)
Algebraic Number Theory (3)	Differential Manifold I (3)
Homological Algebra (3)	Differential Manifold II (3)
Commutative Algebra (3)	Riemannian Geometry I (3)
Rings and Module Theory (3)	Riemannian Geometry II (3)
Topics in Group Theory (3)	Advanced Differential Geometry I (3)
Representation Theory I $(3)$	Advanced Differential Geometry II (3)

Complex Manifolds I (3) Complex Manifolds II (3) Lorentzian Geometry I (3) Lorentzian Geometry II (3) Modern Topology I (3) Modern Topology II (3) Algebraic Topology I (3) Algebraic Topology II (3) Topological Groups (3) Topics in Topology I (3) Topics in Topology II (3) Topics in Topology II (3) Differential Topology (3) Topological Transformation Groups (3) Functional Analysis I (3) Functional Analysis II (3) Harmonic Analysis (3) Several Complex Variables I (3) Several Complex Variables II(3)Operator Algebra I (3) Operator Algebra II (3) Applied Analysis I (3)

## Professors

- Dong-Soo Kim, Ph.D.
   [Professor, Geometry, dosokim@jnu.ac.kr]
   (Submanifold Theory, Conformal Vector Fields, Einstein Spaces)
- Bok-Hee Im, Ph.D.
  [Professor, Algebra, bim@jnu.ac.kr]
  (Group Theory and their Generalizations, Non-associative Rings and Algebras Geometry, Cryptology)
- Hyeong-Kwan Ju, Ph.D.
   [Professor, Combinatorial Mathematics, hkju@jnu.ac.kr]
   (Dynamical Systems)
- Jeong-Ook Kim, Ph.D.
   [Professor, Applied Mathematics, jkim@jnu.ac.kr]
   (Systems Theory, Operator Theory)

Applied Analysis II (3) Nonlinear Analysis (3) Real Analysis (3) Complex Analysis (3) Theory of Ordinary Differential Equations I (3) Theory of Ordinary Differential Equations II (3) Partial Differential Equations I (3) Partial Differential Equations II (3) Topics in Numerical Analysis Numerical Methods of Differential Equations I (3) Numerical Methods of Differential Equations II (3) Applied Numerical Analysis (3) Probability Theory I (3) Probability Theory II (3) Combinatorics (3) Numerical Matrix Theory (3) Mathematics Pedagogy (3) Topics in History of Mathematics (3) Algebra Teaching Materials (3) Analysis Teaching Materials (3) Geometry Teaching Materials (3) Topics in Mathematical Education (3)

- Min-Kyu Kwak, Ph.D. [Professor, Analysis, mkkwak@jnu.ac.kr] (Partial Differential Equations, Ordinary Differential Equations, Dynamical Systems)
  Young-Bok Chung, Ph.D.
- [Professor, Analysis, ybchung@jnu.ac.kr]
  (One or Several Variable Complex Analysis)
  Jong-Taek Cho, Ph.D.
  [Professor, Geometry, jtcho@jnu.ac.kr]
  (Riemannian Geometry related with Contact Structures or Complex Structures, Pseudo-Hermitian Geometry, CR-Geometry)
  Byeong-Chun Shin, Ph.D.
  [Professor, Applied Mathematics,
- bcshin@jnu.ac.kr] (Numerical Analysis) • Young-Joo Lee, Ph.D.

[Professor, Analysis, leeyj@jnu.ac.kr] (Several Variable Complex Analysis)

- Dae-Heui Park, Ph.D. [Professor, Topology, dhpark3331@jnu.ac.kr] (Algebraic Topology, Semi-Algebraic Topology)
- Do-Yong Kwon, Ph.D. [Professor, Number Theory, doyong@jnu.ac.kr]

# Laboratories

#### Algebra Lab

Research is carried out on prime factorization, a solution of various equations and symmetry.

## **Analysis Lab**

Research is conducted on functions and their differentiation or integration. Many laws of nature are described by differential equations.

## **Geometry Lab**

Research is conducted on the curve, surface, and structures of space.

- Hong-Sung Jin, Ph.D.
   [Professor, Applied Mathematics, hjin@jnu.ac.kr]
   (Uniform Superconvergence Wavelets)
- Sang-Wook Kim, Ph.D.
   [Associate Professor, Algebra, swkim.math@jnu.ac.kr]
- Hyun-Cheul Lim, Ph.D. [Assistant Professor, Financial Mathematics, limhc@jnu.ac.kr]

#### **Topology Lab**

Research is conducted on invariability under continuous deformations, such as spheres, tubes, and Moebius strips.

#### **Applied Mathematics Lab**

Research is conducted on cryptography, coding theory, computational mathematics, numerical analysis, communications, information mathematics, financial mathematics, and bio-mathematics.

# Statistics

<u>Contact Information</u> Phone: +82-62-530-3440 Fax: +82-62-530-3449 E-mail: stat.jnu@gmail.com URL: http://stat.jnu.ac.kr

## Graduate Studies in Statistics

The Department of Statistics offers advanced graduate programs leading to master's and doctoral degrees in Statistics. The goal of our graduate programs is to educate students to have an in-depth knowledge of Statistics. Our graduate program balances theory and applications, including solid mathematical training, modeling, data analysis, and computation. Electives are regularly offered in active areas. Recent offerings have included Bayesian data analysis, bio-informatics, categorical data analysis, longitudinal and spatial data modeling, sequential analysis, and survival analysis. The Master's Program in Statistics prepares students for professional opportunities in research areas and in the IT industry. The Ph.D. program in Statistics prepares students for careers in a wide spectrum of topics in data and statistics. Ph.D. candidates have opportunities for rigorous training in theoretical statistics as well as applied research topics.

## Degree Requirements

All students are assigned a supervisor to oversee their work.

Master's candidates are required to earn 24 credits and develop a thesis. Students in this program must pass a written exam in statistics and complete the following courses: Theory of Statistical Inference, Regression Analysis Theory, and Multivariate Statistical Analysis.

Three committee members including the advisor are nominated by the Department to approve the thesis (approval must be given by at least two-thirds of the committee).

Ph.D. candidates are required to earn 36 credits and develop a thesis. Students in this program must pass a written exam in statistics. This exam consists of three parts: 1) theoretical statistics (one of Theory of Statistical Inference and Large Sampling Theory), including probability and mathematical statistics; 2) applied statistics (one of Linear Statistical Models, Experimental Design Theory, and Advanced Statistical Quality Control), including statistical design and data analysis; and 3) a major field of research (one of Topics in Statistical Computing, Survey Method Theory, Time Series Analysis, The Analysis of Cross-classified Categorical Data).

Five committee members including the advisor are nominated by the Department to approve the thesis (approval must be given by at least four-fifths of the committee).

## What Do You Study?

General Course Research for Master's or Doctoral Degree

Master's Program Multivariate Statistical Analysis Regression Analysis Theory of Statistical Inference 1 Theory of Statistical Inference 2

## Ph.D. Program

Introduction to Advanced Statistics

## **Electives**

Experimental Design Linear Statistical Models Topics in Sampling Theory The Analysis of Cross-classified Categorical Data Topics in Stochastic Process Large Sampling Theory Advanced Statistical Quality Control Non-parasitic Statistics Topics in Statistical Computing Advanced Statistics Seminar Topics in Time Series Analysis Bayesian Statistics

# Professors

- Wan-Hyun Cho, Ph.D.
   [Professor, whcho@jnu.ac.kr]
   (Data Mining, Image Partition or Searching)
- Young-Sook Son, Ph.D.
   [Professor, ysson@jnu.ac.kr]
   (Time Series Analysis, Data Mining, Bayesian Statistical Inference)
- Jeong-Soo Park, Ph.D.
  [Professor, jspark@jnu.ac.kr]
  (Design and Analysis of Computer Experiments (Simulation), Meteorological Statistics, Educational Statistics, Statistical Computing)
- Jang-Sun Baek, Ph.D.
  [Professor, jbaek@jnu.ac.kr] (Nonparametric Function Estimation, Multivariate Analysis, Bioinformatics, Pattern Recognition)

Il-Su Choi, Ph.D.
 [Professor, ichoi@jnu.ac.kr]

Survey Method Statistical Pattern Recognition Survival Analysis Intermediate Statistical Data Analysis Advanced Statistical Data Analysis Statistical Data Mining Contents Development for Web-based Education of Statistics Reliability Theory Statistical Image Analysis Advanced Statistical Programming Language Monte Carlo Method and Statistical Computation Advanced Categorical Data Analysis Advanced Statistical Methods in Biometry Statistical Methods for Geo-sciences Advanced Statistical Consulting and Practice

(Bayesian Statistics(MCMC), Mathematical Biology, Environmental Ecology Statistics) • Myung-Whan Na, Ph.D. [Professor, nmh@jnu.ac.kr] (Reliability Theory, Statistical Quality Control, Probabilistic Finite Element Method, Probabilistic Safety Assessment) • Eun-Sik Park, Ph.D. [Professor, espark02@jnu.ac.kr] (Longitudinal/Categorical Data Analysis, Statistical Methods in Medical Research, Clinical Trials, Bioinformatics) • Min-Soo Kim, Ph.D. [Professor, kimms@jnu.ac.kr] (Multivariate Analysis, Image Partition or Searching, Financial Statistics)

• CHI TIM NG, Ph.D. [Associate Professor, easterlyng@jnu.ac.kr] (Time series analysis, Penalized likelihood methods, Composite likelihood methods, Stochastic calculus, Option pricing theory)

• Jae-sik Jeong, Ph.D. [Associate Professor, jjs3098@jnu.ac.kr]

# Laboratories

Study Rooms Pattern Recognition and Image Processing Lab Quality Control and Reliability Lab Applied Statistics Lab (Bioinformatics (Metabolomics, Genomics), Biostatistics (clinical trials), Bayesian analysis)

• Bong-Gyun Ko, Ph.D. [Assistant Professor, bonggyun.ko@jnu.ac.kr] interpretative public intelligence

Bayesian Statistics Lab Experimental Design Lab Discrimination Analysis Lab

The Statistics Library is filled numerous statistics and computer science books and relevant outstanding papers. The Computing Lab houses computers with programs such as SAS, SPSS, S-PLUS, Minitab, and MATLAB. Physics

<u>Contact Information</u> Phone: +82-62-530-3350 Fax: +82-62-530-3369 URL: physics.jnu.ac.kr/

## **Graduate Studies in Physics**

Physics is the most basic science to understand how and why things in the universe work, to discover the fundamental laws of nature. The graduate program in Physics aims to research all natural phenomena and laws of nature, to develop wide applications in other natural sciences, engineering, medical science, agricultural science, and social science, and to source all high technologies.

- The Department of Physics offers programs of study for B.S., M.S., and Ph.D. degrees. The Department is composed of 17 faculty members and 18 graduate students. Our research ranges from fundamental topics such as elementary particle physics and cosmology to applied areas such as material physics and optics. The graduate curriculum in the department of physics provides the background and training required to conduct high quality worldwide research.

• Research areas: Optics, Condensed Matter Physics, High Energy Physics

## Degree Requirements

The graduate program in Physics focuses on the fields of condensed matter physics, optics, and high energy physics in both education and research. After completing the required courses in classical mechanics, electromagnetism, quantum mechanics, and statistical mechanics, students are expected to choose a thesis advisor to start their own research and thesis program.

Master's degree candidates are required to earn 9 credits from required courses(Quantum Mechanics I, Classical Electromagnetism I) and choose 1 between Classical Mechanics I and Statistical Mechanics I), 9 credits from electives. 6 credits can be earned from non-physics courses.

Ph.D. candidates are required to earn 6 credits from required courses (Quantum Mechanics II and Classical Electromagnetism II), 30 credits from electives and 24 credits from non-physics courses.

Classical Mechanics I (3)	Mathematical Physics II (3)
Classical Mechanics II (3)	Spectroscopy (3)
Classical Electromagnetism I (3)	Research for Master's or Doctoral Degree I (1)
Classical Electromagnetism II (3)	Integrated Optics I (3)
Quantum Mechanics I (3)	Optical Design (3)
Quantum Mechanics II (3)	Diffraction Theory of Optical Imagine (3)
Statistical Mechanics I (3)	Many Body Physics (3)
Statistical Mechanics II (3)	Topics on Equilibrium Statistical Physics I (3)
Mathematical Physics I (3)	Topics on Equilibrium Statistical Physics II (3)

Topics on Non-equilibrium Statistical Physics I (3) Topics on Non-equilibrium Statistical Physics II (3) Quantum Field Theory I (3) Quantum Field Theory II (3) High Energy Physics I (3) High Energy Physics Ⅱ (3) Topics on High Energy Physics I (3) Topics on High Energy Physics II (3) Research for Master's or Doctoral Degree II (1) Solid State Physics I (3) Solid State Physics II (3) Topics on Solid State Physics I (3) Topics on Solid State Physics II (3) Solid State Physics Laboratory I (3) Solid State Physics Laboratory II (3) Quantum Theory of Solids I (3) Quantum Theory of Solids II (3) Integrated Optics I (3) Cosmic Ray Physics (3) The Theory of Relativity (3) Nuclear Physics I (3) Nuclear Physics II (3)

#### Professors

- Kie Gon Im, Ph.D.
   [Professor, Laser Optics, kgim@jnu.ac.kr]
- Kang Seog Lee, Ph.D. [Professor, Nuclear Theory, kslee@jnu.ac.kr]
- Chang Sub Kim, Ph.D.
   [Professor, Condensed Matter Theory, cskim@jnu.ac.kr]
- Sun Hyun Youn, Ph.D.
   [Professor, Quantum Optics and Nonlinear Optics Experiments, sunyoun@jnu.ac.kr]
- En Jin Cho, Ph.D.

Advanced Nuclear Physics I (3) Advanced Nuclear Physics II (3) Nuclear Structure Theory (3) High Energy Physics Laboratory I (3) High Energy Physics Laboratory II (3) Applied Optics I (3) Applied Optics II (3) Advanced Topics on Optics I (3) Advanced Topics on Optics II (3) Quantum Optics I (3) Quantum Optics II (3) Applied Optics Experiments I (3) Applied Optics Experiments [] (3) Laser Physics I (3) Laser Physics II (3) Special Topics in Advanced Physics I (3) Special Topics in Advanced Physics II (3) Special Topics in Advanced Physics Ⅲ (3) Special Topics in Advanced Physics  $\mathbb{N}$  (3) Special Topics in Advanced Physics V (3) Special Topics in Advanced Physics VI (3) Physics of Magnetic Materials (3) Mesoscopic Physics (3) Introduction to Quantum Information Science (3)

[Professor, Condensed Matter Experiments, ejcho@jnu.ac.kr]

- Ki Cheon Kang, Ph.D.
   [Professor, Mesoscopic Physics, kckang@jnu.ac.kr]
- Sang Wan Ryu, Ph.D. [Professor, Nano-Photonics, sangwan@jnu.ac.kr]
- In Kag Hwang, Ph.D [Professor, Nano Optics, ikhwang@jnu.ac.kr]
- Han Jin Noh, Ph.D. [Professor, Condensed Matter Experiments,

ffnhj@jnu.ac.kr]

- Kyung Kwang Joo, Ph.D.
   [Professor, High Energy Experiments, kkjoo@jnu.ac.kr]
- Jae Sik Lee, Ph.D.
   [Professor, Elementary Particle Physics Theory, jslee@jnu.ac.kr]
- Ha Sul Kim, Ph.D.
   [Associate Professor, Optical Science & III-V Semiconductor, hydenkim@jnu.ac.kr]
- Joong Wook Lee, Ph.D.

[Associate Professor, Terahertz Photonics & Plasmonics, leejujc@jnu.ac.kr]
Dong ho Moon, Ph.D.
[Associate Professor, High Energy Experiments,

- dhmoon@jnu.ac.kr ]Geol Moon, Ph.D.[Assistant Professor, Atom Optics Experiments,
- cnuapi@jnu.ac.kr ]
  SoongGeun Je, Ph.D.
  [Assistant Professor, Condensed Matter Experiments, sgje@jnu.ac.kr ]

#### Laboratories

#### **Optics Lab**

Research is conducted by Kie Gon Im, Sun Hyun Youn, Heung Ryoul Noh, In Kag Hwang, and Joong Wook Lee. Areas of interest include:

- Applied Optics
- Fiber Optics
- Integrated Optics
- Quantum Optics
- Atom Optics
- Terahertz Photonics & Plasmonics

#### **Condensed Matter Physics**

Research is conducted by Jeong Ju Woo, En Jin Cho, Sang Wan Ryu, Han Jin Noh, Ha Sul Kim, Chang Sub Kim, Yun Kyu Bang, and Ki Cheon Kang, SoongGeun Je.

Research is carried out in the fundamentals of condensed matter physics, semiconductor physics, IT and nanotechnology. Areas of interest include:

- Solid State Physics
- Semiconductor Physics
- Applied Physics
- Nano Physics
- Optical Science & III-V Semiconductor

#### High Energy Physics Lab

Research in nuclear and particle physics is conducted by Kyung Kwang Joo, Dong ho Moon, Jae Sik Lee, and Kang Seog Lee. Research interests include the study of the ultimate constituent of matter.

# Chemistry

\_\_\_Contact Information Tel: +82-62-530-3370 Fax: +82-62-530-3389 URL: http://chem.jnu.ac.kr/

#### Graduate Studies in Chemistry

Chemists analyze, synthesize, quantitate, and design materials. They relish creating models and theories that can rationalize what happens in the laboratory. They enjoy discussing experiments and ideas with each other as well as with physicists, biologists, computer scientists, and with experts in electronics and material science. The study of chemistry prepares individuals for obvious real-life jobs in the chemical industry, education, and other related fields. More fundamentally, the department helps students to develop the ability to solve problems and to think critically. These latter skills will be more valuable to students than any specific facts, theories, and techniques they will master in the classroom. The Department is committed to providing students with a first-class education.

#### Degree Requirements

All students are assigned a research advisor and a research group. The first year is spent developing a research idea, while later years are spent conducting lab research and composing a Ph.D. thesis.

Most students earn 36 credits during their first 2 years. The Department's committee selects courses necessary for students to meet academic requirements.

A qualifying exam is required after successful completion of coursework. All students are required to prepare and present a research plan, including an outline of a proposal and identification of research direction. Upon completion of course requirements and passing required exams and submitting a research plan, students will become eligible for Ph.D. candidacy.

#### What Do You Study?

Special Research in Analytical Chemistry II and	Seminar (3)
Seminar (3)	Special Research in Organic Chemistry II and
Molecular Orbital Theory (3)	Seminar (3)
Physiological Chemistry (3)	Electrochemistry (3)
Special Topics in Biochemistry 1 (3)	Transition Metal Chemistry (3)
Special Topics in Biochemistry 2 (3)	Stereochemistry (3)
Quantum Chemistry (3)	Electro-analytical Chemistry (3)
Organometallic Chemistry (3)	Electronics (3)
Organic Reaction Mechanism (3)	Liquid Theory (3)
Organic Synthesis (3)	Natural Product Chemistry (3)
Special Topics in Organic Chemistry I (3)	Catalytic Chemistry (3)
Special Topics in Organic Chemistry II (3)	Statistical Thermodynamics (3)
Special Research in Organic Chemistry I and	Nucleic Acid Chemistry (3)

Heterocyclic Chemistry (3) Chemical Binding Theory (3) Chemical Kinetics (3) Special Topics in Environmental Analysis (3) Enzyme Chemistry (3)

#### Professors

- Hyoung-Ryun Park, Ph.D.
   [Professor, Inorganic Chemistry, hrpark@jnu.ac.kr]
- Kye-Chun Nam, Ph.D.
   [Professor, Organic Chemistry, kcnam@jnu.ac.kr]
- Seong-Keun Kook, Ph.D.
   [Professor, Physical Chemistry, skkook@jnu.ac.kr]
- Seung-Won Jeon, Ph.D.
   [Professor, Analytical Chemistry, swjeon@jnu.ac.kr]
- Jae-Nyoung Kim, Ph.D. [Professor, Organic Chemistry, kimjn@jnu.ac.kr]
- Jong-Hoon Oh, Ph.D.
   [Professor, Organic Chemistry, jnoh@jnu.ac.kr]
- Che-Hun Jung, Ph.D. [Professor, Biochemistry, jungch@jnu.ac.kr]
- Sun-Woo Lee, Ph.D.
   [Professor, Organic Chemistry, sunwoo@jnu.ac.kr]
- Jeong-Sun Kim, Ph.D. [Professor, Biochemistry, jsunkim@jnu.ac.kr]

Organo Transition Metallic Chemistry (3) Bioinformatics (3) X-ray Crystallography (3) Chemistry of Nanomaterials (3) Supramolecular Chemistry (3)

- Hyun-Dam Jeong, Ph.D.
   [Associate Professor, Physical Chemistry, hdjeong@jnu.ac.kr]
- Hyun-Chul Choi, Ph.D.
   [Associate Professor, Analytical Chemistry, chc12@jnu.ac.kr]
- Jun-seong Lee, Ph.D.
   [Associate Professor, Inorganic Chemistry, leespy@jnu.ac.kr]
- Cheol-Won Lee, Ph.D. [Assistant Professor, Biochemistry, cwlee@jnu.ac.kr]
- Sung Cho, Ph.D.
   [Assistant Professor, Physical Chemistry, scho@jnu.ac.kr]
- Jimin Kim, Ph.D. [Assistant Professor, Organic Chemistry, jiminkim@jnu.ac.kr]
- Kyungsu Na, Ph.D. [Assistant Professor, Physical Chemistry, kyungsu\_na@jnu.ac.kr]
- Hyungseob Lim, Ph.D. [Assistant Professor, Inorganic Chemistry, hslim17@jnu.ac.kr]

#### Laboratories

#### Faculty Members by Research Area

- Physical Chemistry
  - Seong-Keun Kook
  - Hyun-Dam Jeong

- Sung Cho
- Kyungsu Na
- Analytical Chemistry
  - Seung-Won Jeon

- Hyun-Chul Choi
- Inorganic Chemistry
  - Hyoung-Ryun Park
  - Jun-seong Lee
  - Hyungseob Lim
- Organic Chemistry
  - Kye-chun Nam
  - Jae Nyoung Kim

#### Research Instruments Lab

- Jong-hoon Oh
- Sun-woo Lee
- Jimin Kim,
- Biochemistry
- Che-Hoon Jung
- Jeong-Sun Kim
- Cheol-Won Lee

Advanced instrumentation is an essential com- nent of Departmental research. The Department and individual research groups collectively maintain research instruments (hardware and software) that are constantly being updated.

Major Department equipment available to research faculty members and students include the following: NMR 500MHz, NMR 300MHz, Nd: YAG Laser, LC (HPLC), GC, IR, TGA, UVo Vis - computational resources Linux PC Clusters (8nodes) - running Gaussian 98, NWChem.

Linux PC Severs - running Gaussian 98, NWChem. Various Workstations (Alpha and SGI machines) - running Gaussian 98, NWChem. - University research facilities and Research Center Chonnam National University sponsors a large number of specialized centers of research and campus-wide research facilities. Two centers that many members of the Facilities Department frequently use are the Laboratories Building Equipment Management Center and Korea Basic Science Institute.

Department of Geological and Environmental Sciences \_\_\_*Contact Information* Phone: +82-62-530-3450 Fax: +82-62-530-3459 URL: http://geology.jnu.ac.kr

#### Graduate Studies in Geological and Environmental Sciences

The department of geological and environmental sciences provides an outstanding environment for studies of the Earth and various environmental problems. The department seeks to understand the fundamental processes defining the origin, evolution, and current state of Earth systems and to use this understanding to predict future states and to solve environmental problems. The Department is composed of three major research areas as follows:

1) Pure/Basic Geology: conducting broad investigations on rocks, minerals, and fossils of past and present geological environments and predicting the future.

2) Applied Geology: geological and seismological studies of practical issues related with the geological stability of a critical structure, such as a nuclear power plant or nuclear waste disposal.

3) Environmental Geology: practical application of the principles of geology in solving environmental problems, such as soil and ground water contaminations and their remediation.

The specific research encompasses igneous/metamorphic petrology, economic mineral deposits, paleontology, sedimentary environments, environmental hydrogeology, biogeochemistry, geophysics and geodynamics. The Department's programs include interdisciplinary research and teaching that bring the unique perspective of geology to scientific problems at diverse spatial and temporal scales. The Department currently has 8 faculty members.

In recognition of the revolutionary changes in geology, the Department recruited a new faculty member in a relatively new area: computational geodynamics studying the evolution of subduction and mantle convection using computational modeling. Currently, the Department has 23 graduate students; 140 undergraduate students are majoring in geology.

The Department's programs offer courses leading to Bachelor's, Master's, and Doctoral degrees in geology. The Department's faculty members, graduate students, and undergraduate students are involved in field, laboratory, experimental, and modeling studies to solve geological and environmental problems. The graduate programs are designed to train geology students beyond the bachelor's degree for professional employment or for advanced research. To be admitted into the graduate program, applicants must have a bachelor's degree in geology or an applied science, as determined by the department's graduate committee.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits in addition to 1 research credit. Ph.D. candidates are required to earn an additional 36 credits plus 1 research credit.

#### What Do You Study?

Advanced Lecture of Earth Environmental Science I (3) Advanced Lecture of Earth Environmental Science II (3) Advanced Metamorphic Petrology (3) Advanced Field Geology (3) Advanced Geology (3) Geological Survey and Study (3) Advanced Petrology (3) Circum Pacific Geology (3) Study of Mineral Analysis (3) Advanced Mineral Exploration (3) Environments of Economic Geology (3) Hydrothermal Ore Genesis (3) Advance of Soil Mineralogy (3) Ore Deposits of Korea (3) Advanced Geophysics (3) Advanced Seismology (3) Practice on Seismology 1 (3) Practice on Seismology 2 (3) Seminar on Geophysics I (3) Seminar on Geophysics II (3) Gem Mineralogy (3) Medical Mineralogy (3) Special Lectures on Seismology (3) Ichnology (3) Advanced Mineral Exploration Advanced Vertebrate Paleontology (3) Seminar in Tidal-Flat Sedimentology (3) Special Topics on Geophysical Fluid Dynamics (3) Advanced Paleontology (3) Seminar on Paleoenvironment (3) Advanced Micropaleontology (3) Biostratigraphy (3) Earth History and Evolution (3)

#### Professors

• Sang-Eun Shin, Ph.D. [Professor, Mineralogy and Economic Non-clastic Sedimentology (3) Principles and Topics in Sedimentology I (3) Principles and Topics in Sedimentology II (3) Sedimentary Basin Analysis (3) Clastic Sedimentology (3) Sedimentology of Coastal Environments (3) Evolution of Depositional Environments (3) Seminar in Earth Environmental Science I (3) Seminar in Earth Environmental Science II (3) Vertebrate Paleontology (3) Geotectonics (3) Precambrian Geology (3) Advanced Mineralogical Petrology (3) Petrogenesis of the Metamorphic Rocks (3) Advanced Hydrogeology (3) Advanced Contaminant Hydrogeology (3) Groundwater and Transport Modeling (3) Fractured Rock Hydrogeology (3) Aquifer Hydraulics (3) Groundwater Remediation (3) Numerical Analysis and Programing for Hydrogeology (3) Geo-microbiology (3) Environmental Mineralogy (3) Advanced Environmental Geology (3) Advanced Environmental Soil Science (3) Environmental Geo-microbiology (3) Seismological Data Processing (3) Geodynamics (3) Advanced Geodynamics(3) Deodynamic Modeling (3) Subduction Zone Geology (3) Mantle Geology (3)

Advanced Plate Tectonics (3)

Mineral Deposits, sesshin@jnu.ac.kr]

- Min Huh, Ph.D.
   [Professor, Paleontology, minhuh@jnu.ac.kr]
- Seung-Soo Chun, Ph.D.
   [Professor, Sedimentary Environments, sschun@jnu.ac.kr]
- In-Wook Yeo, Ph.D.
   [Professor, Environmental Hydrogeology, iwyeo@jnu.ac.kr]

#### Laboratories

# Mineralogy and Economic Mineral Deposits

(Adviser: Prof. Sang-Eun Shin) Mineralogical study of rocks and ores, and geochemical prospects of economic mineral deposits are an important subject of the Mineralogy and Economic Mineral Deposits group.

Research Interests and Current Projects:

- Study on formation process and exploration of economic mineral resources
- Mineralogical study for gem synthesis and jewelry appraisal
- Clay and non-metal mineral deposit program

#### Paleontology Lab

#### (Advisor: Prof. Min Huh)

Paleontology is the study of prehistoric animals and plants which remain or other indications that are found in sedimentary rocks. It is the branch of geology which aims to interpret the record of events in the earth's history, past geography, paleoclimate and paleoenvironments. The Paleontology Lab is currently interested in the research on dinosaur and pterobrur fossils including footprints, eggs, bones from the Cretaceous deposits, and the ostracoda.

• Research Interests and Current Projects:

- Paleontologic study on the life of past geological

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- Dong-Hoon Sheen, Ph.D.
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- Donghoon Seoung, PhD.
   [Assistant Professor, Earth Materials Science, dseoung@jnu.ac.kr]

times

- Paleoenvironments, paleogeography, paleoclimatology, paleoecology
- Fossil excavation and its scientific preparation and conservation
- Geological investigation of buried cultural properties

#### Sedimentary Environments Lab

(Advisor: Prof. Seung–Soo Chun) This Lab is focused on teaching and research on sedimentary processes, characteristics of depositional environments, and evolution models in recent and/or ancient sedimentary basins, especially in Cretaceous non-marine basins, present macro and meso-tidal flats and Quaternary sequences (beach, dune, delta and lagoon) based on outcrop study, various core workings, petrographic study, seismic interpretation, GPR interpretation, and ichnological works.

- Research Interests and Current Projects:
  - Development of depositional and evolution models of macrotidal tidal-flat settings in the western coast of Korea
  - Hydrodynamic interpretation of primary sedimentary structures
  - Ichnology itself and its application to the interpretation of depositional environments and

sequence stratigraphy

- Dynamic classification of coastal environments and depositional models, and its application to coastal management
- GPR data acquisition, processing and interpretation in sedimentary bodies
- Basin analysis and basin tectonic setting

#### **Environmental Hydrogeology**

(Advisor: Prof. In-Wook Yeo)

Hydrogeology deals with the occurrence, movement, and quality of water in porous media. The Environmental Hydrogeology group is involved in a diverse spectrum of research in hydrogeology, with a strong program in fractured rock hydrogeology. In their research, faculty members and students in the Hydrogeology group use theoretical analyses, groundwater flow and contaminant transport modelings, hydrogeological field data analyses, and laboratory experiments.

#### Research Interests and Current Projects:

- Groundwater flow analysis in rock fractures and its modeling
- Discontinuity network analysis and its 3-D realization
- DNAPL migration and remediation in rock fractures
- Bacterial transport in rock fractures
- Reactive transport modeling of heavy metals and NAPLs

#### Soil Environment and Biogeochemistry

Biogeochemistry is the study of biological

(Adviser: Prof. Yul Roh)

#### Earth Materials Science Lab.

(Advisor: Prof. Donghoon Seoung) The Earth Materials Science Laboratory is a research laboratory that focuses on the role of Earth materials in (1) mineralogical processes on the crust, mantle, and deep inside core and, (2) processing of these materials to derive novel use and functionality, and controls on the chemistry of the Earth's environment and mineral formation. Biogeochemistry has been vital to the study of the Earth, and has resulted in the findings of many environmental/industrial applications such as the remediation of contaminated soil and groundwater and the microbially-induced synthesis of nanomaterials.

#### Research Interests and Current Projects:

- Characterization and remediation of contaminated soils
- Naturally accelerated bioremediation of contaminated soils and groundwater
- Microbially induced synthesis of nanoo materials
- Assessment and characterization of nuclear power plants and nuclear waste disposal sites

#### Seismology & Geophysics Lab

(Advisor: Prof. Dong-Hoon Sheen) Geophysics is the study of the Earth using quantitative physical methods. This group focuses especially on seismology, which is useful to study the structure of the Earth and also to reduce potential earthquake hazards. Recently, microseism, seismic source parameter estimation and earthquake early warning are main research topics.

- Research Interests and Current Projects:
- Generation and propagation characteristics of microseism
- Seismic source parameter estimation
- Development of various magnitude relationships for earthquakes around South Korea
- Development of earthquake early warning system in South Korea

(3) crystallographic access to atomic scale changes under various thermodynamic conditions.

- Research Interests and Current Projects:
- Mineralogical investigation under extreme conditions (High-pressures and temperatures) using Diamond-anvil-cells (DACs) via synchrotron

radiation lightsources and laser-induced shock waves

- Crystallographic access to changes of the materials in atomic scale ranges
- Fixation and sequestration of CO2, H2, and

radioactive nuclides using microporous materials (MOFs, ZIFs, COFs, and Zeolites)

- Development of 2D/3D functional materials (interstratified/porous materials)

## Oceanography

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#### Graduate Studies in Oceanography

The Department of Oceanography has 9 full-time faculty members and several part-time lecturers engaged in teaching and research at the graduate and undergraduate levels. The Department conducts interdisciplinary research in coastal marine environments, maintains advanced laboratories, seeks public and private research funds, and recruits and retains qualified faculty, staff, and students. It provides an effective learning environment for students who are interested in careers in marine science or related fields, and also for students who are interested in science-based management of contaminated and human-impacted coastal environments. Faculty research interests range from the ecology of phytoplankton, macro-alga zooplankton and nekton to the biogeochemical cycle of elements and numerical modeling of coastal processes. Graduates from the Department of Oceanography hold many faculty positions in universities and colleges, as well as research positions in industry, private research institutions, national laboratories, and regulatory agencies.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits from various oceanography courses. They are also required to pass a foreign language exam and a qualifying exam, and submit a thesis.

Ph.D. candidates are required to earn an additional 36 credits from various oceanography courses. They are also required to pass a foreign language exam and a qualifying exam, and submit a thesis.

#### What Do You Study?

Advanced Deep-sea Geology (3) Advanced Fish Systematics (3) Advanced Littoral Sedimentary Environment (3) Circulation in Coastal Ocean (3) Environmental Assessment in Coastal Ocean I (3) Advanced Remote Sensing (3) Geophysical Fluid Dynamics (3) Advanced Ecology of Plankton (3) Special Topics on Benthic Ecology (3) Special Topics on Fish Ecology (3) Seminar in Marine Ecology I (3) Seminar in Marine Ecology II (3) Marine Ecological Studies (3) Advanced Wave Dynamics (3) Advanced Ocean Currents (3) Advanced Tides (3) Ocean Turbulence (3) Advanced Dynamical Oceanography (3) Seminar in Chemical Oceanography (3) Advanced Seawater Analysis (3) Seminar in Marine Pollution (3) Advanced Carbonate Rock (3) Advanced Physical Oceanographic Exploration (3) Seminar in Physical Oceanography (3) Advanced Marine Biology (3) Advanced Clastic Sedimentary Rock (3) Shallow Water Tides (3) Advanced Seawater Analysis (3) Marine Community Ecology (3) Advanced Marine Meteorology (3)

#### Professors

- Joo-Yong Kim, Ph.D.
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- Seong-Sig Cha, Ph.D.
   [Professor, Fish Ecology,sscha@jnu.ac.kr]
- Hae-Lip Suh, Ph.D.
   [Professor, Planktology,suhhl@jnu.ac.kr]
- Kwang Young Kim, Ph.D. [Professor, Marine Ecology,kykim@jnu.ac.kr]
- Byeong-Gweon Lee, Ph.D. [Professor, Chemical Oceanography, blee@jnu.ac.kr]

#### Laboratories

#### Ichthyology Lab.

(Advisor: Prof. Seong-Sig Cha) Research is conducted on fish, ichthyology, biology, taxonomy, anatomy, evolution and life history, ecology, physiology, and stock management of fish.

#### Plankton Lab.

(Advisor: Prof. Hae-Lip Suh)

Advanced Microbial Ecology (3) Ecology of Marine Zooplankton (3) Ecology of Marine Phytoplankton (3) Numerical Modeling and Prediction I (3) Numerical Modeling and Prediction II (3) Marine Resource Management (3) Marine Zoo-benthic Ecology (3) Marine Phyto-benthic Ecology (3) Marine Natural Product Chemistry (3) Advanced Submarine Stratigraphy (3) Advanced Marine Geophysics (3) Advanced Marine Chemistry (3) Advanced Marine Geology I (3) Advanced Marine Geology II (3) Advanced Chemical Oceanography (3)

- Myung Gil Park, Ph.D.
   [Professor, Biological Oceanography, mpark@jnu.ac.kr]
- Jee-Hoon Jeong, Ph.D.
   [Associate Professor, Atmospheric Science, jjeehoon@jnu.ac.kr]
- Yoo-Geun Ham, Ph.D.
   [Associate Professor, Atmospheric Science, ygham@jnu.ac.kr]
- Byoung-Ju Choi, Ph.D.
   [Associate Professor, Physical Oceanography, bchoi@jnu.ac.kr]

This lab conducts studies on the classification and ecosystem of marine zooplankton. Also, we focus on the trophic ecology of zooplankton in the pelagic ecosystem. In particular, we analyzed prey and predator tissue for  $\sigma$ 13C and $\sigma$ 15N and used isotopic mixing models to provide estimates of the trophic dynamics in the East Sea (Sea of Japan).

Paleontology Lab.

(Advisor: Prof. Joo-Yong, Kim)

#### Ecological Impact in Coastal Zone Lab

(Advisor: Kwang-Young Kim) Research is conducted on photosynthetic and fouling processes of coastal zones, which represents an extremely contaminated region. An effort is made to understand how prevalent environmental parameters can influence the benthic population dynamic and community structures in the various habitats

#### Metal Ecology Tocisity Laboratory; MET

(Advisor: Prof. Byeong–Gweon Lee) Research in this lab focus on metal biogeochemistry aquatic environments. Research is conducted on chronic toxicological effects of metals to aquatic organisms, and evaluation of sedimentary quality criteria for metals.

#### Laboratory OF HAB Ecophysiology; LOHABE

(Advisor: Prof. Myung Gil Park)

Research is conducted on Planktonic members of most algal group known to harbor intercellular symbionts including viruses, bacteria, fungi, and protozoa.

#### **Climate Prediction Lab;CPL**

(Advisor: Prof. Jee-Hoon Jeong) This lab (CPL) conducts various studies on climate variabilities, climate change, and climate modeling. The accurate climate prediction over seasonal to interannual time-scale is a principal aim of the research.

#### Ocean & Climate Science Lab.

(Advisor: Prof. Yoo-Geun Ham) This lab conducts studies on sub-seasonal, interannual, and decadal climate variability over the tropics (e.g. El Nino, AMOC), climate change/sensitivity after the global warming, and the development of the initialization system including the data assimilation and the optimal perturbation method for sub-seasonal, seasonal to decadal prediction by using a global coupled climate model. To understand the physical mechanisms of the climate variability and the improvement of the seasonal predictability is the main aim of the research.

#### Physical Oceanography Lab.

(Advisor: Prof. Byoung-Ju Choi) To understand physical processes in the ocean, observation data such as temperature, salinity, currents and sea level are collected and analyzed in Physical Oceanography Laboratory. We also study ocean circulation using Numerical Models and Ocean Data Assimilation. Recently, regional ocean modeling systems (ROMS) for Northwestern Pacific Ocean, Yellow and East China Sea, Korea Strait, and East Sea have been used for real time ocean prediction and research. Biological Sciences and Biotechnology *Contact Information* Phone: +82-62-530-1035 Fax: +82-62-530-2199 E-mail: sbst@jnu.ac.kr URL: http://sbst.jnu.ac.kr

#### Graduate Studies in Biological Sciences and Biotechnology

Biological Sciences and Biotechnology is the field of study which explores the principles of life phenomena and applies the results of scientific research to high-tech industries. This is a field of cutting-edge technology which strives to promote the health and welfare of humankind, focusing on such diverse fields as medicine, health, pharmaceuticals, food, environment, agriculture and energy. It is a future-oriented industrial field that can create numerous high-value-added industries in the knowledge-based society of the 21st century.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits to graduate.

#### What Do You Study?

Advanced Mycology (3) Advanced Immunology (3) Advanced Microbial Systematics (3) Advanced Developmental Biology (3) Advanced Molecular Biology (3) Molecular Cell Biology (3) Advanced Molecular Genetics (3) Reproductive Endocrinology (3) Advanced Ecology (3) Advanced Cell Physiology (3) Advanced Plant Systematics (3) Special Topics in Plant Physiology (3) Advanced Plant Ecology (3) Advanced Phycology (3) Advanced Industrial Microbiology (3) Advanced Biostatistics (3) Infection & Immunity (3) Cell Signalling (3) Advanced Gene Regualation (3) Cellular and Molecular Immunology (3) **Bioinformatics** (3) Functional Genomics (3)

Developmental Genetics (3) Methods in Molecular Immunology (3) Methods in Molecular Biology (3) Reproductive Biology (3) Cell Culture Engineering (3) Aging & Cancer Biology (3) Artificial Evolution of Protein (3) Metabolic Disease (3) Metagenomics (3) Special Topics in Molecular Endocrinology (3) Molecular Physiology (3) Comparative Genomics (3) Special Topics in Physiology (3) Bioethics (3) Special Topics in Aquatic Biology (3) Special Topics in Plant Molecular Biology (3) Special Topics in Neurobiology (3) Enzyme and Proteomics (3) Advanced Biotechnology (3) Genomic Stability (3) Mechanobiology (3) Physiology of aging (3)

Seminar 1 (3)Seminar 2 (3) Seminar 3 (3) Plant Stress Physiology (3) Research and Communication1 (3) Research and Communication2 (3) Molecular medical sciences (3) Advanced molecular research (3) Research Guidance 1 Research Guidance 2 Research Guidance 3 Biomaterials (3) Molecular biotechnology and biological sciences capstone design1 (3) Molecular biotechnology and biological sciences capstone design2 (3) Bio big data and artificial intelligence (3) Plant Development (3)

#### Professors

#### Major of Biological Science / Major of Systems Biology

- SangJin Oh, Ph.D.
   [Professor, Microbial Genetics, sjo@jnu.ac.kr]
- SangYoung Chun, Ph.D.
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- Ho Zoon Chae, Ph.D.
   [Professor, Biochemistry, hzchae@jnu.ac.kr]
- Jaemog Soh, Ph.D. [Professor, Genetics, jaemsoh@gmail.com]
- Chul-Ho Yun, Ph.D.
   [Professor, Functional Proteomics, chyun@jnu.ac.kr]
- Hueng-Sik Choi, Ph.D.
   [Professor, Molecular Endocrinology, hsc@jnu.ac.kr]
- KeeSook Lee, Ph.D.

Bioimaging (3) Advanced Ecomimetics (3) Cancer Biology (3) Safety and intellectual property Management for Researchers (3) Bio-signal (3) longevity (3) Advanced Brain disease (3) Biomolecules and Regulation of Metabolism (3) Stem Cell Biology (3) Stress Biology (3) Advanced Plant Genetics (3) Physiologically Active Substances (3) Advanced Plant Biotechnology (3) Scientific Writing in Biomedical Science (3) Advanced systems biology (3) Advanced Omics (3) Advanced Toxicology (3)

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- [Professor, Molecular Neurogenetics, changgk@jnu.ac.kr]
- Hee-Sae Park, Ph.D.
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- Hyung Sik Kang, Ph.D. [Professor, Immunology, kanghs@jnu.ac.kr]
- YoungHee Joung, Ph.D.
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- Won-Seok Choi, Ph.D.
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- · Chungoo Park, Ph.D.

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• Geupil Jang, Ph.D. [Assistant Professor, Plant Developmental and

#### **Major of Biology**

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- Dong-Ha Nam Ph.D. [Associate Professor, Ecobiochemistry, dongha@jnu.ac.kr]
- Dong-Hyun Lee Ph.D. [Associate Professor, Genomic Stability, donghyunlee73@jnu.ac.kr]
- Eung-Sam Kim, Ph.D.
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#### Laboratories

#### Equipment

Phosphoimage analyzer, MALDI-TOF, Digital viscometer, Freeze-dryer system, Scintillation counter, Elisa analyzer, Protein purification system, Deep freezer, Spectrophotometer, Luminometer, Cryocut microtome, Gel documentation system, HPLC, FACS. Ultracentrifuge (table top), Micro- injection system, Automatic DNA sequencer, Akta FPLC



# M. Professional Graduate Schools



Graduate School of Business *Contact Information* Phone: +82-62-530-150

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#### Overview

The mission of the Graduate School of Business (GSB), established on March 1, 2007, is to nurture business leaders through practical, global, and an interdisciplinary-oriented education that meets international standards. The GSB offers Global MBA and K-MBA degrees operated on a 45-hour credit system in 4 semesters across 2 years. The program admits students with academic aptitude, regardless of work experience but an internship is required for those students with no work experience. In August 2010, the GSB launched a government supported Management of Technology (MOT) MBA program and the MOT program runs as its own track since 2017. In addition to the regular MBA programs, the school also offers Customized Executive MBA Programs designed to meet the specific needs of an industry or a firm. As a result of the school's effort to provide an education with a global orientation, the school had earned AACSB international accreditation in July 2012 and earned reaccreditation in April 2018. The GSB offers students not only knowledge and skills in corporate management and entrepreneurial enterprises, but also opportunities to deepen their understanding of Asian business culture through business field study tours to top business schools in Asia.

#### History

- Feb 1969 Established as the Graduate School of Business Administration
- Mar 1994 Launched Advanced Management Program
- Mar 2007 Transformed into the Graduate School of Business and launched MBA Program
- Apr 2010 Launched MOT MBA Program
- July 2012 Accredited AACSB
- Mar 2014 Selected KOICA-CNU by Korea International Cooperation
- Aug 2015 Launched KEPCO E<sup>3</sup> MBA Dual Degree Program(Customized Executive MBA Program) K-MBA
- Oct 2018 Launched Big data Management track
- Mar 2019 Concluded an MOU for MBA Dual Degree Program with University of Missouri-St. Louis

#### **Educational Goals**

- 1. Practical Management Education: Prepare students with practical capabilities through case studies requiring problem-solving and decision-making skills, project-based learning and internships.
- 2. Global Orientation: Provide students with opportunities to study abroad through academic exchanges and collaborative projects with leading MBA programs in Asia, Europe, and the USA. In addition, students will be provided with foreign language education, global experiences through interaction with international students, student exchange programs, and lectures by distinguished scholars in the field.
- 3. Interdisciplinary Training: Equip students with skills, knowledge, and leadership as well-rounded business managers in corporate management in such areas as finance, accounting, human resources and organization, marketing, production/operations, management information systems, and international business.

#### Curriculum

Global MBA and K-MBA curricula are composed of all electives. Students need only 45 credits for any subjects in either curriculum. During the second year, students can do the Capstone Project1 and 2 instead of in-person lectures, through which they compile their knowledge and field training experience during the MBA course. The Capstone projects are a form of self-study teams or alone. Such a systematic curriculum enables students to be fully equipped with the necessary knowledge, in-depth expertise, and comprehensive and practical perspectives essential to become qualified business leaders.

#### **Education System**

	Global MBA	K-MBA	
Degree offered	Master's degree	Master's degree	
Track		General, Finance Accounting, Big data Management,	
Irack	-	MOT(Management of Technology)	
Medium of instruction	English and Korean Korean		
Length of program	4 Semesters in 2 Years		

#### Degree Requirements

In order to obtain an MBA degree, students are required to complete 45 credit hours consisting of core courses and electives with a grade point average of B or above. Also, students need more than six months of work experience and an internship is required for those students with no work experience.

#### Professors

#### **Business Administration**

- Il Sang Ko, Ph.D.
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- Su-Jin Lee, Ph.D.
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- Myung-Sook Jun, Ph.D. [Associate Professor,Labor and Industrial Relation msjun@jnu.ac.kr]
- Sung-Il Jeon, Ph.D. [Professor, Financial Accounting, sijeon@jnu.ac.kr]

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Graduate School of Culture \_\_Contact Information Phone: +82-62-530-4062, 4079 Fax: +82-62-530-4069 URL:http:///website.jnu.ac.kr/user/indexMai n.action?siteId=culture

#### Graduate School of Culture

#### History

- Oct 2005 School of Culture at JNU authorized to open
- Mar 2006 First-year graduate students enrolled in the Programs of Theory and Planning of Cultural Art and Cultural Tourism
- Mar 2006 First Dean, Gwang Seo Park, inaugurated
- Mar 2007 Second Dean, Chul Lee, Ph.D., inaugurated
- June 2009 Third Dean, Eul Sik Sim, Ph.D., inaugurated
- Feb 2011 Fourth Dean, Hoi Seok Yang, Ph.D., inaugurated
- Feb 2013 Fifth Dean, Kang-Lae Lee, Ph.D., inaugurated
- Feb 2015 Sixth Dean, Ju Noh Lee, Ph.D., inaugurated
- Mar 2015 Students enrolled in the newly added Program of Media Art Engineering
- Feb 2017 Seventh Dean, Yang-Hyan Kim, Ph.D., inaugurated.
- Feb 2019 Eighth and Current Dean, Mu-Yong Lee, Ph.D., inaugurated.

#### Vision

To foster creative and competent cultural planners and educational specialists in the field of Korean culture.

To develop creative minds with the ability to identify the natural relationship between uniqueness and universality based on a comprehensive understanding of cultural diversity.

To nurture the ability to attract aesthetic or artistic factors from daily life and to commercialize them based on the knowledge of Korean cultural technology.

#### Staff

Position	University Classification	Name
Dean	Professor	Mu-Yong Lee, Ph.D.
Associate Dean	Professor	Shin Kyum Kang, Ph.D

#### **Faculty Members**

	Faculty					Staff		
	Professors	Associate Professors	Assistant Professors	Assistants	General Affairs	Maintenan ce	School Supporting Association	
No.	7	2		1			1	11

Entrance	Quota	for	Each	Department
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Departments	Theory and Planning of Cultural Art Cultural Management and Tourism Media Art Engineering	Total
Entrance Quota	30	30

#### Overview of Programs

The Graduate School of Culture was established in 2006 in order to nurture creative professionals working in the culture industry. The School's programs are aimed at teaching students the social and financial values of art and culture, and developing a long-term perspective on commercialization using the academic base of liberal arts studies. To achieve this goal, the School provides three programs: 1) Cultural Art Planning

- 2) Cultural Management and Tourism
- 3) Media Art Engineering

The Cultural Art Planning program is designed to educate talented planners able to produce creative cultural products based on knowledge of the humanities that encompass aesthetics, cultural studies, literature, ecology, philosophy, and sociology. The program aims to create cultural art theorists who have a clear grasp of current trends in global cultural project planning and policy. The program also aspires to enable professionals to communicate cultural and art products to the general public, and identify consumption and production practices.

The aim of the Cultural Management and Tourism Program is to train professionals in cultural management and tourism and create culture and place marketing experts who can conduct research and planning, and oversee management by uniting various professional fields in a creative and integrative way based on passion, knowledge, and executive ability.

"Culture, Tourism, and Place" are chosen as three key words of this program, and the two routes, the Cultural Tourism Strategist route and Place Marketing Strategist route, are available along with a 32-subject curriculum.

The Cultural Tourism Strategist route is designed to create tourism professionals equipped with comprehensive and unique abilities. This route empowers students to overcome the limits of mass tourism by identifying alternative industries such as ecotourism, social welfare tourism, sustainable tourism, and green tourism.

The Place Marketing Strategist route aims to produce experts in the fields of place marketing and spatial culture. Students are empowered to practice in the new paradigm of Place Studies including place identity, urban culture, cultural politics of space, and human communication and networking, from which identity and authenticity of region and place as grounds of daily life are derived. This route focuses on nurturing the ability to conduct creative, critical, and practical research, and devise plans related to urban and local cultural contents and brands.

The Media Art Engineering program focuses on creating quality media specialists who are armed with cultural sensibility and a sound view on society through a comprehensive understanding of video, animation, video games, web, design and digital media industries that are vital in the digital era.

#### Degree Requirements

To obtain the MA, a student must meet the following requirements:

- 1) 30 credit hours in the Graduate School of Culture and a minimum of 21 credit hours in the major.
- 2) Students need to demonstrate proficiency in one foreign language (English, Chinese, French, German,
- or Japanese) and pass a foreign language test recognized by their department.
- 3) submit a "Proposal for Thesis" under the supervision of his/her thesis supervisor.
- 4) submit and defend an acceptable thesis.

#### What Do You Study?

#### **Cultural Art Planning**

Public Art and Community Art(3) Culture & Community(3) Performing Arts Planning(3) International Exhibitions(3) Multicultural Studies(3) Cultural Planning in Urban Space(3) Seminar in Culture Aesthetics(3) Cultural Industry Seminar(3) Introduction to Culture Industry(3) Arts and Culture Education Workshop(3) Seminar in art and culture planning(3) Introduction to Culture and Arts Planning(3) Introduction to Cultural Policy(3) Cultural Contents Planning Workshop(3) Cultural Contents Theory(3) Cultural Contents and Storytelling(3) Museums and Cultural Complexes(3) Imagination and Culture(3) Sound and Global Imagination(3) Workshop for Minor-cultural Planning 1(3) Seminar for Minor-cultural Theories(3) Research on Minority Movement(3) Seminar on Visual Culture(3) Understanding of visual culture(3) Music Culture and Performance(3) Local Cultural Policy(3) Workshop for Creative planning(3) Introduction to art & cultural theories(3) Modern and Contemporary Art: History and Issues(3) Theories of Mass Culture(3) Media Aesthetics(3)

Seminar in Culture Planning(3) Research on cultural city(3)Culture Aesthetics(3) Seminar in Cultural Studies(3) Seminar in Art&Culture Education(3) Introduction to Art&Cultural Theories(3) Myth & Narrative(3) Image & Writing(3) Theories of Visual Communication(3) Project on GwangJu Cultural City(3) Cultural Semiotics & Practice in Cultural Contents(3) Seminal in Culture Producing(3) Research on Cultural Narrative(3) Methods for the study of culture(3) Culture & Photography(3) Seminar in Cultural Policy(3) Workshop For Cultural Policy(3) Seminar for MA(3) Study of Regional Cultures(3)

#### **Cultural Management and Tourism**

Emotion and Culture Marketing(3) Spatial Culture Design(3) Spatial Culture and Place Identity(3) Culture Politics of Space(3) Public Marketing(3) Audience Development Studies(3) Tourism and Culture(3) Tourism and Local Regeneration(3) Green Tourism Manual(3) Seminar in Urban Tourism Planning(3) Urban Cultural Policy(3) Theories of Urban Branding Management (3) Cultural Governance Research(3) Data Analysis in Cultural Management(3) Research Methodology in Cultural Management(3) Culture business Strategy and Leadership(3) Cultural Economics(3) Cultural Tourism Economics(3) Seminar in cultual Tourism planning & Design(3) Cultural Tourism Marketing Research(3) Cultural Tourists'Behaviors(3) Seminar on Cultural Tourism Studies(3) Cultural tourism Research Methodology(3) Seminar on Cultural Tourism Issues(3) Studies on Cultural Tourism Resources(3) Seminar in Cultural Tourism Policy(3) Cultural Tourism Contents Marketing(3) Arts & Cultural Management Studies(3) Consumer Behavior in Arts and Culture(3) Policy Studies in Promoting Arts & Culture(3) Culture and Welfare(3) Workshop for Culture Convergenced Tourism(3) Music Management(3) Seminar for MCT(3) Asia Culture Exchange Workshop(3) Asia Cultural Cities Workshop(3) Art Tourism Seminar(3) Leisure and Culture(3) Arts Organizations & Theater Management(3) Seminar in Place Marketing Strategy(3) Workshop for Place Marketing Strategy(3)

#### Media Art Engineering

Emotional Media Study(3) Game Analysis Study(3) Game Contents Development(3) Multimedia Contents Study(3) Mobile Contents Analysis and Study(3) Culture Technology Policy(3) Culture Technology Innovative Strategy(3) Music Video Fusion Seminar(3) Media Engineering Independent Project(3) Media Art Seminar(3) Media Art and Communication(3) Media Art Independent Project(3) Media Contents Independent Project(3) Media Paradigm and Trend Analysis(3) Strategy of Media Public Relation(3) Production of Broadcasting(3) Broadcast Contents Storytelling(3) Background Media Design(3) Book Media Project(3) Social Media Design Study(3) Visual Contents Seminar(3) Experiment Media Workshop(3) Interaction between Image and Music(3) Webpage Design Study(3) YouTube and Visual Video Contents(3) Music Contents Analysis and Study(3) Interactive Media Study(3) Creative Presentation Planning(3) Study on Cartoon and Animation(3) Creative Copy and Image Storytelling(3) Character Animation Analysis and Study(3) Computer Graphics Special Effects Study(3) Killer Contents Analysis and Study(3) Planning Portfolio(3) SNS Image and Video Planning(3)

#### Professors

#### **Administrators**

 Mu-Yong Lee, Ph.D.
 [Dean, Professor, Place Marketing/ Urban Culture Management, cult@jnu.ac.kr]

• Shin Kyum Kang, Ph.D.

[Associate Dean, Professor, Cultural Tourism Marketing/ Ecotourism, tourlab@jnu.ac.kr]

#### **Cultural Art Planning Program**

• Kyung-woon Jeong, Ph.D.

[Professor, Narratology, kw518@yahoo.co.kr]

- Kihyun Park, Ph.D.
   [Professor, Media Aesthetics/ Cultural Theory, dumal@jnu.ac.kr]
- Jina Kim, Ph.D.
   [Associate Professor, Art History/Cultural Studies/Exhibition Studies, jkart@jnu.ac.kr]
- Shihun Noh, Ph.D. [Associate Professor, Cultural Contents, shnoh@jnu.ac.kr]

#### Cultural Management and Tourism Program

 Mu-Yong Lee, Ph.D. [Professor, Place Marketing/ Festival Studies/Urban Culture Management, cult@jnu.ac.kr]

- Shin Kyum Kang, Ph.D. [Professor, Tourism (Cultural Tourism Marketing/ Ecotourism), tourlab@jnu.ac.kr]
  Chi-Ok Oh, Ph.D. [Associate Professor, Tourism Management/
- [Associate Professor, Tourism Management Tourism Economics, chiokoh@jnu.ac.kr] • InSul Kim, Ph.D.
- [Assistant Professor, Art Management/ Cultural Policies, snow@jnu.ac.kr]

#### Media Art Engineering Program

Kyoung-Soo Kim, Ph.D.
 [Professor, Multimedia Design, ks@jnu.ac.kr]

#### Cultural Convergence Research Institute (CCRI)

The Cultural Convergence Research Institute (CCRI) is designed to conduct various research and development projects to (re)define regional identity; to support regional culture & economic development; and to realize the universal values and ideals of human societies via the globalization of regional culture. CCRI also aims to increase the academic prestige of Jeonnam National University as a nation's leading research university. Currently, eight laboratories are operated by CCRI to serves diverse research activities.

# Law School

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#### The School in General

#### History

- 1953. 04. College of Liberal Arts, Department of Law, as part of the newly established Chonnam National University
- 1954. 02. Permitted to establish college of law (Dep't of Law & Dep't of Public Administration)
- 1955. 08. Department of public administration abolished. Renamed the Dep't of Law
- 1955. 12. Professor Se-Hoon Kee became the first Dean
- 1957. 03. Conferred law degrees for the first time (22)
- 1970. 12. Re-established Dep't of Public Administration (incoming class of 20)
- 1975. 11. Established Social Science Research Center in the college of law
- 1981. 04. Established legal clinic
- 1983. 03. Divided Dep't of Law into Dep't of Public Law and Dep't of Private Law
- 1985. 11. Transferred Social Science Research Center to the College of Social Science Established Institute for Law and Public Administration
- 1990. 06. Established Career Development Office
- 1995. 03. Merged Dep't of Public Law and Dep't of Private Law into one Dep't of Law
- 1995. 06. Established Computer Lab
- 1996. 07. Established Law Library
- 1997. 03. Established Language Lab
- 1999. 03. Merged Dep't of Law and Dep't of Public Administration into Law Major (total 230)
- 2001. 03. Adjusted the size of the incoming class (221)
- 2001. 09. Transferred the Institute for Law and Public Administration in the college of law to the Institute for Law and Public Administration of Chonnam National University
- 2005. 02. Entered into Academic Cooperation Agreement with Kobe University College of Law in Japan
- 2005. 04. Opened Prime Study Hall
- 2005. 12. Entered into Academic Cooperation Agreement with Remin University Law Center in China
- 2005. 12. Entered into Academic Cooperation Agreement with Yentai University College of Law in China
- 2006. 03. Merged with the Dep't of Public Administration at Yesu University (Class size 251)
- 2006. 06. Entered into Academic Cooperation Agreement with Qinghwa University College of Law in China
- 2007. 04. Entered into Academic Cooperation Agreement Hong Kong Chinses University Law School
- 2008. 01. Preliminary approval for law school
- 2008. 08. Officially approved to establish a law school for 120 students

- 2009. 03. Opened CNU Law School. Abolished College of Law, Transferred Dep't of Public Administration to College of Social Science.
- 2010. 02. Entered into Academic Cooperation Agreement with University of Kansas, School of Law in USA
- 2011. 03. Entered into Academic Cooperation Agreement with Keio University College of Law in Japan
- 2013. 01. Legal Clinic signed Business Agreement with GwangJu YMCA Consumer Center Legal Clinic signed Business Agreement with GwangJu Migrant Women Support Center
- 2014. 07. Legal Clinic signed Business Agreement with Social Economic Center of NGO Civic Foundation
- 2014. 08. Legal Clinic entered into Business Agreement with Gwangju Disability Rights Center
- 2015. 01. Legal Clinic signed Business Agreement with MultiCultural Family Support Center in Buk-Gu District, Gwangju
- 2016. 09. Legal Clinic signed Business Agreement with 'Lawyers for Public Interests'
- 2017. 01. Academic Cooperation Agreement with Gwangju Metropolitan Art Culture Group Legal Clinic signed Business Agreement with Buk-Gu Office, GwangJu Metropolitan City
- 2017. 04. Legal Clinic signed Business Agreement with Social Cooperatives SALLIM
- 2017. 06. Legal Clinic signed Business Agreement with Hwasun Neungju High School
- 2018. 03. Legal Clinic signed Business Agreement with Jeonnam Credit Guarantee Service

2018. 09. Entered into Academic Cooperation Agreement with Nankai University College of Law in China

#### Educational Goal

With values based on the spirits of Truth, Creation, and Dedication, the educational motto of CNU, the school's educational goal is to educate and cultivate world-class legal experts with special areas of expertise.

The school will equip its students with the required capability and knowledge to professionally handle complicated legal issues in order to provide quality legal service, while maintaining a deep understanding of humanity and society. Students educated by the school will emerge in this globalized world as the legal experts with:

- (1) solid ethical views;
- (2) sufficient legal knowledge and practical capability; and
- (3) strong sense of social solidarity.

#### Administrators

Title	Rank	Name
Dean	Professor	Soon-Suk, Kim
Assistant Dean for Academic Affairs	Professor	Sang-Kyun, Cho
Assistant Dean for Student Affairs	Associate Professor	Byung-Chun, Choi
Administrative Director	Governmental Official	Mi-Kyung, Choi

# Faculty

Classificat		Fac	ulty	Administra	tive Staffs		
ion	Professors	Associate Professors	Assistant Professors	Teaching Assistants	General	University Funded	Total
Numbers	26	11	2	3	3	4	49

### Enrollment

the master's course	the doctor's course
120	10

# Faculty Members

#### Professors

Name	Major
• Bong-Su Kim, LL.D.	[Associate Prof. Criminal Law, idi21@jnu.ac.kr]
• Song Kim , LL.D.	[Associate Prof. Civil Law, kimsong5@jnu.ac.kr]
• Soon-Suk Kim, LL.D.	[Professor, Commercial Law, soonskim@jnu.ac.kr]
• Yeon-Mi Kim, LL.D.	[Professor, Legal Philosophy, yeonmy@jnu.ac.kr]
• Jae-Seung Kim, J.D.	[Professor, Tax Law, kimjjss@jnu.ac.kr]
• Jae-Yoon, Kim, LL.D.	[Professor. Criminal Law, kimjy@jnu.ac.kr]
• Ji-Su Kim, LL.D.	[Professor, Legal History and philosophy Chinese Law, lotusbud@jnu.ac.kr]
• Tae-Bong Kim , LL.M.	[Professor, Civil Law, ktbong@jnu.ac.kr]
• Hyun-Chul Kim, LL.D.	[Professor, constitutional Law, hckim77@jnu.ac.kr]
• Hwa Kim, LL.D.	[Assistant Prof. Civil Law, hwakim@jnu.ac.kr]
• Chen-cheol Ryu, LL.D.	[Professor, Criminal Law, ccryu@jnu.ac.kr]
• Ki-Seok Moon, J.D.	[Professor, American Law, kmoon@jnu.ac.kr]
• Byung-Ro Min, LL.D.	[Professor, Constitutional Law, byungro@jnu.ac.kr]
• In-Ho Park , LL.M.	[Associate Prof. Commercial Law, ihpark12@jnu.ac.kr]
• Jong-Mi Park , LL.B.	[Associate Prof. Civil Law, pjm45646@jnu.ac.kr]

Name	Major
• Seung-Hyeon Seong, LL.D.	[Professor, Civil Law, gaius@jnu.ac.kr]
• Oh-Sik Song, LL.D.	[Professor, Civil Law, ohsik@jnu.ac.kr]
• Sung-Po An, LL.D.	[Professor, Commercial and Trust Law, sungpo@jnu.ac.kr]
• Jean Ahn, Ph.D.	[Professor, Human Right Law, jean7475@jnu.ac.kr]
• Ki-Ok Lee, Ph.D.	[Professor, Criminal Law, kolee@jnu.ac.kr]
• Soon-Uk Lee, LL.D.	[Assistant Prof. Criminal Law, soonuklee@jnu.ac.kr]
• Seng-Woo Lee, LL.D.	[Professor, Civil Law, sengwoo@jnu.ac.kr]
• Young-Moo Lee, MA(Administration)	[Professor, Administrative Law and Public law, shushanke@jnu.ac.kr]
• Joon-Min Lee, LL.M	[Associate Prof. Civil Law, juminlee@jnu.ac.kr]
• Hyun-Jai Lee, LL.M.	[Professor, Civil Law, woomoon@jnu.ac.kr]
• Byung-Seok Lim, LL.B.	[Associate Prof. Civil Law, bslim11@jnu.ac.kr]
• Shin Chang, LL.D.	[Professor, International Law, schang@jnu.ac.kr]
• Yoon-Soon Jang, LL.B.	[Associate Prof. Economic Law, yunsoon1021@jnu.ac.kr]
• Hoon Jeong, LL.D.	[Professor, Administrative Law and Environmental Law, jh8341@jnu.ac.kr]
• Sang-Kyun Cho, LL.D.	[Professor, Labor Law, skcho@jnu.ac.kr]
• Seon-Ja Cha, LL.D.	[Professor, Law and Women, seonja@jnu.ac.kr]
• Kwang-Sun Choi, LL.D.	[Associate Prof. Civil Law, choiks@jnu.ac.kr]
• Byung-Chun Choi, LL.D.	[Associate Prof. Criminal Law, bcchoi88@gmail.com]
• Hye-Sun Choi, LL.M.	[Associate Prof. International trade Law, chs45647@jnu.ac.kr]
• Hwan-Ju Choi, LL.D.	[Professor, Civil Proceduce, chju5@korea.com]
• In-Seon Ham, LL.D.	[Professor, Administrative Law, isham@jnu.ac.kr]
• Wan-Jung Heo, LL.D.	[Professor, constitutional Law, hanjunior@jnu.ac.kr]
• Kwan-Pyo Hong, LL.B.	[Associate Prof. Human Right, feder@jnu.ac.kr]
• Eugene Kwadwo Mensah	[Professor, International and Human Rights Law, 0298em@jnu.ac.kr]

#### Curriculum

Mandatory Courses Legal Research (1) Property (3) Civil Procedure 1 (3) Basic Theories in Administrative Law (3) Corporate Law (3) Legal Writing (1) Contracts (3) Criminal Procedure (3) The Constitutional Law 2 (3) Legal Ethics (2) Externship (1) Moot Court (1) Criminal Law 2 (3) Obligations (3) Electives Legal English (2) Legal Philosophy (3) Torts (3) Civil Procedure 2 (3) The Constitutional Law 1 (3) General Principles of Commercial Law (3) Taxation (3) International Law (3) Anti-Discrimination Law (3) History of Human Rights Development (3) Environmental Law (3) Labor Organizations (3) History of Legal Philosophy (3) Trends in Civil Cases (3) Criminal Cases (3) Case Study of Commercial Law (3) Insurance Law (3) Corporate Management and Taxation (3) International Commerce Law (3) International Arbitration Law & Practice (2) Human Rights and Minorities (2) Human Rights and Koreans Overseas (2) American Private Law(2) The UN and the rights of the child (2) Victims of Crime and Human Rights (2) Cases and Doctrine of International Transaction Law (3)Human Rights Policy System and Practice (2) Chinese Law (2) Law and Society (2) Corporate Accounting Law & Practice (2)

Obligations (3) Family Law (3) Laws of Administrative Remedies (3) Intellectual Property Law (3) Competition Law (3) International Trades and Law (3) Labor Contracts (3) Legal Methods (3) Spirits of Traditional Laws (3) Real Property Law (3) Criminal Policies (3) Corporate Governance (3) Securities Law (3) Patent Law (3) International Organizations (3) Women and Human Rights (3) Chinese Business Law & Practice (2) American Public Law (2) Law and Women (2) Western Legal History (3) International Human Rights (2) Law and Political Process (3) Laws Governing Government Officials (3) Case Study of Civil Procedure (3) Practice in Civil Enforcement and Attachment (3) Practice of Public Briefing and Writing (3) Environmental Litigation Practice (3) Negotiation (2) Modern Contracts (2) Life Science Ethics and Medical Criminal Law (2) Information Society and Law (2) Education Law (2) Trusts (2) Trust & Estate(2) FTA & ISD(2) Science and Human Rights (2) American Civil Procedure Rules & Practice (2) American Criminal Law & Procedure (2) American Securities Law (2) Japanese Law (2) EU Law (2) Practice of Civil Briefing and Writing (3) Cyber Space and Law(2) Seminar in Integrated Business Litigation (2) Intellectual Property Law Seminar (2) Public Interests and Human Rights Clinic (2) Assessment and Reconciliation of Past and

- Law (2) Seminar in Consumer Law (2) Criminology (2) Constitutional Procedure (3) Cases in Criminal Procedure (3) Local Government Law (3) Human Rights and Social Welfare (3) Family Law Practice (3) Criminal Law Practice (3) Criminal Law Practice (3) Labor Dispute Practice (3) Financing Collateral Law (2) Economic Crimes and Law (2)
- Law of Corporate Restructuring (2) Financial Market Law (2) The Law of Business Enterprises (2) Transnational M&A (2) The Law of Contracts in America (2) German Law (2) Japanese Private Law (2) Legal Clinic (2) Case Study of Criminal Law and Procedure (3) Practice of Criminal Briefing and Writing (3) Law and Economics (2) Forensic Medicine (2)



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#### School of Dentistry

The CNU School of Dentistry has grown rapidly since its establishment in 1980. By 2019, the School has seen graduates totaling 2,516 students with D.D.S degrees, and 1,035 students with M.S.D or Ph.D. degrees.

The School of Dentistry has secured ultra-modern facilities required for research, education, and clinical practice. The main school building is located at the Yongbong campus, and accommodates ample facilities for lectures and clinical practice. A comprehensive Dental Care Center for students dental practice is also now fully operational. The second building is also located at the Yongbong campus and is equipped with cutting-edge experimental facilities and equipment for fundamental research for dental science.

The School of Dentistry consists of excellent faculty members and brilliant students. The school's faculty members ranked among the highest nationally in securing research funds. The research capacity of the faculty members is respectfully recognized by the dental research community. The faculty members work hard to make CNU School of Dentistry one of the best in the nation, and strive to be recognized internationally as well.

Recently, the academic system of the School of Dentistry was reorganized into a Professional Graduate School of Dental Science for the purpose of producing more qualified dental professionals. The reorganization, in part, involved the transformation of the existing academic system of two years of Pre-Dental Studies and an additional four years of Dental Studies into a new system of Dental Studies for four years at the master's level. The new Professional Graduate School of Dental Science admits bachelor's degree holders from various disciplines and then aims to train them to become excellent oral health professionals.

In 2014, pre-dental course was opened and the first 35 high school graduate students joined this course. The newly opened pre-dental course was consisted with 3-years of undergraduate curriculums. The students who have successfully finished this course will automatically join the Professional Graduate School of Dental Science.

It is the School of Dentistry's mission to be a partner with students in achieving academic excellence, providing the best oral healthcare, and engaging in creative endeavors to improve the health of members of the local community and the country as a whole.

The School of Dentistry aims to:

- 1. Acquire fundamental knowledge and skills for the prevention, diagnosis, and treatment of diseases related to the oral and maxillofacial organs and tissues.
- 2. Train students to become creative and motivated dentists and dental scholars.
- 3. Provide oral health services for members of the local community and country as a whole.

4. for Globalization of dental education, collaborative interactions that are integral to the success of our missions have been strongly encouraged and supported.

The faculty members and personnel of the school will utilize all available capacities and resources for the successful launch of the Professional Graduate School of Dental Science, and remain committed to excellence for Dental Studies at the graduate level.

#### Degree Requirements

Course Registration and Graduation

Each student is required to submit his/her application card for course enrollment to the Dean through the supervising professor during the course registration session of each semester.

The academic year is from the first day of March to the last day of February the following year. The academic year is divided into two semesters: the first semester is from March 1st to the end of August, and the second semester is from September 1st to the end of February the following year. Summer and winter courses are held for four weeks during each vacation period.

There are final exams, midterm exams, spot tests, special tests, graduation exams, and make-up exams. Midterm exams, final exams, and spot tests are administered to students in regular courses.

For graduation, 162 credit hours must be earned. The graduation of students who have completed eight semesters or more, who possess the appropriate GPAs, and whose graduation papers or exams were satisfactory, is decided by faculty of the School of Dentistry to achieve a Doctorate of Dental Science degree.

After passing the National board Exam for general dentists, graduated students are qualified to practice work as practicing dentists.

#### What Do You Study?

## First Year (Major Requirement)

Human Anatomy and Histology Practice of Human Anatomy and Histology 1 Human Life Phenomenon 1 (Physiology and Biochemistry) 1 Practice of Human Life Phenomenon 1 (Physiology and Biochemistry) Hard Tissue Biology Radiology and Human Body 1 Human Life Phenomenon 2 (Microbiology and Pharmacology) Diagnosis and Treatment of General Diseases Practice of General Pathology Practice of Human Life Phenomenon 2 (Microbiology and Pharmacology) Dental Materials Practice of Dental Materials Dental Anatomy and Occlusion Practice of Dental Anatomy and Occlusion Radiology and Human Body 2

#### Second Year (Major Requirement)

Diagnosis of Oral and Maxillofacial Diseases 1 Practice of Oral Pathology 1 Orthodontics 1 Practice of Orthodontics 1 Prosthetic Restorations 1 Surgical Treatment of Oral and Maxillofacial Diseases 1 Local and General Anesthesia Operative Dentistry 1 Practice of Operative Dentistry 1 Endodontic and Periodontal Diseases 1 Practice of Endodontics and Periodontology 1 Practice of Surgical Treatment of Oral and Maxillofacial Diseases Clinical Practice (Sub-internship) 1 Prosthetic Restorations 2 Practice of Prosthetic Restorations 1 Orthodontics 2 Practice of Orthodontics 2 Surgical Treatment of Oral and Maxillofacial Diseases 2 Endodontic and Periodontal Diseases 2 Practice of Endodontics and Periodontology 2 Clinical Practice (Sub-internship) 2 Preventive Dentistry Practice of Preventive Dentistry Operative Dentistry 2 Practice of Operative Dentistry 2 Third Year (Major Requirement) Prosthetic Restorations 3

Practice of Prosthetic Restorations 2 Operative Dentistry 3 Dental Management of Medically Compromised Patients Practice of Human Anatomy and Histology 2 Public Health Dentistry Practice of Dental Implantology Clinical Practice (Subinternship) 3 Surgical Treatment of Oral and Maxillofacial Diseases 3 Orofacial Pain and Therapeutics Pulpal and Periodontal Diseases 3 Dental Management by the Systemic Conditions and Aging Dental Ethics Dentist Role in Society Behavioral Dentistry Dental Psychology Diagnosis and Surgical Treatment of Oral & Maxillofacial Diseases Clinical Practice (Sub-internship) 4

#### Graduate Courses

Methodology for Dental Research (I) Methodology for Dental Research (II) Statistics in Dentistry (I) Statistics in Dentistry (Ⅱ) Current Topics of Dental Science (I) Current Topics of Dental Science (II) Current Trends of Dental Science (I) Current Trends of Dental Science (Ⅱ) Research for the Master's or Doctoral Degree Clinical Perspective of Dental Nutrition Advanced Course of Oral Biochemistry Experimental Clinical Oral Biochemistry (I) Molecular Biology in Oral Cancer Cell Molecular Biology in Dentistry Orofacial Pain Physiology of Hard Tissue and Temporomandibular Joint Salivary Physiology Dental Neurophysiology Taste, Smell and Speech

Dental Implantology

#### Fourth Year (Major Requirement)

Diagnosis of Oral & Maxillofacial Diseases 2 Orthodontics and Maxillofacial Plastic Surgery Dental Practice Management Clinical Practice (Sub-internship) 5 Case Discussion 1 Field Study The Essence for the Writing of Scientific Papers Advanced Clinical Occlusion Esthetic Dental Restorations Developmental Disorders and Dental Care Methodology for Dental Research Laser in Dentistry Forensic Dentistry and Medical Law Diagnosis and Surgical Treatment of Clinical Oral and Maxillofacial Diseases Clinical Restorative Dentistry Clinical Practice (Sub-internship) 6 Case Discussion 2

Chemotherapy on Oral Infectious Disease Molecular Pharmacology in Dentistry Pharmacological Control of Orofacial Pain Genetic Disorders in Dentistry Drug and Gene Therapy on Oral Cancer Microbial Aspects of Periodontal Disease Histophysiology of Periodontal Disease Advanced Clinical Periodontology Current Topics in Periodontology Esthetic Periodontics Nonsurgical Periodontal Therapy Pain Control Outpatient Anesthesia Fluid and Electrolyte Balance Cardiopulmonary Resuscitation Patient Monitoring Functional Jaw Orthopedics Growth and Development of Oromaxillofacial Tissue Behavior Management of Children Preventive Dentistry of Children

Team Approach of Cleft Lip and Palate Oral Microbiology Oral Immunology Experimental Oral Microbiology Experimental Oral Immunology Clinical Oral Microbiology Central Nervous System in Dentistry Cell Biology in Dentistry Biology of Dental Hard Tissue Applied Anatomy of the Head and Neck Advanced Oral Histology Gerontological Biology in Dentistry Growth of Skull after Birth Advanced Hard Tissue Biology Technics in Molecular Biology Experiment of Oral Pathology Oncology of Oral Cavity Pathology of Dental Caries Pathology of Pulpal and Periapical Diseases Pathology for Anomaly in Maxillofacial Region Diseases of Salivary Glands Immunopathology of Oral Cavity Review of Recent Studies in Oral Pathology Colloquium in Clinical Oral Pathology Advanced Oral and Maxillofacial Surgery Oral Anomaly Orthognathic Surgery Maxillofacial Reconstructive Surgery Practice in Functional Rehabilitation of TMJ Transplantation Immunology Maxillofacial Traumatology Current Topics of Oral and Maxillofacial Surgery Surgical Orthodontic Treatment TMJ in Orthodontics Periodontal Orthodontic Interrelationship Case Planning Seminar Orthodontic Treatment for Orthognathic Surgery Mixed Dentition Treatment Retention and Relapse Growth Modification in Orthodontics Orthodontic Management of Prosthodontic Patients Esthetic Aspects in Orthodontics Advanced Dental Materials Dental Materials Science

Dental Polymer Materials Current Topics of Dental Materials Metallic Dental Materials Dental Ceramics Dental Impression Materials Dental Cements Esthetic Restorative Materials Dental Implant Materials Properties and Evaluation of Dental Materials Biocompatibility Testing of Dental Materials The Dental Pulp Biology Endodontic Microbiology Cardiology Plastic Restoration Esthetic Dentistry Pulp and Periapical Disease Endodontic Immunopathology Ceramic Restoration Modern Endodontic Therapy Endodontic Microsurgery Current Topics in Canal Obturation Current Topics in Canal Shaping Dental Implantology Occlusion Gerodontics Theory and Practice of Fixed Prosthodontics **Removable Partial Prosthodontics** Esthetic Prosthodontics Precision Attachment in Removable Prosthodontics Modern Dental Ceramics Periodontic and Prosthodontic Dentistry Modern Practice in Crown and Bridge Prosthodontics Modern Removable Partial Denture Prosthodontic Treatment for Edentulous Patient Advanced Oral Diagnosis Advanced Oral Medicine The Theory of Maxillofacial Pain-dysfunction Study on Oral Diagnosis & Oral Medicine Oral Diagnosis and Treatment Plan Diagnosis of Dental Emergency Theory of Oral Soft Tissue Lesion Examination for Oral Diagnosis Myology of Oral and Mandible Clinical Practice of Oral Diagnosis

Clinical Practice of Oral Diagnosis	Oral and Maxillofacial Imaging
Theory of Craniofacial Pain	Prevention of Oral Disease
Oral Radiology	Dental Health Statistics
Radiographic Interpretation	School Dental Health
Oral Radiographic Technique	Oral Epidemiology
Specialized Radiographic Techniques	Community Dental Health
TMJ Radiology	Dental Health Programmity
Radiation Biology	Adult Dental Health
Salivary Gland Imaging	Geriatric Dental Health
Oral & Maxillofacial Radiographic Therapy	Child Dental Health
Oral & Maxillofacial Radiographic Anatomy	Dental Health Administration
Radiation Dosimetry & Protection	Dental Manpower Development
Oral & Maxillofacial Sonography	Dental Care Social Insurance System

#### Academic Departments and Faculties

#### **Basic Science in Dentistry**

#### > Department of Oral Microbiology

Faculty

Professor / Kang, In-Chol Professor / Ohk, Seung-Ho

#### Research areas

Molecular diagnosis of oral bacteria Cellular microbiology of periodontal disease

The Department of Oral Microbiology educates the students about medical microbiology, immunology, and oral microbiology. Medical microbiology covers classification, structures, pathogenesis, and diagnosis of medically important microorganisms; immunology is the study of the body's defense against infection; and oral microbiology deals with oral ecology, oral microbiota, dental caries, periodontitis, and other oral infections. The research areas of Professor Kang and Professor Ohk are the cellular microbiology of periodontal disease and molecular diagnosis of oral bacteria, respectively.

#### > Department of Oral Pathology

#### Faculty

Professor / Kim, Ok-Jun Assistant Professor / Kim, Young

#### **Research** areas

Oral and maxillofacial cancer Photobiology application to dentistry Stem cell and cell free therapy for degenerative disease Molecular imaging and target probe application for various disease Differential expressed genes and bio-marker screening in oral & maxillofacial tumor

# > Department of Oral Physiology

#### Faculty

Professor / Kim, Won-Jae Professor / Jung, Ji-Yeon

#### **Research** areas

Role of autophagy in oral biology Differentiation from adult neural stem cells

The purposes of Oral Physiology Laboratory are to make undergraduate students in the School of Dentistry understand the cellular functions and regulating mechanisms in which life phenomena are normally involved in functions and the interaction of tissues or organs of the human body. In our lab, researches in progress are as follows;

1. Autophagy regulation in dentin formation and inflammation

2. Proliferation and differentiation mechanism of adult neuronal stem cell

# > Department of Oral Biochemistry

## Faculty

Professor / Park, Byung-Ju Professor / Lee, Tae-Hoon

#### **Research** areas

General biochemistry of oral biology Redox mediated cell signaling & disease

Oral Biochemistry focuses on the biochemical reactions of living organisms. Two professors teach the basic biochemistry based on oral environments for first year undergraduate students in the School of Dentistry. The Lab. of oral biochemistry carries out experiments to find out relationships between inflammatory diseases including periodontal disease and therapeutic agents. We also investigate functional homeostasis between reactive oxygen species and antioxidants. The Oral Biochemistry Laboratory seeks the improvement of care, health, and treatments through the development of prevention materials and methods of reducing dental decay and periodontal diseases.

# > Department of Oral Anatomy

## Faculty

Professor / Lee, Eun-Joo

Professor / Kim, Sun-Hun Professor / Kim, Min-Seok

Research areas Hard tissue biology Direct lineage reprogramming Identification of novel genes in tooth development

The primary objective of the Department of Oral Anatomy is to provide a foundation for clinical dentistry through educating gross anatomy, histology, oral histology and embryology, and dental morphology and occlusion and related laboratory courses. Our current researches are the identification and regulation of novel genes in the process of tooth development and eruption, biophysical forces for efficient tooth movement, and the acquisition of functional dental lineage cells by direct conversion.

# > Department of Preventive and Public Health Dentistry

Faculty

Professor / Choi, Choong-Ho Assistant Professor / Chung, Ki-Ho

#### Research areas

Oral epidemiology Prevention of oral diseases Anti-plaque and anti-gingivitis agents Development of tooth pastes and oral hygiene products

Department of Preventive and Public Health Dentistry has been carrying out various experiments, clinical studies about the prevention of dental disease and researches for oral health care. The Department of Preventive and Public Health Dentistry has effective education programs such as problem-based learning and systematic polyclinic practice programs for undergraduate students.

# > Department of Dental Materials

Faculty Professor / Park, Yeong-Joon Professor / Song, Ho-Jun

#### **Research** areas

Evaluation of biocompatibility for dental materials Development of advanced dental products including restorative and implant materials

The Department of Dental Materials offers the scientific knowledge based on the material science of dental materials such as metals, ceramics, polymers, and composites to repair or replace teeth. It also establishes the scientific background for the selection and application of dental materials for specific clinical

situations and it aims to acquire the manipulation skills.

# > Department of Pharmacology and Dental Therapeutics

Faculty

Professor / Koh, Jeong-Tae Professor / Lee, Shee-Eun Associate Professor / Ryu, Je-Hwang

#### **Research** areas

Molecular bone biology Vaccine development and mucosal immunology Pathogenic mechanism of hard tissue degenerative diseases

The Department of Pharmacology and Dental Therapeutics offers lectures, laboratory works and various demonstrations to students to understand and acquire the basic and applied knowledge of drugs. Action mechanisms of drugs and general pharmacology principles are emphasized in the course. It also provides knowledge on adverse drug effects, toxicology, and clinical pharmacology in order to use proper drugs in clinical applications. Research topics are focused on osteoblast differentiation, bone regeneration based on tissue engineering, signal communication between microorganisms and host cells in disease models, development of therapeutic vaccines and pathogenic mechanism of hard tissue degenerative diseases.

## > Department of Dental Education

#### Faculty

Professor / Lee, Seok-Woo Professor / Lim, Hoi-Soon

#### Research areas

Development and implementation of novel didactic methodology Enhancing students' involvement in academic, research, and service activities Development and managing courses related to medical/dental humanities

The main objective of the Department of Dental Education is managing courses related to medical/dental humanities. In order to produce "global dental professionals with a philosophy of humanism", our department focuses on developing and implementing humanities and other related courses, including Dental History, Dentist and the Society, Dental Ethics, Medical Communications, and Dental Management.

# **Clinical Dentistry**

## ▷ Department of Oral and Maxillofacial Surgery

Faculty Professor / Oh, Hee-Kyun Professor / Park, Hong-Ju Professor / Kook, Min-Suk Associate Professor / Jung, Seunggon Assistant Professor / Han, Jeong Joon

#### **Research** areas

Oral cancer Orthognathic surgery Craniofacial deformity Maxillofacial plastic and Reconstructive Surgery

The Department of Oral and Maxillofacial Surgery is the surgical specialty in dental clinics that includes surgical diagnosis, esthetic treatment, and the functional treatments of diseases, injuries and defects of intraoral organs such as teeth, gingiva, oral mucosa and tongue, and reconstructive treatment of jaws, faces, heads, and necks. Oral and maxillofacial surgeons are trained to treat and care for patients who have maxillofacial injuries, facial deformities, infections, dental implants, cleft lips and palates, salivary gland disease, oral mucosal disease, and the cyst of the jaw. Department of Oral and Maxillofacial Surgery is in the process of researching on oral cancer, maxillofacial reconstructive surgery, craniofacial deformity, cleft lip and palate, and the basic study and clinical treatment of dental implants, and TMJ disorder.

# > Department of Orthodontics

#### Faculty

Professor / Cho, Jin-Hyoung Associate Professor / Lee, Kyung-Min Assistant Professor / Oh Min-Hee

#### Research areas

Early Orthodontic Treatment Adult Interdisciplinary Treatment Craniofacial Growth and Development 3D Imaging Analysis using cone-beam CT 3D Digital Orthodontics using Laser Scan and Stereophotogrammetry

Orthodontics is a specialty field of dentistry that deals primarily with malpositioned teeth and the jaws: their diagnosis, prevention, and correction. The area of orthodontics concerned with the supervision, guidance, and correction of the growing or mature dentofacial structures, including those conditions that require the movement of teeth or correction of malrelationships and malformations of their related structures and the adjustment of relationships between and among teeth and facial bones by the application of forces and/or the simulation and redirection of functional forces within the craniofacial complex.

#### **Department of Prosthodontics**

Faculty

Professor / Yang, Hong-So Professor / Park, Sang-Won Associate Professor / Lim, Hyun-Pil Associate Professor / Yoon, Kwi-Dug Assistant Professor / Park, Chan

#### Research areas

CAD-CAM digital dentistry Esthetic ceramic restorative material Implant surface treatment & bone material research

The Department of Prosthodontics is in charge of restoration and reconstruction of the teeth, the surrounding tissues, and the defects of maxillofacial areas with artificial substitutes, thereby restoring mastication, comfort and aesthetic functions. In the Department of Prosthodontics, the newest prosthodontics technology is used to have the teeth crowned with gold and ceramics and manufacture dentures, including manufacture or treatment of implant prostheses and esthetic prostheses. By performing the experiments such as, development of prosthodontics appliances' design, stress distribution analysis, dental zirconia, bone graft substitutes, the outcome of these research was successful.

#### Department of Periodontology

#### Faculty

Professor / Chung, Hyun-Ju Professor / Lee, Seok-Woo Professor / Kim, Young-Joon Professor / Kim, Ok-Su

#### **Research** areas

Genotyping in periodontal diseases patients Surface characteristics and bioactivity of titanium surface Relationship between the periodontal diseases and systemic diseases

Periodontology deals with the structures and behavior of the periodontium in health and in disease such as the anatomy, microbiology, physiology, and pathology of the periodontal tissues and also is concerned with the prevention and treatment of periodontal diseases. At present, our department is focused on the study about the causes and activities of the periodontal diseases, and the tissue engineering approaches for the regeneration of periodontal tissue. Clinically, non-surgical procedures, periodontal regeneration therapy, periodontal plastic surgery, implant therapy, and treatments for the peri-implantitis are performed. Also, oral hygiene instruction and professional maintenance program after periodontal therapy are performed.

# > Department of Conservative Dentistry

Faculty Professor / Oh, Won-Mann Professor / Hwang, In-Nam Professor / Hwang, Yun-Chan Professor / Chang, Hoon-Sang Assistant Professor / Lee, Bin-Na

#### Research areas

Pulp-dentin regeneration Color of composite resin Treatment of pulp inflammation

The Department of Conservative Dentistry was defined as the clinical specialty in dentistry that restores the original esthetic and function of the tooth. Department of Conservative Dentistry primarily serves operative treatment including root canal therapy, resin filling, gold/resin inlay, onlay, crowns, laminate veneer, etc. In addition, patients are also served by the tooth whitening therapy, treatment of hypersensitized-teeth, and apical surgery with microscopes, tooth transplantation, intentional replantation and so on.

## Department of Oral Medicine

# Faculty

Professor / Kim, Byung-Gook Professor / Kim, Jae-Hyung

#### **Research** areas

Orofacial Pain Oral Mucosal Diseases Temporomandibular Disorders

Oral medicine is the special field in dental clinics which helps to treat many kinds of disease occurring in oral, face, and jaw area. The diseases of oral cavity, face, and jaw areas which need to take oral medical treatment are temporomandibular disorder, facial pain, trigeminal neuralgia, oral mucosal disease, xerostomia, disturbance of taste sensation, halitosis, oromandibular dyskinesia, snoring, and sleep apnea. It is common that these kinds of disease occur as a result of systemic disorders so that oral medicine can be in the position connecting oral cavity with whole body. Other roles of oral medicine are to deal with the diagnosis and treatment of oral disease, and legal application of dentistry for dental patients with systemic diseases.

# Department of Pediatric Dentistry

#### Faculty

Professor / Choi, Nam-Ki Professor / Kim, Seon-Mi

Research areas

Restorative & Preventive Treatment Treatment for Handicapped Children Preventive & Interceptive Orthodontic Treatment

Pediatric dentistry is intended for newborns to adolescents including the handicapped, and deals with the broad spectrum of dental parts from general field of dentistry to hospital dentistry, treatment of genetic disorder and congenital disease, growth and development. Department of Pedodontics currently performs prevention and treatment of dental caries, continuous care for dentition and occlusion, various minor oral surgeries, behavior management, and sedation to general anesthesia for anxious children or the handicapped, and make efforts to research for humane care with patient-oriented concept.

# > Department of Oral and Maxillofacial Radiology

#### Faculty

Professor / Kang, Byung-Cheol Professor / Yoon, Suk-Ja Associate Professor / Lee, Jae-Seo

#### **Research** areas

3D Dental Imaging Sialographic examination Oral and Maxillofacial Diagnosis

The Department of Oral and Maxillofacial Radiology is committed to instruct dental students to have the ability to deliver dental patients the accurate diagnosis of oral and maxillofacial diseases and abnormalities utilizing conventional and advanced imaging modalities including dental cone beam CT and interventional techniques such as sialography and sialoendoscopy. Dental students/dentists ascertain that the reading results of the patient's diagnositic images can explain the patient's chief complaints or sign and symptoms. Additional imaging and/or patient examination can be performed to arrive at the more specific diagnosis before treatment is initiated.

# > Department of Anesthesiology

Research areas Critical care medicine Respiratory care Pediatric anesthesia



# IX. Special Graduate Schools



Graduate School of Education *\_\_Contact Information* Phone: +82-62-530-2572 Fax: +82-62-530-2302 URL: http://edutop.jnu.ac.kr

# Graduate Studies in the Graduate School of Education

The Graduate School of Education (GSE) was established in 1975 for the purpose of retraining current teachers in modern educational theories and training prospective teachers in well-oriented, appropriate programs. GSE programs provide current and prospective teachers with creative problem solving abilities associated with their major studies and educational theories in order to instil passion in their instruction. Therefore, GSE graduates are expected to be professional teachers and educators equipped with the ability of leading regional education systems and contributing to the future of educational and social development according to the demand of the times.

There are 24 master's degree programs offered by the GSE, including Educational Administration, Life-long Education, Educational Technology and Methods, Counseling Psychology, Korean Education, English Education, History Education, Geography Education, Ethics Education, Mathematics Education, Physics Education, Chemistry Education, Biology Education, Earth Science Education, Music Education, Fine Art Education, Physical Education, Home Economics Education, Early Childhood Education, Computer Education, Electrical Electronic and Communication Education, Nutrition Education, Special Education, Integrated Social Studies Education.

#### Degree Requirements

Students holding a bachelor's degree or its equivalent are eligible to apply for admission. Courses are offered during the summer and winter vacation periods. The length of the coursework is two years and six months or greater.

The minimum number of credits required for completion of the Master's Degree of Education is 27. A student may not take more than 6 credits per semester of his/her major courses.

A student whose field of specialization is different from his or her undergraduate major is required to earn a maximum of 15 additional credits in relevant undergraduate courses. Successful applicants should have CGPAs of C or higher. A total of up to 9 credits earned at other universities and colleges can be transferred to the master's degree program of the GSE.

A grade of C or better is acceptable for courses in the master's degree program, but the CGPA of graduate students should be a C or higher in order to be awarded the master's degree. Those with equivalent qualifications, as well as international students, can be accepted as special students through relevant examinations.

## Professors

Faculty members of the GSE are usually composed of 3 to 5 professors from each department of the College of Education.

# What Do You Study?

## **Home Economics Education**

Advanced Home Management Advanced Clothing Materials Advanced Food Science Advanced Child Development Methodology in Home Economics Education Advanced Research and Teaching of Home **Economics** Materials Advanced Course on Home Economics Logic and Essay Writing Advanced Family Life and Welfare Advanced General Housing Advanced Food History Advanced Clothing Management Statistics Advanced Apparel Design Advanced Culture of Clothing Advanced Nutrition Advanced the Family Advanced Home Economics Education Advanced Meal Education Seminar of Home Economics Education

## **Educational Technology and Methods**

Theories of Educational Technology Instructional Systems Design ICT-based Education Philosophy of Teaching Methods Analysis of Current Curriculum Theories of Instruction and Learning Educational Assessment in Schools Educational Research Instructional Research Instructional Media Multimedia Design and Development Web-Based Instruction Distance Education Hypermedia in Education Constructivist Instructional Theories Human Resource Development Trends in Educational Technology Development of Educational Information Policy Practicum in Educational Technology

#### **Educational Administration**

Studies of Education Laws Theories in Educational Administration Educational Planning and Policy Research Methods of Educational Administration Comparative Studies of Education System Educational Personnel Administration Theory of Educational Administrator Design and Operation of School Facilities The Nature of Teaching Profession Topics in Educational Administration Supervision Economics of Education Educational Finance Organizational Behavior in Educational Administration Theories of Human Relations in Education Theories of Learning and Instruction Theories of Teacher Education Argument in Educational Administration Research

#### **Korean Education**

Korean Language Education Korean Literature Education Korean Linguistics Education Policy on thr Korean Language Korean Grammar Education Korean Phonology Education Korean Semantics Education Ancient Korean Poetry Education Oral Korean Literature Education Modern Korean Poetry Education Modern Korean Fiction Education Literary Criticism The Korean Language Proficiency Evaluation Studies on Korean Literary History Studying Media Education Theories on Communication Education Studies on Teaching Materials of Korean History of Korean Language Education

#### **Physics Education**

**Ouantum** Physics Condensed Matter Physics Mathematics for Physics Physics Laboratory Materials in Physics Education Physics Education Laboratory Nuclear and Particle Physics Researches in Physics Education Modern Optics Theory of Fluid Advanced Physics Education Experiment Theory and Practice in Teaching Physics Psychology in Physics Learning Physics Curriculum and Evaluation Seminar in Physics Statistical Thermodynamics Studies on Physics Education for the Gifted Education of Mechanical Concepts Education of Electromagnetic Concepts Studies in Physics Education

# **Fine Art Education**

History of Korean Art Drawing Theory of Art Education Practice of Crafts Practice of Design Practice of Sculpture Practice of Sculpture Practice of Korean Painting Aesthetics Image Art Techniques of Expression Theory of Modern Arts Art Teaching and Learning Methods Logics and Writing of Art Computer Lesson Support of Art Expression and Development Stage of Children's Art Development and Application of Teaching Materials for Art Education The philosophical theory of korean art Art and Culture

# **Counseling Psychology**

Psychology of Personality Psychological Testing Counseling of Special Children Counseling Practicum and Case Studies Group Counseling Family Counseling Counseling Theories and Practice Behavior Modification Abnormal Psychology Career Counseling School Psychology

# **Biology Education**

Advanced Vertebrate Zoology Advanced Genetics Advanced Animal Physiology Advanced Plant Physiology Advanced Invertebrate Zoology Advanced Microbiology Advanced Human Embryology Advanced Environmental Biology Advanced Ecology Advanced Plant Taxonomy Advanced Animal Taxonomy Advanced Molecular Biology Advanced Cell Biology Studies in Biology Education Biology Logic and Essay Writing Secondary School Biology Curriculum and Teaching Method Action Research in Biology Education

Multimedia in Biology Education

#### **Mathematics Education**

Teaching Materials for Algebra Teaching Materials for Analysis Pedagogy of Mathematics Teaching Materials for Geometry Topics in Algebra I Topics in Algebra II Topics in Analysis I Topics in Analysis Ⅱ Topics in Geometry Topics in Topology Topics in Mathematical Statistics Combinatorics Topics in Applied Mathematics Mathematics Using Computer Psychology of Learning Mathematics History of Mathematics Education Studies in Mathematics Education Mathematics Teaching and Learning Materials

#### **History Education**

Introductory Theory of History Education History of Chinese Historiography History of Korean Politics History of Western Historiography History of Western Socio-Economics History of Korean Socio-Economics History of Chinese Socio-Economics Modern-Contemporary History of Korea Pre-Modern History of Europe Modern and Contemporary History of Europe Twentieth Century Modern History Pre-Modern History of East Asia Modern and Contemporary History of East Asia Methods of History Teaching Readings of Historical Sources Ancient and Medieval Korean History Intellectual and Cultural History of Korea A Course on History Logic and Essay writing Research of Education Text and Teaching Method of History

#### **English Education**

English Language Learning and Teaching Methodology Pedagogical English Grammar Studies in British and American Culture Second Language Acquisition History of the English Language General Linguistics English Phonology Seminar on British and American Poetry Seminar on British and American Fiction Seminar in English Language Teaching Seminar on British and American Drama Critical Perspectives on British and American Literature Research Methods in English Education Teaching English Literature Teaching English Linguistics Multimedia and English Teaching ELT Materials Development Testing in TEFL

#### **Nutrition Education**

Advanced Nutrition Education and Counseling Advanced Food Science Advanced Food Safety Advanced Nutrition Advanced Nutrition in Life Cycle Advanced Foodservice in Institution Advanced Nutritional Assessment Advanced Diet Therapy Advanced Principles of Food Preparation Advanced Nutrition Education Method Advanced Public Health Statistics Advanced Community Nutrition Research on Foodservice Management Advanced Cultural Aspects of Food Research of Teaching Materials and Methods in Nutrition Education Advanced Functional Food Advanced Food Processing and Preservation

Seminar in Nutrition Education

## **Early Childhood Education**

Theoretical Foundations of Early Childhood Education Curriculum and Instructional Resources in Early Childhood Education Research Methods in Early Childhood Education Instructional Methods and Practices in Early Childhood Education History and Philosophy of Early Childhood Education Developmental Psychology of Early Childhood Theories of Play in Early Childhood Education Study of Early Childhood Education Programs Study of Language Education in Early Childhood Study of Social Education in Early Childhood Study of Science and Mathematics Education in Early Childhood Administration and Supervision in Early Childhood Institutions Seminar in Parent Education Field Study in Early Childhood Education Study on Counseling and Guidance for Young Children Instructional Media for Young Children Study of Children's Literature in Early Childhood Education Study of Creative Art Education in Early Childhood Education Study of Inclusive Education for Young Children

Study of Early Childhood Teacher Education

# **Ethics Education**

Studies in Western Ethical Thoughts Studies in Theories of Moral and Ethics Education Studies in Korean Ethics Education Seminar in Theories of Value Education Studies in Modern Ethical Thought Seminar in the Ethical Theory of Buddhism Topics in Logic and Essay of Ethics Education Studies in Anthropology Research on Welfare State Topics in Classic Writings of Western Ethics Studies in East Asian Ethics Education Seminar in the Ethical Theory of Lao-tzu and Chang-tzu Studies in Moral Psychology and Moral Development Education on the Unification of Koreans Studies in Teaching Method of Moral and Ethics Education Studies in Social Democracy

## **Music Education**

A Course on Music Logic and Essay Writing Teaching Material and Pedagogy of Music Music Education Theory Psychology of Music Education Music History Seminar in Music Education Curriculum of School Music Education Introduction of Korean Traditional Music Korean Music Major Adapting Multi-MIDI in Music Classes Advanced Music Theory Teaching of Choir Class Pedagogy and Music Education

# **Integrated Social Studies Education**

Common Sociology Logic and Essay Writing Curriculum and Instruction in Social Studies History of Political-Social Thought International Political Economics International Relation and Regional Politics Local Government and Civics Education Methods in Social Studies Education Modern Society and Culture Multimedia and Education Participatory Research in Social Studies Education Social Problems and Welfare Studies in Korean Unification Teaching Method of Social Studies Theories of Law Theories of Political Science Theory of Information and Society Theory of Korean Economics Theory of Korean Politics Theory of Modern Democracy

# Electrical Electronic and Communication Education

Materials and Instructional Method in Industrial Education Theories of Teaching Logic and Logical Writings in Industrial Education Management of Industrial Education Seminar in Technical Education Research Methods in Technical Education Action Research in Technical Education Advanced Design of Digital Circuit Advanced Microprocessor Advanced Automatic Control Advanced Electrical Engineering Advanced Engineering Electromagnetics General Electrotechnics and Electronics Advanced Electronic Engineering Advanced Electromagnetic Applications Advanced Electronic Circuit Advanced Computer Network Advanced Computer Application Education Advanced Communication Engineering Advanced Circuit Theory

#### **Computer Education**

Development & Implementation of the Computer Education Curriculum Design & Development of the Multimedia Assisted Instruction Topics in Data Structure Research in Computer Education Telecommunication &Distance Education Teaching Materials in Computer Education Advanced Computer Organization Advanced Operating System Theory of Compiler Construction Topics in Programming Language Design and Analysis Algorithm Topics in Artificial Intelligence Topics in Computer Networks Topics in Software Engineering Advanced Computer Graphics Database Design and Modeling Distributed Database System Advanced Object-Oriented System

## **Earth Science Education**

Advanced Earth Science T Advanced Earth Science ∏ Teaching Materials in Earth Science Advanced Geophysics Stellar Physics Topics in Climatology Advanced Applied Geology Advanced Oceanography Advanced Stratigraphic Paleontology Micro-Meteorology Astronomical Observation and Analysis **Global** Tectonics Petrogenesis Advanced Mineralogy Natural Disasters and Resources History of Earth Science and Earth Science Education Multimedia and Earth Science Teaching Materials Earth Science Education and Regional Environment Studies in Science Education

# **Geography Education**

Advanced Climatology Advanced Geographic History Advanced Geomorphology Advanced Study in Geographical Education Media Analysis & Development in Geography Text Education for Culture and Historical Geography Education for Economic Geography Education for Population Geography Education for Regional Study in Korea Education for Urban Geography Geography Education Theory Geography Education Theory Thesis Research in Education of World Regional Geography Seminar in Human Geography Education Seminar in Physical Geography Education Seminar on Cartography and Geographic Social Geography Seminar

#### **Physical Education**

Measurement and Evaluation of Physical Education History of Physical Education Philosophy of Physical Education Study on Teaching of Physical Education Physical Education Theory Physical Education Logic and Essay Writing Physical Healthy Theory Korean Dance Physical Training Sport Physiology Physical Teaching Method Sociology of Physical Education Sport Psychology Sport Biomechanics Administration of Physical Education Motor Learning and Control Training Theory

## Life-Long Education

Introduction to Lifelong Education Management in Lifelong Education Methods of Lifelong Education Practicum in Lifelong Education Philosophy and Thoughts in Lifelong Education Adult Learning and Counseling Education for Children Education for Adolescents Education for Adolescents Education for Senior Citizens Civic and Citizenship Education Development of Human Resources Lifelong Education in the Information Society Vacational Ethics Topics in Lifelong Education Lifelong Education and Communication Education of Community Development Self-Development and Meditation Multimedia in Lifelong Education Distance Education with E-learning and Cyber-learning Educational Research Methods Statistics and Data Analysis for Lifelong Education Research Development of Lifelong Education Programs Sociology of Education Counselling Psychology

#### **Chemistry Education**

Topics in Physical Chemistry Topics in Organic Chemistry Topics in Chemistry Education Topics in Inorganic Chemistry Topics in Quantum Chemistry Topics inInstrumental Analysis Topics in Physical Organic Chemistry Topics in Chemical Thermodynamics Topics inOrganic Reaction Theory Topics in Chemical KineticsTopics in Biochemistry Advanced Analytical Chemistry A Course on Chemistry Logic and Essay Writing Curriculum and Evaluation in Chemical Education Teaching Methods and Material Development in Chemical Education Issues in Chemical Education Research Method in Chemical Education Teaching and Learning Theories in Chemical Education Research Methodology in Chemical Education Chemistry Logic and Essay Writing Advanced Electrochemistry

#### **Special Education**

Teaching methods and materials in Special Education Research Methodology in Special Education Introduction to Special Education

Education for Children with Intellectual Disabilities Education for Children with Physical Disabilities Education for Children with Emotional Disorders Education for Children with Communication Disorders Education for Children with Learning Disabilities Inclusion of Children with Special Needs Special Education Technology Curriculum and Instruction in Special Education Psychology and Education of Children with Disabilities Special Education and Counseling Special Education Administration

Assessment and Evaluation of Children with Disabilities

Applied Behavior Analysis

Education for Children with Visual Impairments Education for People with Hearing Impairments

Movements of Thought in Modern Education

School Education and Society

Introduction to Early Childhood Special Education

Graduate School Of Industry and Technology <u>Contact Information</u> Phone: +82-62-530-1607 Fax: +82-62-530-1942 URL: http://eng.jnu.ac.kr

# Graduate Studies in the Graduate School of Industry and Technology

The Graduate School of Industry and Technology was established in 1989. The School aims to teach students theories and applications of industrial technology so they can contribute to the development of the local community and nation as a whole. The school offers 12 master's degree programs and 1 non-degree program, the AISP (Advanced Industrial Strategy Program)

The 12 programs are offered through the Graduate School of Industry and Technology.

- Architectural Engineering
- Civil Engineering
- Mechanical Engineering
- Industrial Engineering
- Mineral and Energy Engineering
- Textiles Engineering and Cloth Design
- Industrial Engineering
- Biochemical Engineering
- Electrical-Electronics-Computer Engineering
  - Electrical Engineering
  - Electronics Engineering
  - Computer Engineering
- Material Engineering

- Chemical Engineering
- · Environment and Energy Engineering
- · Department of Eco-friendly Agriculture
  - Environmentally Friendly Agricultural Life
  - Eco-friendly Animal Husbandry
- Department of Food and Food Service Industry
- Rural Resources & Environmental Engineering
  - Rural Engineering
  - Rural Tourism & Local Development
  - Agricultural Environment
  - Forest Resource
  - Biosystems
- · Electronics & Computer Engineering

# Degree Requirements

Anyone who has graduated from a four-year college and has been awarded a bachelor's degree, or who has a bachelor's degree or master's degree from a foreign university, or who is recognized by the Ministry of Education and Human Resources Development as having equivalent qualifications of course work requirements of a regular four year college program, is eligible for application for admission after passing the appropriate entrance examination.

The length of coursework shall normally be two years and six months.

A period of no longer than four years and six months shall be allowed for completion of the master's degree programs.

When a student is absent from lectures for more than one month because of illness or other unavoidable circumstances, he or she may petition for a temporary leave of absence of one year or less.

Class days must number 15 weeks or more each semester. A minimum of 24 credits are required for completion of the master's degree. The courses a student should take are divided into two types: required and elective courses.

Students are expected to attend more than two-thirds of their classes and receive a grade of C or higher to be considered acceptable. However, a student must earn a CGPA of 3.0 or better to be awarded a master's degree.

A master's degree shall be granted to candidates who have fulfilled all the requirements.

Applicants for research courses in the Graduate School of Industry and Technology should have graduated from an undergraduate program qualified by the Ministry of Education and Human Resources Development. International students or government officials who have equivalent qualifications can be accepted as special supernumerary students through an additional examination.

# What Do You Study?

# **Architectural Engineering**

Theory of Architectural Planning Project Control on Building Construction Computer Aided Advanced Estimation Advanced Course in Steel Structures Advanced Course in Steel Structure Design Theory of Urban Design Advanced Theory of Urban Planning Principles of Noise Control Principles and Applications of Architectural Acoustics Principles of Building Facilities Theory of Architecture Design (1) Theory of Architecture Design (2) Advanced Theory of History of Oriental Architecture Advanced Theory of History of Korean Architecture Advanced Theory of History of Western Architecture Theory of Environmental Psychology Theory of Architecture Theory of Architectural Space Advanced Theory Of Contemporary Architecture Earthquake resistance design Structural building system Theory of modern architecture Construction Management Advanced Decision Methodology Safety Management in Construction Field Eco-housing design Architectural programming

Reinforced concrete Structural Analysis Advanced Construction Materials Methodologies for integrative Design Theory in Digital Architecture Building Information Modeling Practical Thesis Seminar

#### **Civil Engineering**

Advanced Structural Engineering Advanced Reinforced Concrete Structure Design of Structural Advanced Geo-Technical Engineering Advanced Foundation Engineering Advanced Urban Planning Advanced Surveying Engineering Applied Hydrology Water Resource Engineering Advanced Water and Waste Water Treatment And Disposal Introduction of Civil Engineering Environmental Impact Assessment Advanced Traffic Engineering Advanced Highway Construction Engineering Advanced Highway Engineering

#### **Mechanical Engineering**

Advanced Control Engineering Advanced Course of Applied Mathematics Advanced Design Engineering Advanced Dynamics Advanced Energy Conversion Advanced Fluid Dynamics Advanced Internal Combustion Engine Advanced Manufaturing Engineering Advanced Material Science Advanced Mechanical Vibration Advanced Solid Mechanics Advanced Thermodynamics Alternative Energy Automation In Manufacturing Combustion & Systems Composite Materials Conduction Heat Transfer Convective Heat Transfer Design of Thermal System F.E.M Fluid Machinerv Fluid Power And Fluidics Fluid System Design Heat Exchanger Design Measurement In Heat Transfer And Fluid Mechanics Mechatronics Metal Forming Optimal Control Practical Thesis Seminar Robotics Seminar Structural Dynamics Welding Engineering

#### **Industrial Engineering**

Mineral and Energy Engineering
Advanced Haulage Engineering
Advanced Resources and Safety
Special Issues on Resource Engineering
Research for Material Processing
Metallic Mineral Processing
Non-Metallic Mineral Processing
Applied Mineralogy
Applied Geology
Gem Mineralogy
Advanced Industrial Waste Treatment
Advanced Industrial Waste Water Treatment

Air Pollution Control Advanced Rock Mechanics Advanced Blasting Engineering Advanced Stress Analysis Advanced Electrical and EM Prospecting Advanced Seismic Prospecting Advanced Ground Water Engineering Advanced Industrial Sensors Characterization of Industrial Materials

#### Textiles Engineering and Cloth Design

Advanced Course of Fiber Material Advanced Fiber Physics Advanced Theory of Dyeing Advanced Instrumental Analysis Advanced Fiber Assemblies Advanced Weaving Process Physical Properties of Fiber Advanced Textile Finishing Advanced Textile Process System Analysis and Control Fashion CAD Fashion Design Fashion Research **Clothing Ergonomics** Applications of Advanced Textile Materials Textile Materials and Product Evaluation Textile CAD Dyeing for Fashion Design Information Analysis and Marketing Research Analysis of Consumer Behavior Advanced Fashion Marketing Product Planning and Development

## Industrial Engineering

Advanced Human Engineering Advanced Inventory Management Advanced Operations Research Advanced Project Management Advanced Service Engineering Advanced Statistics Advanced Supply Chain Management Advanced Theory of Constraints Advanced Topics on Digital Manufacturing Systems Advanced Topics on Human Interface Engineering Advanced Topics on Knowledge Engineering Case Studies of Industrial Engineering Case Studies of Systems Engineering Computer Programming Decision Theory Engineering of Product Development Evolutionary Algorithms Experimental Designs Management of Technology Marketing and Management Strategy Practical Thesis Seminar Probability Theory and Its Applications Production Management Quality Control Simulation and S/W Practice Special Topics in Industrial Engineering System Safety Engineering Theory and Practice of Creative Problem Solving

#### Biochemical Engineering

Advanced Bioindustry Advanced Industrial Microbiology Advanced Aquaculture Advanced Fisheries Food Processing Advanced Fisheries Business Management Advanced Biomedical Material Advanced Animal and Plant Tissue Cultures Advanced Agriculture Biotechnology Advanced Soil Fertility Advanced Crop Production Advanced Genetic Engineering Advanced Fermentation Engineering Advanced Separation and Purification for **Biochemical Material** Advanced Marine Ecology Advanced Marine Biotechnology Advanced Fisheries Dynamics Advanced Clean Technology Advanced Bioprocess Engineering

Advanced Food Engineering Advanced Instrumental Analysis Seminar Practical Thesis Seminar

# Electrical • Electronics • Computer Engineering

Electrical Engineering Electro Magnetic Field Theory Advanced Power Electronics Topics in Renewable Energy Systems Power System Control Advanced Electric Power System Analysis Power System Operation Alternative Energy Conversion Theory Photo-Electric Energy Conversion High Voltage Insulation Theory Automation of Industrial Process Advanced Digital Control Advanced Electrical Applications Electric Materials Engineering Electric Network Theory Power Transformation Theory Lighting System Design and Applications EMC/EMI Switching Power Supply Design Special Electric Machinery Automatic Measurement System Power System Dynamic Modeling Energy Storage System Engineering Seminar Practical Thesis Seminar Electronics Engineering

Computer Architecture Advanced semiconductor design methodology High Frequency Circuit Design Opto-Electronics Digital System Advanced Digital Control Digital Image Processing Robotics Multimedia Systems Semiconductor Device Process Engineering Semiconductor Device Physics and Technology Nonlinear Control Practical Thesis Seminar Study for Industrial Thesis Signal Processing Antena Engineering Mobile Communication Engineering Electronic Device Engineering Electromagnetic Field Theory Information Theory Control Application Engineering Intelligent Control Engineering Intelligent Control Theory Integrated Circuits Engineering Next generation memory semiconductor design Next Generation Wireless Communication Engineering Next Generation Mobile Communication Engineering Next Generation Information Communication Engineering Next Generation Communication Engineering Telecommunications network Communication Theory Stochastic Process

#### **Computer Engineering**

Signals and Systems Theory Communication Theory Communication System Engineering Computer Network Data Communication Digital System Design Computer Architecture Principles VLSI Design Data Base Data Structure System Software Operating System Artificial Intelligence Computer Image Processing Multimedia and Application Project Design and Seminar Theory of Probability and Statistics Mobile Communication Engineering Embedded Hardware Computer Security Study for Industrial Thesis Pratical Thesis Seminar Digital communications and channel coding

#### **Materials Engineering**

X-Ray Diffraction Advanced Metallurgical Thermodynamics Special Topics In Metals And Alloys Sintering And Crystal Growth Advanced Foundary Engineering Advanced Ferrous Process Metallurgy Materials For Special Uses Advanced Course Of Surface Processing Theory Of Phase Transformation Advanced Welding Engineering Dislocation Theory Advanced Inorganic Chemistry Advanced Solid Thermodynamics Advanced Crystallography Corrosion and Protection of Metal Metallic Biomaterials Nano-materials and Processing Bioengineering Seminar Advanced Instrumental Analysis Practical Thesis Seminar

## **Chemical Engineering**

Advanced Polymer Material Advanced Polymer Chemistry Fine Chemical Process Adsorption Phenomena Organic Synthesis Theory Advanced Polymer Processing Advanced Functional Polymer Advanced Process Control Advanced Chemical Reaction Engineering Advanced Chemical Engineering Thermodynamics Heat Transfer for Chemical Engineering Fluid Dynamics for Chemical Engineering Mass Transfer Advanced Separation Process Chemical Engineering Design Catalyst Engineering Energy Engineering Technical Informations and Patent Strategies Advanced Instrumental Analysis Seminar Practical Thesis Seminar

#### **Environment and Energy Engineering**

Advanced Air Pollution Control Advanced Air quality management Advanced Atmospheric Chemistry of Air Pollution Advanced Environmental Hygiene Advanced Environmental Impact Assessment Advanced Environmental Microbiology Advanced Renewable Energy Advanced Waste Water Engineering Advanced Water and Wastewater Engineering Advanced Water Quality Management Environmental Hydrology Environmental Organic Chemistry Environmental Policies and Management Hydrogen Energy Intellectual Property Protection in Environmental Engineering Microbial Fuel Cell Technology Modern Renewable Energy Technology Practical Thesis Seminar Principles and Design of Hazardous Gas Treatment Soil Pollution treatment and Management Solid Waste Management And Treatment

#### Department of Eco-friendly Agriculture

Environmentally Friendly Agricultural Life Advanced Plant Genetics & Breeding Advanced Plant Physiology & Ecology Advanced Food Crops Advanced Special Crops Advanced Vegetable Crops Advanced Floriculture Advanced Insect Pest Advanced Plant Pest Advanced Pomology Special Studies Research for the Master's Degree Advanced Agriculture Advanced Fertilizers Advanced Biochemistry Advanced Plant Nutrition Advanced Applied Microbiology Advanced Chemistry of Natural Products Advanced Soil Science Topics Advanced Environmental Toxicology Agricultural Marketing Farm Management Advanced Agricultural Finance Agricultural Policy Advanced Rural Survey

#### Eco-friendly Animal Husbandry

Advanced Animal Reproduction Advanced Animal Food Processing Technology Advanced Animal Breeding Sustainable Animal microbiology Advanced Animal Metabolomics Sustainable Forage Production & Utilization Animal Bioactive Chemicals Advanced Animal Production & Welfare Advanced Beef Production Advanced Beef Production Advanced Animal Population Genetics Advanced Animal Biotechnology Advanced Germ Cells Advanced Animal experiment design Advanced Animal Hygiene Industrial Paper Seminar

#### Department of Food and Food Service Industry

Practical Thesis Seminar Advanced Food Processing Advanced Food Engineering Food Functionality Advanced Food Design Engineering Advanced Food Microbiology Advanced Food Biochemistry Advanced Food Ingredient Utilization Advanced Food Hygiene Advanced Food Preservation Advanced Food Packaging Advanced Food Chemistry Advanced Nutrition Chemistry

#### Rural Resources & Environmental Engineering

#### Rural Engineering

Landscape Planning & Practices Agricultural Marketing Rural Systems Engineering Rural Watershed Management Rural Surveying Methodology Rural Development Theory Non-point Source Pollution Management Practical Thesis Seminar Advanced Course in Structural Analysis Rural Ecosystem Remediation Advance Village Planning Advanced Soil Science Topics Environmentally Sustainable Foundation Design

#### Rural Tourism & Local Development

Landscape Planning & Practices Green Care Policy & Planning Interpretation for Agriculture & Rural Laws Agricultural Maketing Rural Development Planning Rural Economy Development Rural Tourism/ Development Seminar Rural Tourism Planning and Managment Rural Villages Improvement Rural Development Theory Practical Thesis Seminar Forestry Tourism Planning Place Marketing Theory Rural Community Development Soil Environment Remediation Topics

#### Plant Resources Production & Utilization

Advanced Plant Genetics & Breeding Advanced Plant Physiology & Ecology Advanced Food Crops Advanced Special Crops Advanced Vegetable Crops Advanced Floriculture Advanced Insect Pest Advanced Plant Pest Advanced Pomology Special Studies Research for the Master's Degree

## Forest Resource

Advanced Dendrology Advanced Erosion Control Engineering Advanced Forest Civil Engineering Advanced Forest Ecology Advanced Mycology Advanced Silviculture Advanced Wood Mechanics Forest Environmental Law Forest Polic Forest Proctection Liggnocellulosic biorefinery Muchanics of Materials Practical Thesis Seminar Topics Wood Anatomy & LAD Wood Chemistry Wood Construction Mechanics Wood Engineering Wood Machining and Drying Wood Physics

#### Biosystems

Advanced Agricultural Processing Engineering Agricultural Mechatronics Agricultural Fluid Power System Analysis of Agricultural Information Advanced Farm Machinery 1 Practical Thesis Seminar Advanced Data Communication and Networking for Biosystems Automation of Agricultural Systems Advanced Biosystems Engineering Acquisition and Analysis of Bio-information Advanced Food Processing Machinery Advanced applied Biological Engineering Advanced precision Agricultural Engineering Topics

#### **Electronics & Computer Engineering**

Digital System Engineering Advanced Opto-Electronics Electronic Device Engineering Modern Robotics Intelligent Control Engineering Signals and Systems Theory Digital Signal Processing Computer Network Data Communication Engineering Introduction to Communication System Engineering Digital Communication Engineering Next Generation Information Communication Engineering Multimedia Signal Processing Advanced Multimedia Systems Multimedia Applications Advanced Computer Security Image and Communication System Digital Image Processing Computer Architecture Advanced Embedded System Design Database Processing Advanced Data Structure Software Engineering Operating System Principles Advanced Artificial Intelligence Introduction Computer Vision Introduction to Pattern Recognition Neural Network and Fuzzy Systems Web Engineering Ubiquitous Computing Probability and Statistical Theory Special Topics in Computer and Electronics Engineering Project Management Research Seminar for the Master's Degree and Technical Writing Study for Industrial Thesis Small Business Technology Management Advanced Electronic Circuits Introduction to Optical Communication System Advanced SoC Design

Graduate School of Industry-University Cooperation

\_\_Contact Information Phone: +82-61-659-7208 Fax: +82-61-659-7209 E-mail: won@jnu.ac.kr

# Graduate Studies in the Graduate School of Industry-University Cooperation

The Graduate School of Industry-University Cooperation (GIUC) was established in November 1993 and initially consisted of three master's degree programs. The aim of the School is to familiarize students with industrial technology theories and applications and help them become experts in high-tech industries.

There are 20 master's degree programs offered through the GIUC, including programs in Corporate Management, Foreign Trade Management, Logistics and Transportation, Cultural Industry, Visual Information Design, Electronic Communication Engineering, Ocean Civil Engineering, Environmental System Engineering, Mechanical Design Engineering, Refrigeration Engineering, Chemical System Engineering, Electrical Engineering, Computer Engineering, Biotechnology Engineering, Automotive System Engineering, Mobile Soft, Multimedia Contents, Architectural Design, and Global Business Administration

## Degree Requirements

Anyone who has graduated from a four-year college and has been awarded a bachelor's degree, or who has a bachelor's degree or master's degree from a foreign university is eligible for application for admission after passing the appropriate entrance exam.

The length of coursework shall normally be two and a half years. Class days must number 15 weeks or more each semester. A minimum of 24 credits are required for completion of the master's degree. Students must also pass two types of additional exams for completion of the master's degree. One is the foreign language exam (English, for the most part), and the comprehensive exam consisting of at least three major courses.

The Department Head appoints a member of his faculty as an academic advisor to individual students within the first semester, to guide students in their selection of coursework and thesis subjects.

# What Do You Study?

Department of Business Administration	Topics in Small and Medium Enterprise
Major in Business Administration	Topics in Fisheries Economics
Thesis	Topics in Fisheries Marketing
Topics in Business Administration	Topics in Organizational Behavior
Topics in Marketing	Topics in Quantitative Business
Topics in Financial Management	Analysis
Topics in Quality Management	Topics in Fishing Ground Management
Topics in Marketing Management	Topics in Fisheries Market Structure
Topics in Accounting Principles	Topics in Cooperatives

Topics in Food Economics Topics in Security Management Topics in Production Management Topics in Consumer Behavior Analysis Topics in Financial Analysis Topics in Environment of International Business Topics in Tax Accounting Topics in Fisheries Business Management

# Professors

- Gye yul Lee, Ph.D.
   [Professor, Corporate Economics, kyleeo@jnu.ac.kr]
- Yeon su Kim, Ph.D.
   [Professor, Personnel Management, mgmool@jnu.ac.kr]

# What Do You Study?

## **Department of Business Administration**

Major in Management Research Methods in Administration Topics in International Marketing Topics in International Trade Theory Topics in Letter of Credit Topics in International Financial Management Topics in Foreign Direct Investment Topics in Overseas Regional Economics Topics in Economic Integration Topics in International Financial Derivatives Case Study on International Commerce Topics in Electronic Commerce International Trade Contract and Marine Insurance Case Study on Distribution and Logistics Topics in International Business Management

# Professors

- Cheol Lee, Ph.D. [Professor, International Economy, clee1@jnu.ac.kr]
- Bok-jae Park, Ph.D.

Topics in Personnel Management Topics in Wage Management Topics in Strategic Management Topics in Fisheries Policy Advanced Fisheries Law System Topics in International Business Topics in International Marketing

Gyung soo Jung, Ph.D. [Professor, Accounting, cks@jnu.ac.kr]
Byung Se Han, Ph.D. [Professor, Marketing, bshan@jnu.ac.kr]
Seok-gang Park, Ph.D. [Assistant Professor, Strategic Management,

parksg1214@jnu.ac.kr]

Topics in Theory of Foreign Exchange Topics in International Business Strategy Topics in International Finance Topics in Multinational Enterprise Topics in Marketing Management Topics in Econometrics Topics in International Trade Policy Topics in International Resource and Environmental Economics Topics in Corporate Foreign Exchange Risk Management Topics in Commercial Practice of International Trade Topics in EDI Case Study on International Logistics International Negotiation and Foreign Commercial Custom

[Professor, International Commerce, bjpark73@jnu.ac.kr]Gil-sung Kim, Ph.D.[Professor, International Management, kikis@jnu.ac.kr]

• Young-moon Kang, Ph.D.

# What Do You Study?

#### **Department of Business Administration**

Major in Transportation and Logistics Master's Thesis Research Advanced Research Methodology Advanced Transportation Planning Advanced Traffic Engineering Urban Public Transportation Advanced Study on National and Regional Planning Advanced Study on Transportation Polices Transportation Network Theory Urban Modeling Seminar e-Supply Chain Management Seminar Global Logistics Seminar Service Management Seminar Performance Management Seminar Network Theory Port Management Seminar Material Handling System Computer Simulation Advanced Analysis of Traffic Flow

# Professors

- Byung-In Park, Ph.D.
   [Professor, Corporate Distribution, bipark@jnu.ac.kr]
- Sang-Gu Kim, Ph.D.
   [Professor, Transportation Operation, kim-sg@jnu.ac.kr]
- Jong-Wook Bae, Ph.D.
   [Professor, Distribution System, jwbae@jnu.ac.kr]

# What Do You Study?

# **Department of Cultural Industries**

Major in Cultural Industries

[Professor, International Commerce, wto3@jnu.ac.kr]

Seminar on Traffic Operations Advanced Database Management for Transportation and Logistics Information Technology Application Advanced Logistics Information System Information Technology and Management Innovation Economic Evaluation for Transport Infrastructure Investment Urban Logistics Planning Theory Freight Movement Theory Transportation Economics Seminar Transportation Planning Seminar Advanced Green Logistics Neural Networks Advanced Intelligent Transport System Logistics Polices Seminar Advanced Industrial Location Theory Advanced Capacity Analysis Advanced Traffic Control

- Chang-Hyun Kim, Ph.D. [Associate Professor, Distribution Major, chkim@jnu.ac.kr]
- Chang-Ho Choi, Ph.D.
   [Associate Professor, Freight Transportation, jc1214@jnu.ac.kr]
- Seung-Sik Chin, Ph.D. [Associate Professor, Environmental Distribution, shin2han@jnu.ac.kr]

Culture and Industry Introduction to Korean Culture Study of Comparative Culture Theories of Mass Culture Aesthetics of Art Cultural Criticism Local Culture Research of Korean Culture I Research of Korean Culture II Comprehension of Assets Research of Cultural Industry Management Research of Cultural Industry Policy Cultural Industries Methodology

# Marketing Research in Cultural Industry Cultures and Communications E-Business in Culture Survey of Culture Culture and Tourism Study on Tourism Policy Cultural Information and Mass Media Analysis of Cultural Contents Planning and Direction of Culture Cultures and Films

# Professors

• Jun-ok Kim, Ph.D. [Professor, kjok@jnu.ac.kr]

# What Do You Study?

## **Department of Visual Information Design**

Major in Art and Design Theory of Multimedia Design Art Workshop 1 Design Art Workshop 3 Western Art Compared with Oriental Art Major Photography 1 Expression and Media 1 Major Photography 3 Studies in Work 1 Brand Clinic Theory of Design Representation Design Psychology Advertising Design Advanced Theory of Marketing Illustration Essay Product in Culture

# Professors

- Eel-kwon Kim, Ph.D. [Professor, Visual Art and Digital Media Design, eelkwon@jnu.ac.kr]
- Young-sang Seo, .Ph.D. [Professor, Photograph Art, ysang@jnu.ac.kr]

Theory of Visual Information Design Motion Graphics Workshop Design Art Workshop 2 Design Art Workshop 4 Theory of Modern Visual Art Major Photography 2 Expression and Media Major Photography 4 Studies in Work 2 Design Comment Theory of Design Future Package Design Theory of Design Development Sign and Typography Visual Environmental Design Psychology of Visual Perception Presentation Research

- Jae-sung Yun, .Ph.D.
   [Professor, Visual Design, asvi84@jnu.ac.kr]
- Seok Choi, .Ph.D. [Professor, Visual Design,

# What Do You Study?

## **Department of Industrial Engineering**

Majorin Electronic Communication Engineering
Advanced Data Communication
Advanced Electro-Magnetics
Graph Theory
Advanced Optical Communication
Digital Signal Processing
Data Communication and New Media
Measurements Engineering
Advanced Satellite Communication
Algorithms

# Professors

- Hee-jong Suh, Ph.D.
   [Professor, Computer Communication Networking, hjsuh@jnu.ac.kr]
- Ki-Ryang Cho, Ph.D. [Professor, Optimization, krcho@jnu.ac.kr]
- Seung-yeop Rhee, Ph.D. [Professor, Microwave Engineering,

# What Do You Study?

# **Department of Industrial Engineering**

Major in Ocean Civil Engineering Research for Master's Degree Programing for Applied Civil Engineering Theory of Elasticity Advanced Soil Mechanics Advanced Planning Theory Advanced Hydrology Advanced Transportation Planning Plastic Analysis of Structures Finite Element Method Earthquake Engineering EMI and EMC Data Communication Network Digital Logic Design Advanced Digital Engineering Acoustics Engineering Advanced Microwave Advanced Image Communication Advanced Automatic Control Advanced Telecommunication Regulations Advanced Antennas Mobile Communication Engineering

ysrsy@jnu.ac.kr]

- Dae-Ik Kim, Ph.D. [Professor, Integrated Circuit Design, daeik@jnu.ac.kr]
- Han-Seung Jang, Ph.D.
   [Assistant Professor, IoT & Machine-to-Machine Communications, Smart Grid, hsjang@jnu.ac.kr]

Advanced Hydraulics Advanced Coastal Hydraulics Earth Structures Coastal Hydraulic Models Advanced Rock Mechanics Advanced Foundation Engineering Advanced Reinforced Concrete Structural Dynamics Advanced Urban Planning Analysis of Special Structures Advanced Pre-stressed Concrete Water Resource System Advanced Harbor Engineering Advanced Ocean Soil Mechanics

# Professors

- Ik-hyo Lee, Ph.D.
   [Professor, Geotechnical Engineering, ikhyo@jnu.ac.kr]
- Jae-min Kim, Ph.D.
   [Professor, Dynamic Structural Engineering, jm4kim@jnu.ac.kr]
- Dae-hyon Kim, Ph.D.
   [Professor, Highway and Traffic Engineering, daehyon@jnu.ac.kr]
- Jung-won Huh, Ph.D.
   [Professor, Structural Reliability Engineering,

# What Do You Study?

## **Department of Industrial Engineering**

Major in Computer Engineering Advanced Operating System Advanced Artificial Intelligence Advanced Computer Graphics Computer Architecture Soft Computing Advanced Database System Advanced Data Communication Digital Integrated Circuits Advanced Image Processing Interconnection Network System MOS Integrated Circuit Seminar I

# Professors

- Chang-Soo Jang, Ph.D.
   [Professor, High Performance Computer, csjang@jnu.ac.kr]
- JaeHung Yoo, Ph.D. [Professor, Graphics. jhy@jnu.ac.kr]

# Pollution Diffusion

jwonhuh@jnu.ac.kr]
Young-sang Kim, Ph.D.
[Professor, Geotechnical Engineering, geoyskim@jnu.ac.kr]
Dong-yeob Han, Ph.D.
[Associate Professor, Geometrics Information Engineering, hozilla@jnu.ac.kr]
Jong-in Lee, Ph.D.
[Professor, Coastal and

Harbor Engineering, jilee@jnu.ac.kr]

Seminar II Digital Signal Processing Advanced Software Engineering Super Computer System Computer Vision Advanced Multimedia VLSI Test VLSI System Design Artificial Intelligence Application Advanced Pattern Recognition Advanced Computer Networks Advanced Distributed Procession Advanced Algorithm

- Kang-Chul Kim [Professor, VLSI Design, kkc@jnu.ac.kr]
- Chang-Gyoon Lim [Professor, Artificial Intelligence, clim@jnu.ac.kr]

#### kgj@jnu.ac.kr]

• Gwang-Jun Kim [Associate Professor, Computer Communication,

# What Do You Study?

#### **Department of Industrial Engineering**

Major in Environmental System Engineering

Advanced Air Pollution Engineering Advanced Air Pollution Management Modeling of Atmospheric Diffusion Advanced Industrial Wastewater Treatment Research for Master's Degree Noise Control Engineering

## Professors

- Woo-Bum Lee, Ph.D. [Professor, Water and Wastewater Treatment, woolee@jnu.ac.kr]
- Byeong-Cheon Paik, Ph.D.
   [Professor, Water System and Microbiology, bpaik@jnu.ac.kr]
- Seong-Gyu Seo, Ph.D.
   [Professor, Air Pollution Engineering, sseo@jnu.ac.kr]

# What Do You Study?

#### **Department of Industrial Engineering**

Major in Mechanical design Engineering Research for Thesis Random Data Machine Tool Research Advanced Manufacturing Processes Theory of Elasticity Advanced Vibration Theory Advanced Measurements Engineering Advanced Fluid Mechanics Advanced Thermodynamics Advanced Water Pollution Engineering Advanced Water Treatment Engineering Applied Hydrology Advanced Remediation Engineering Advanced Waste Treatment Engineering Advanced Waste Control & Management Advanced Wastewater Treatment Advanced Environmental Analysis Advanced Environmental System Engineering

Weon-Joon Lee, Ph.D. [Professor, Waste Engineering, leewj@jnu.ac.kr]
Eun Sik Kim, Ph.D.

[Assistant Professor, Environmental Materials and Membrane Water Treatment, @jnu.ac.kr]

 Min Jin Hwang, Ph.D.
 [Assistant Professor, Industrial Environmental engineering, vip7080@jnu.ac.kr]

#### Casting

Mechanics of Composite Materials Vibration of Plate and Shell Noise and Vibration Engineering Advanced Automatic Control Advanced Robotics Boundary Layer Theory Advanced Combustion Engineering Finite Element Method Micromachines Nonlinear Vibration Theory of Composite Plates Turbulence Gas Dynamics Experimental Methods in Thermal Engineering Computational Fluid Dynamics Computational Turbulence Modeling Heat Power Multi-Phase Flow Hydraulic and Pneumatic Control System Applied Mathematics Materials for Machines Fracture Mechanics Advanced Machine Design Continuum Mechanics Numerical Control Advanced Fluid Machinery Internal Combustion Engines Advanced Welding Process Mechanical Behavior of Materials

# Professors

- Sang-Kyoo Park, Ph.D.
   [Professor, Fluid Engineering And Turbulence, psk@jnu.ac.kr]
- Kang Chung, Ph.D.
   [Professor, Noise and Vibration Engineering, Numerical Analysis And Structural Vibration, ckang@jnu.ac.kr]
- Young-Wan Kim, Ph.D.

# What Do You Study?

# **Department of Industrial Engineering**

 Major in Refrigeration and Air-Conditioning Engineering
 Advanced Refrigeration Engineering I
 Advanced Air Conditioning Engineering I
 Advanced Food Refrigeration I
 Advanced Engineering Mathematic
 Advanced Heat Transfer
 Advanced Fluid Dynamics Advanced Dynamics Numeral Stresses Analysis Experiment for Fluid Engineering Advanced Heat Transfer Advanced Thermal Engineering Numerical Analysis Structural Vibration Optimal Design Application of Image Thermal System Design Energy Conversion Engineering Energy and Environment Convective Heat Transfer Radiation Heat Transfer Transport Phenomena Turbo Machinery Tribology Aeroacoustics

[Professor, Mechanical Design and Mechanics of Composite Materials, wannkim@jnu.ac.kr]
Ki-Seong Kim, Ph.D.
[Professor, Heat and Particle Imaging Velocimeter, sngkim@jnu.ac.kr]
Seung-Uk Ko, Ph.D.
[Assistant Professor, Dynamic Control and Biomechanics, kos2@jnu.ac.kr]

Advanced Thermal Engineering Advanced Refrigeration Mechanical Design I Advanced CAD/CAM Advanced Environmental Engineering I Research for Master's Degree Advanced Material Engineering Advanced Refrigeration Engineering II Advanced Air Conditioning Engineering II Advanced Food Refrigeration II Advanced Refrigeration Mechanical Design II Advanced Cold Chain Advanced Energy Utilizing Engineering

# Professors

- Min-Young Kim, Ph.D.
   [Professor, Food Refrigeration Engineering, kmy@jnu.ac.kr]
- Jong-Taek Oh, Ph.D.
   [Professor, Heat Engineering (Refrigeration Engineering), ohjt@jnu.ac.kr]
- Ki-Won Park, Ph.D. [Professor, Air Conditioning Engineering,

# What Do You Study?

#### **Department of Industrial Engineering**

Major of Chemical System Engineering Advanced Engineering Mathematics Advanced Organic Chemistry Advanced Chemical Reaction Engineering Polymer Structure Advanced Process Control Advanced Engineering Physical Chemistry Advanced Chemical Engineering Thermodynamics Reaction Kinetics Advanced Numerical Analysis Advanced Fine Chemistry New Material Engineering Advanced Catalyst Engineering Applied Polymer Engineering

## Professors

Youn-Sop Kim, Ph.D.
[Professor, Polymer Chemistry, yskim1@jnu.ac.kr]
Ho-Joon Seo, Ph.D.
[Professor, Catalytic Reaction Engineering, hjseo@jnu.ac.kr]
Oh-Yun Kwon, Ph.D. Advanced Sanitary Engineering Advanced Control Engineering Advanced Ultra Cryogenics-Engineering

- pkw@jnu.ac.kr]
- Young-Woo Shin, Ph.D.
   [Professor, Mechanical Engineering, (Material Forming), shin5381@jnu.ac.kr]
- Yongseok Jeon, Ph.D.
   [Professor, Energy, Refrigeration and Heat Engineering, silverriver@jnu.ac.kr]

Advanced Materials Science Advanced Transport Phenomena Fluid Phase Equilibria Nano Chemical Technology Polymer Rheology Advanced Inorganic Industrial Chemistry Interfacial Chemistry Reactor Analysis Design Research for Master's Thesis Advanced Chemical Engineering Safety Advanced Environmental Chemical Engineering Advanced Nano and Bioengineering Advanced Bioseparation Engineering Advanced Biopolymer Advanced Tissue Engineering

[Professor, Physical Chemistry, oykwon@jnu.ac.kr]
Hun-Soo Byun, Ph.D.
[Professor, Thermodynamics and Separation Processes, hsbyun@jnu.ac.kr]
Soon-Do Yoon, Ph.D.
[Assistate Professor, Process and Control of Chemical Engineering Materials, yunsd03@jnu.ac.kr] • Heon-Ho Jeong, Ph.D.

# What Do You Study?

# **Department of Industrial Engineering**

Major in Biotechnology
 Advanced Botany
 Advanced Genetics
 Protein Chemistry
 Bio-resource Engineering
 Topics in Ecology
 Topics in Breeding
 Topics in Functional Food
 Topics in Microbial Engineering
 Topics in Fermentation Technology
 Topics in Bioreactor Engineering
 Advanced Microbiology
 Advanced Cell Technology

# Professors

- Gyu-Hwa Chung, Ph.D.
   [Professor, Plant Genetics, chung@jnu.ac.kr]
- Myeong-Rak Choi, Ph.D.
   [Professor, Food Biotechnology, mrcheo@jnu.ac.kr]
- Jin-Man Kim, Ph.D.
   [Professor, Molecular Biology, inmank@jnu.ac.kr]
- Jong-Duck Kim, Ph.D.

# What Do You Study?

#### **Department of Industrial Engineering**

Major in Electrical and Semiconductor Engineering Advanced Electromagnetics Network Analysis and Synthesis Power Electronics Systems Advanced Electrical Machinery Economic Engineering of Power System [Assistant Professor, Bio-application Engineering, jeonghh29@jnu.ac.kr]

Advanced Zoology Advanced Food Biotechnology Advanced Molecular Biology Advanced Cell Culture Bioprocess Engineering Advanced Bioactive Material Fermentation Technology Special Topics in Marine Ecology Special Topics in Breeding Special Topics in Food Biotechnology Special Topics in Genetic Engineering Special Topics in Enzyme Technology Advanced Culture Engineering Research for Master's or Doctoral Degree

[Professor, Biological Pharmaceutics, pasteur@jnu.ac.kr]

 Seung-Hwan Yang, Ph D. [Associate Professor, Cell Molecular Biotechnology, ymichigan@jnu.ac.kr]

 Ji-Heon Noh Ph D. [Associate Professor, RNA genomics, journi@chonnam.ac.kr]

Fuzzy Theory VLSI Process Technology Intelligent Control Technology Adaptive Control Technology Advanced Microprocessor Advanced Digital Image Processing Advanced Pattern Recognition Semiconductor Process VLSI Circuit Design Advanced Plasma Engineering Dielectric Engineering Power System Simulation Power System Operation Advanced Linear Control Theory Advanced Non-Linear Control Theory Fuzzy-Neuro Control Theory Plant Diagnosis Theory Neuro Computing Circuit Design and Simulation Advanced Electronics Advanced Power Electronics Neural Network Theory Advanced Power System Engineering

# Professors

- Nam-Sup Choi, Ph.D.
   [Professor, Power Electronics, nschoi@jnu.ac.kr]
- Yi-Gon Kim, Ph.D.
   [Professor, Automatic Control, yigon@jnu.ac.kr]
- Buhm Lee, Ph.D. [Professor, Power Systems, buhmlee@jnu.ac.kr]
- Yang-Hee Joung, Ph.D. [Professor, VLSI, Materials, jyanghee@jnu.ac.kr]

# What Do You Study?

# **Department of Industrial Engineering**

Major in Automotive Engineering Research Topics for Master's Degree Advanced Dynamics Advanced Vibration Theory Advanced Solid Mechanics Experiment for Stress Analysis Advanced Combustion Engine Advanced Fluid Mechanics Reliability Engineering of Power System Advanced Control Theory Advanced Semiconductor Engineering Advanced Digital Control Engineering Advanced Robust Control Advanced Modern Control Robot and Machine Vision Thin Film Engineering Semiconductor Physics Sensor Engineering Stability Engineering of Power System Advanced Chaos Engineering Emotion Engineering Biometrics System

- Young-Chul Bae, Ph.D. [Associate Professor, Chaos Synchronization, ycbae@jnu.ac.kr]
  Kyoung-Min Kim, Ph.D.
- [Professor, Vision and Signal Processing, kkm@jnu.ac.kr]
- Seong-Jun Kang, Ph.D.
   [Professor, VLSI, Processing and Design, sjkang@jnu.ac.kr]

Applied Numerical Method of Engineering Advanced Automatic Control Advanced Working Machine Tribology Advanced Numerical Dynamics Advanced Vehicle Dynamics Finite Element Analysis Advanced Figure Mechanical Behavior Strength Design of Automotive Component Advanced Thermodynamics Advanced Heat Transfer Advanced Mechatronics

# Professors

- Kyung-Jo Park, Ph.D.
   [Professor, Dynamics and Vibration, kjpark40@jnu.ac.kr]
- Chung-Youb Kim, Ph.D. [Professor, Solid Mechanics, kimcy@jnu.ac.kr]
- Hei-Cheon Yang, Ph.D. [Professor, Thermal and Fluid Engineering,

# What Do You Study?

# **Department of Industrial Engineering**

Major in Multimedia
 Master's Thesis Research I
 Master's Thesis Research II
 Web-Programming
 Advertisement and Market Research Seminar
 Special Topics on Multimedia Database
 Distributed Multimedia
 Software Development Management
 Special Issues on Information Systems
 Special Issues on Graphic and Moving
 Image Processing
 Management Science and Operations Research
 Multimedia Authoring Basics

# Professors

- Jun-Sug Lee, Ph.D.
   [Professor, MIS, iexpert@jnu.ac.kr]
- Kyoung-Soo Kim, Ph.D.
   [Associate Professor, Digital Animation and Web Design, ks@jnu.ac.kr]

# What Do You Study?

# **Department of Industrial Engineering**

Major Required for Masters Master's Thesis Research Mechanical Instrumentation Theory and Application Advanced Manufacturing Special Machining

hcyang@jnu.ac.kr]
Hoon Kim, Ph.D.
[Associate Professor, Mechanics Control and Measurements, khoon97@jnu.ac.kr]
Bong-Ho Moon, Ph.D.

[Associate Professor, Tribology, mbh@jnu.ac.kr]

Logistics Information Systems Artificial Intelligence Special Issues on Electronic Commerce Artificial Intelligence Application New Multimedia Technology Seminar Web-based Decision Making Seminar Venture Business Start-up Seminar Virtual Reality Computer Vision Special Topics on Software Quality Multimedia Advertisement Multimedia Game Research Multimedia Authoring Application

 Jeong-Seon Park, Ph.D.
 [Associate Professor, Programming, Pattern Recognition, jpark@jnu.ac.kr]

Topics in Operating System Topics in Computer Network Topics in Algorithm Advanced Programming Languages Topics in Database System Advanced Information Retrieval System Topics in Computer Architecture Topics in Information Security Topics in Mobile Platform Topics in Mobile Communication Internet Information System

#### Professors

- Hyung-Hyun Cho, Ph.D.
   [Professor, Database and Security. hhcho@jnu.ac.kr]
- Soon-Hee Han, Ph.D.
   [Professor, Compiler and Mobile System. shhan@jnu.ac.kr]
- Young-Man Kang, Ph.D.

#### What Do You Study?

#### **Department of Industrial Engineering**

Major in Architectural Design Computer-aided Architectural Design Theory of Architectural Planning Methodology of Architectural Planning Theory of Architectural Space Theory of Architectural Project Theory of Architectural Beauty Aesthetics of Architecture Theory of Architectural Design 1 Theory of Architectural Design 2 Theory of Architectural Design 3 Theory of Architectural Design 4 Methodology of Architectural Design Psychology of Architecture Architectural Environment Theory of Design's Valuation

#### Professors

• Hyun-tae Kim, Ph.D. [Professor, Architecture Planning and Design, Theory of Compiler Construction Advanced Object-Oriented System Topics in Mobile Database Design Topics in Distributed Processing System Topics in Software Engineering Topics in Mobile Multimedia System Topics in Mobile System

[Professor, Computer Network and Digital Broadcasting Systems ymkang@jnu.ac.kr]
Hee-Taek Ceong, Ph.D.
[Professor, Distributed Systems and Multimedia htceong@jnu.ac.kr]

Theory of Education Facility's Design Research for the Master's Degree Theory of Complex's Design Theory of City Planning Theory of Urban Design Methodology of Urban Design 1 Methodology of Urban Design 2 Theory of Welfare Facility's Design Theory of Waterfront Theory of Medical Facility's Design Japan and East History of Architecture Theory of Japan and East of Architecture Theory of Garden's Design Theory of Housing Theory of Korea's Architecture Theory of Modern Architecture

htkim@jnu.ac.kr] • Chan Park, Ph.D. [ Professor, Architecture Decoration and History, chan@jnu.ac.kr]

- Joo-song Jung, Ph.D.
   [Professor, Architecture Planning and Design, jjseong@jnu.ac.kr]
- Kum-ho Chung, Ph.D.

[Professor, Architecture Planning and Design, kumho@jnu.ac.kr]
Jun Taek Kim, Ph.D.
[Professor, Architectural Design and urban Design, juntaek.kim@jnu..ac.kr

### ■ What Do You Study?

#### **Department of Industrial Engineering**

■ Major in Global Master of Business

#### Administration

Business administration	e-business Strategy
Business Korean Language	Global Management
Marketing Strategy	Big data & business strategy
Business Korean Language 2	

#### Professors

- Won-il CHO, Ph.D. [Professor, Global Master of Business Administration, mengzi@jnu.ac.kr]
- Joeng-Su Park, Ph.D.
   [Professor, Global Master of Business Administration, joengsu@jnu.ac.kr]

Graduate School of Fisheries and Ocean Sciences *\_\_Contact Information* Phone: +82-61-659-7108 Fax: +82-61-659-7109 E-mail: love@jnu.ac.kr URL: http://gradsea.jnu.ac.kr

#### Graduate Studies in the Graduate School of Fisheries and Ocean Sciences

The Graduate School of Fisheries and Ocean Sciences was authorized by the Ministry of Education to open eight academic units (Department of Aquaculture, Ocean Environmental System Program, Department of Ocean Engineering, Department of Marine Production Management, Power System Engineering, Marine Food Science and Technology, Department of Aqua life Medicine) with an entrance quota of 30 applicants in October 2005. The Graduate School of Fisheries and Ocean Sciences offers night classes, and its master's program requires two-and-a-half years to complete. Applicants who apply for any program in the school are required to hold a bachelor's degree from a domestic or international university. This Graduate School aims to educate students on basic and practical theories and to provide research development that is applied to harbors, marine transport, marine resources, fishing industries, fish-raising industries, marine bio-manipulation, and food industries.

#### Degree Requirements

#### Credit Requirements

Applicants who apply for admission into the master's degree program should have one of the following qualifications at the time of application:

- Thesis degree: more than 24 credits
- Non-thesis degree: more than 36 credits

#### Foreign Language (English) and Comprehensive Final Examination

- Students taking the foreign language test should acquire more than 12 credits.

- The comprehensive final examination consists of three subjects. Applicants taking the examination should acquire more than 18 credits.

#### Preparation of Thesis

The master's thesis should be prepared using the Guidelines for the Preparation of Theses, available from the Graduate School.

#### Submission of Thesis

Students who pass the foreign language test and comprehensive final examination, and complete degree program requirements or are expected to complete the degree program requirements in the semester of submission can submit a thesis.

#### Advisors

The Department Head may designate a faculty member for each student upon admission to guide them in their studies.

#### Limitations on Advisors

A faculty member may not be assigned more than three students to advise per year.

Power System Engineering <u>Contact Information</u> Phone: +82-61-659-7130 Fax: +82-61-659-7139 E-mail: engine@jnu.ac.kr URL: http://engineer.chonnam.ac.k

#### Graduate Studies in Power System Engineering

The division of Power System Engineering is committed to educating future leaders in the field of engineering. The graduate program focuses on training experts in the marine systems industry, a field which requires familiarity with state-of-the-art technology. It also nurtures skills in power generation, as well as in both the mechanical and electrical engineering fields.

#### Degree Requirements

To earn a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to the appropriate graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval.

When students take lectures offered in the special graduate school (including supplementary subjects), master's degree candidates must achieve a grade of C or higher, while Ph.D. candidates must achieve a grade of B or higher.

#### What Do You Study?

Thesis Research Advanced Engineering Mathematics Advanced Thermodynamics Advanced Internal Combustion Engines Advanced Fluid Mechanics Advanced Air Conditioning Advanced Solid Mechanics Advanced Mechanical Vibration Dynamics Advanced Hydraulic Engineering Advanced Measurement System Advanced Robotics System Engineering Advanced Automatic Control Advanced Optimal Design Advanced Machine Tools

#### Professors

• Dong-Jun Yeo, Ph.D. [Professor, Dynamics of Machines, Advanced Electric Machinery Advanced Accurate Machining Advanced Machine Design Advanced Numerical Analysis Advanced Combustion Engineering Advanced Gas Turbines Advanced Gas Turbines Advanced Thermal Power Engineering Advanced Heat Transfer Advanced Heat Transfer Advanced Engine Design Advanced Dynamics Advanced Fluid Machinery Advanced Hydraulic-Pneumatic Control Analysis of Dynamic Systems Advanced Mechatronics Advanced Sequence Controls

djyeo@jnu.ac.kr] • Kyong-Uk Yang, Ph.D. [Professor, Hydraulic-Pneumatic Control, yangku@jnu.ac.kr]

• Myung-Soo Choi, Ph.D. [Professor, Mechanical Vibration,

#### Laboratories

- Internal Combustion Engines Lab
- Heat-Fluids Lab
- Applied Mechanics Lab

engine@jnu.ac.kr]

- Woo-Gyeong Wang, Ph.D. [Professor, Internal Combustion Engine. wangwk@jnu.ac.kr]
- Hydraulic-Pneumatic Controls Lab
- Automatic Controls Lab
- Machine Dynamics Lab

# Department of Aqualife Medicine

<u>Contact Information</u> Phone: +82-61-659-7170 Fax: +82-61-659-7179 E-mail: ljs@jnu.ac.kr URL: http://fishpath.jnu.ac.kr/

#### Graduate Studies in Aqualife Medicine

The Department of Aqualife Medicine focuses on the study of fish disease treatment and prevention. Our department is composed of eight main laboratories: pathogenic microbiology, histopathology, fish disease diagnosis, environmental physiology, preventative medicine for fish, fish pharmacology, clinical fish pathology, fish virology and clinical diseases.

#### Degree Requirements

To get a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval. The foreign language and comprehensive examinations are administered in February and August of each year.

#### What Do You Study?

Research Methodology Advanced Ontogeny Master's Thesis Research Advanced Invertebrate Anatomy Microbial Genetics Molecular Studies in Fish Pathology Advanced Aquatic Toxicology Applied Fish Pharmacology Advanced Fish Immunology

#### Professors

- Eunheui Kim, Ph.D. [Professor, Pathogenic Bacteriology and Genetics, ehkim@jnu.ac.kr]
- Jung Sick Lee, Ph.D. [Professor, Fish and Shellfish Anatomy, ljs@jnu.ac.kr]
- Myung Joo Oh, Ph.D.

Advanced Fish Histopathology Advanced Fish Anatomy Applied Aqualife Microbiology Advanced Diagnostic Fish Pathology Advanced Fish Pathology Advanced Fish Disease and Nutrition Prevention of Epizootics Advanced Environmental Analysis Advanced Environmental Physiology

[Professor, Fish Virology and Parasitology, ohmj@jnu.ac.kr]

- Heung Yun Kim, Ph.D.
   [Professor, Fish Physiology and Toxicophysiology, hykim@jnu.ac.kr]
- Sungju Jung, Ph.D.
   [Professor, Fish Pathology and Immunology, sungju@jnu.ac.kr]

• So Young Kang, Ph.D. [Professor, Fish Pharmacology and Pharmacognosy sykang1@jnu.ac.kr]

• Toyohiko Nishizawa, Ph.D. [Professor, Virology and Cell Biology jjnishi@jnu.ac.kr]

 Wi-Sik Kim, Ph.D. [Assistant Professor, Clinical diseases, wisky@jnu.ac.kr] Department of Maritime Police Science

*\_\_Contact Information* Phone: +82-61-659-7180 Fax: +82-61-659-7189 E-mail: hosamms@jnu.ac.kr

#### Graduate Studies in Maritime Police Sciences

Due to South Korea being a peninsula and therefore facing the sea on three sides and the geopolitical nature of the region, there is growing importance for maritime law enforcement. We are therefore aiming at cultivating professionals in the Maritime Police and strengthening competitiveness in the workforce through further education. In addition, the academic and research-based composition of Maritime Police personnel with experience in various research fields are required to improve the organization.

#### Degree Requirements

To get a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to graduate school regulations. Special graduate school students may earn up to 6 credits in principle per semester; this may be adjusted to within 3 credits with the President's approval.

#### What Do You Study?

- Advanced Criminal Law Advanced Law of the Sea Advanced Marine Engine Advanced Vibration Analysis Advanced Fisheries Law Advanced Marine Safety Advanced Criminology Studies in Maritime Law Advanced Marine Navigation Studies in public law Advanced Response of Marine Oil Pollution
- Advanced Fisheries Management Advanced Computer Aided Design Studies in Maritime Traffic Law Basic Studies in International Law Advanced Criminal Procedure Advanced Seamanship of Naval Vessel Advanced Marine policing Organization and Management Advanced Theory of police Investigation Advanced Ship Dynamics

#### Professors

- Dal-hyun Park, Ph.D. [Professor, Criminal Law, dhpark328@jnu.ac.kr]
- Duck-jong Jang, Ph.D. [Professor, Marine Safety, Navigation, Marine Pollution response, jdj@jnu.ac.kr]

- Ki-Soo Lee, J.S.D. [Professor, Criminal Law, Police Science, kslee@jnu.ac.kr]
  Ho-Sam Bang, Ph,D. [Professor, International Law of the Sea, Maritime Law,
  - hosamms@jnu.ac.kr]

Department of Marine Bio Food Science *\_\_Contact Information* Phone: +82-61-659-7210 Fax: +82-61-659-7219 E-mail: foodkims@jnu.ac.kr

#### Graduate Studies in Marine Bio Food Science

In the marine field, the Department of Marine Bio Food Science is leading the study of food material, quality, process, storage, distribution, sanitation, safety, and processing technologies.

The basic characteristics of marine food, marine products and development of multiple processing, the use of special functional ingredients for continued exploration concentrated focus on basic scientific literacy and to foster talent and value of marine food acquiring knowledge about the features and, Fisheries with the increase in food hygiene safety technical, process knowledge, quality improvement, the study of the spread of seafood by practicing in the field of marine fisheries industry to increase adaptability to lead the marine biotechnology industry is to nurture talent.

#### Degree Requirements

To obtain a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Special graduate school students may earn up to 6 credits in principle to semester. The foreign language and comprehensive examinations required are administered in February and August of each year.

#### What Do You Study?

Food Quality Control Advanced Food Microbiology Advanced Bio chemistry Advanced Food Engineering Advanced Food Enzymes Advanced Nutritional Chemistry Food Rheology Advanced Food Preservation1 Advanced Canned Food1 Advanced Lipid Chemistry Advanced Glucose Chemistry Advanced Food Toxicology Advanced Food Hygiene Food Color Chemistry Advanced Bioactive Substances Food Stuff Technology Marine Bioactive Substances

Advanced Antibiotics Advanced Food Research Advanced Food Chemistry Food Analysis Technology Advanced Food Flavour Chemistry By-products Processing Organoleptic Evaluation Advanced Fermentation Technology Lipid Food Advanced Instrumental Analysis Advanced Sea Weed Processing Advanced Applied Microbiology Nutritional Biochemistry Functional Food Chemistry Physical Properties of Food Advanced Food Preservation2 Advanced Canned Food2

Advanced Vitamin Chemistry Advanced Food Biotechnology Advanced Food Analysis Management for Food Hazard Point Advanced Fisheries Chemistry

#### Professors

- Tae-jin Bae, Ph.D.
   [Professor, Seafood Processing, bae5658@jnu.ac.kr]
- Dong Soo Kang, Ph.D. [Professor, Fisheries Chemistry, dskang@jnu.ac.kr]
- Sun-jae Kim, Ph.D. [Professor, Food Safety, foodkims@jnu.ac.kr]

Advanced Food Additives Advanced Seaweed Chemistry Advanced Marine Resources Processing Food Resources Processing

- Gin-Nae Ahn, Ph.D.
   [Associate professor, Marine Biotechnology, gnahn@jnu.ac.kr]
- Sun-Hee Cheong, Ph.D. [Associate professor, Functional Foods, sunny3843@jnu.ac.kr]

Department of Marine Production Management <u>Contact Information</u> Tel: +82 61 659 7120 Fax: +82 61 659 7129 E-mail: hhshin@jnu.ac.kr URL: http://marine.inu.ac.kr

#### Graduate Studies in Marine Production Management

The future of the marine environment requires sustainable management of marine biological resources such as the management of fisheries, high-quality seamanship skills and safe navigation, and marine reorganization with an emphasis on marine ecology awareness. The aim is to train competent and creative marine technical personnel and experts who will lead the marine production and shipping industry by educating theoretical and practical skills on marine production, marine navigation, and fishery systems.

#### Degree Requirements

To earn a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to the appropriate graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval.

#### What Do You Study?

Thesis Research Writing Thesis Advanced Seamanship Theory of Ship's Position Error Theory of Vessel Motion Fisheries Engineering Fisheries Oceanography Fishing Gear Engineering Advanced Fishing Gear Design Mechanice Fishing Gear Materials Fishing Behavior Advanced Fishing Technology Fishing Physics Fishing Vessel Ability Fishing Machinery

#### Professors

 Doo-Jin Hwang, Ph.D.
 [Professor, Fisheries Acoustics, djhwang@jnu.ac.kr] Advanced Fishery Biology Fisheries Data Processing Fishing Ground Mechanism Artificioa Reet Engineering Fishing Mechanism Advanced Pelagic Fishery Technology Acoustics Fishing Methodology Measuring Instrumentin Navigation Advanced Theory of Navigation Advanced Navigation Advanced Fisheries Law International Marine Law Advanced Marine Mateorology Oceangraph Environmentalism

 Taeho Kim, Ph.D.
 [Professor, Fisheries Engineering, kimth@jnu.ac.kr]

- Hyong-Ho Shin, Ph.D.
   [Professor, Ship Navigation, hhshin@jnu.ac.kr]
- Jihoon Lee, Ph.D. [Professor, Fishing System,

#### Laboratories

- Fishing gear and Measurement technology Lab
- Navigation Lab
- Fishing gear Fishing Methodology Lab
- fishery system Lab
- Fishery Resources and Information Lab

jihoon.lee@jnu.ac.kr]

• Kyounghoon Lee, Ph.D. [Professor, Fishing Information khlee71@jnu.ac.kr] Department of Aqualife science <u>Contact Information</u> Phone: +82-61-659-7160 Fax: +82-61-659-7169 E-mail: kkh@jnu.ac.kr

#### Graduate Studies in Aqualife science

The Department of Aqualife science is designed for aquaculture awareness and the conservation of aquatic organisms.

The main target areas are fishery aquaculture and seaweed aquaculture through the study of resource ecology, ecosystem modeling, reproductive biology, Advanced Bio-diversity and Conservational Biology, fish physiology, fish feeds, and Aquafarm Environmental Ecology studies.

The purpose of this program is to produce experts and researchers in the field of aquaculture through intensive study and study of both basic and applied sciences.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits over a minimum of 2 years and 6 months. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam. Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

#### What Do You Study?

Advanced Genetics (3)	Advanced Limmnology (3)
Advanced Developmental Biology (3)	Advanced Feed Biology (3)
Advanced Ichthyology (3)	Advanced Biochemistry (3)
Fishery Invertebrate Zoology (3)	Advanced Fishery Animal Nutrition (3)
Advanced FishFeeds (3)	Advanced Phycocultivation (3)
Algal Physioecology (3)	Reproductive Ecology (3)
Aquafarm Environmental Ecology (3)	Advanced Marine Ecology (3)
Crustacea Culture (3)	Invertebrate Zoology Culture of FreshWater (3)
Endocrinology (3)	Taxnomy of Invertebrate (3)
Advanced Marine Fish Culture (3)	Advanced Fish of Fresh-Water Culture (3)
Management and Pathology of Aquatic Organism (3)	Fish Ecology (3)
Invertebrate Zoology Culture of SeaWater (3)	Semina 3 (3)
Advanced Breeding Science (3)	Semina 4 (3)
Advanced Cell Biology (3)	Semina 2 (3)
Fish Population Dynamics Management (3)	Thesis Research (3)
Advanced Fisheries Administration (3)	

### Professors

- Woon Kyo Lee, Ph.D. [Professor. Reproduction organism wklee@jnu.ac.kr, +82-61-659-7161]
- Gwan Sik Jeong, Ph.D. [Professor. Fish Culture and Nutrition ksjeong@jnu.ac.kr, +82-61-659-7162]
- Kyeong Ho Han, Ph.D. [Professor. Ichthyology Ecology and Taxonomy. aqua05@jnu.ac.kr, +82-61-659-7163]
- Kyeong Ho Kang, Ph.D. [Professor. Invertebrate Culture

choisd@jnu.ac.kr, +82-61-659-7166]

- Sang Duk Choi, Ph.D. [Professor. Aquaculture Environment Ecology choisd@jnu.ac.kr, +82-61-659-7166]
- Kang Hee Kho, Ph.D.
   [Professor. Molecular Physiology kkh@jnu.ac.kr, +82-61-659-7168]

Naval Architecture and Ocean Engineering <u>Contact Information</u> Phone: +82-61-659-7150 Fax: +82-61-659-7159 E-mail: parkih@jnu.ac.kr

#### Graduate Studies in Naval Architecture and Ocean Engineering

Naval architecture and ocean engineering focuses on research and education in a variety of areas from basic theory to advanced technology on ships and offshore structures. The final goal of the Department lies in the design and production of reliable and cost-effective transport systems and offshore structures which can carry out missions successfully in harsh ocean environments. The research scopes of naval architecture consist of resistance and propulsion, propulsors, structures and materials, motion and maneuverability, noise and vibration, and welding. Ocean engineering involves various scopes of technical problems that arise during the design, construction, load-out, and operation of various forms of structures developed to meet the needs of the offshore petroleum and construction industries. Research on the ocean environment itself is also one of the major research fields to cover rigorous analysis of detailed subjects using powerful computers. In particular, it offers on-board training courses on university-owned research and training ships.

#### Degree Requirements

To earn a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to the appropriate graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval.

#### What Do You Study?

Advance measurements engineering (3)	Finite Element Method (3)
Advance manufacturing automation (3)	Advanced Optimal Design (3)
Ecosystem Engineering (3)	Advanced Theory of Special Ships (3)
Advance manufacturing engineering of ship (3)	Advanced Potential Theory (3)
Advanced Theory of Ship Design (3)	Sediment Transport and Littoral Processes (3)
Advance materials Science of ship (3)	AdvancedCoastalandHarborEnginering (3)
Advanced Theory of Ship Propulsion (3)	Coastal Numerical Modelling1 (3)
Advanced Theory of Ship Resistance (3)	Coastal Numerical Modelling2 (3)
Advanced Fisheries Oceanography (3)	Advanced Marine Measurement (3)
Advanced Numerical Methods (3)	Advanced Ocean Geoinformatics (3)
Advanced Coastal Oceanography (3)	Introduction to Ocean Thought (3)
Advance welding process (3)	Advanced Dynamical Oceanography (3)
Advanced Hydrodynamics (3)	Advanced Operational Oceanography (3)

Advanced Ocean Remote Sensing (3) Advanced Ocean Information Analysis (3) Turbulent Diffusion Theory in the Ocean (3) Advanced Marine Environmental Engineering (3)

#### Professors

- Moon-Ock Lee, Ph.D. [Professor, Environmental Hydraulics (Coastal Oceanography), leemo@jnu.ac.kr]
- Ok-Sam Kim, Ph.D. [Professor, Manufacturing Engineering of Ship, kos@jnu.ac.kr]
- Il-Heum Park, Ph.D.
   [Professor, Coastal and Ocean Engineering, parkih@jnu.ac.kr]

- Jong-Kyu Kim, Ph.D. [Professor, Ocean Informatics, kimjk@jnu.ac.kr]
  Hee-Jong Choi, Ph.D.
- [Professor, Ship Design, chiohj@jnu.ac.kr]
- Jee-Hun Song, Ph.D.
   [Professor, Ship Structural Vibration, jhs.@jnu.ac.kr]

Department of Environmental Oceanography <u>Contact Information</u> Phone: +82-61-659-7140 Fax: +82-61-659-7149 E-mail: shinhc@jnu.ac.kr

#### Graduate Studies in the Ocean Environmental Systems

The Department of Ocean Environment Systems aims to carry out scientific and technological studies of the marine environment, the origin of life on earth. For students aspiring to be marine researchers, the Ocean Environment System Program is designed to provide advanced training in a specialized field.

#### Degree Requirements

To earn a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval.

When students take lectures offered in the special graduate school (including supplementary subjects), master's degree candidates must achieve a grade of C or higher, while Ph.D. candidates must achieve a grade of B or higher.

#### What Do You Study?

Advanced Aquatic Environmental Processes (3) Advanced Biology of Water Pollution (3) Advanced Chemical Oceanography (3) Advanced Coastal Oceanography (3) Advanced Community Ecology (3) Advanced Ecology of Fisheries Resources (3) Advanced Estuary Ecology 1 (3) Advanced Estuary Ecology 2 (3) Advanced Evolutionary Ecology (3) Advanced Fisheries Oceanography (3)

#### **Major Electives**

Advanced Geological Oceanography 1 (3) Advanced Geological Oceanography 2 (3) Advanced Intertidal Ecology (3) Advanced Marine Biology of Benthos (3) Advanced Marine Conservation Biology (3) Advanced Marine Conservation Ecology (3) Advanced Deep Sea Biology (3) Advanced Marine Planktology (3) Advanced Marine Pollution (3) Advanced Marine Pollution Control (3) Advanced Marine Pollution Ecology (3) Advanced Marine Sedimentology (3) Advanced Marine Zooplanktology (3) Advanced Ocean Bio-Genetics (3) Advanced Ocean-Ecotoxicology 1 (3) Advanced Ocean-Ecotoxicology 2 (3) Advanced Ocean Environmental Condition (3) Advanced Physical Oceanography 1 (3) Advanced Physical Oceanography 2 (3) Advanced Red Tides (3) Environment Analysis of Fishing Area (3) Environment of Fisheries Oceanography (3) Fisheries Physical Oceanography (3) Fluid Dynamics for Oceanography (3) Instrumental Analytical Chemistry (3)

Marine Environmental Ecology (3) Ocean Animal Behavior (3) Ocean Eco-informatics (3) Paleo Oceanography 1 (3) Paleo Oceanography 2 (3)

#### Professors

- Yang Ho Yoon, Ph.D.
   [Professor, Phytoplankton Ecology and Environmental Science, yoonyh@jnu.ac.kr]
- Yeon Gyu Lee, Ph.D. [Professor, Marine Geology, lyg6342@jnu.ac.kr]
- Hyo-Sang Choo, Ph.D.
   [Professor, Physical Oceanography, choo@jnu.ac.kr]
- Hyun Chool Shin, Ph.D. [Professor. Marine Benthic Ecology,

Regional Oceanography (3) Water Quality Control of Aquatic Culture Systems (3) Zooplankton Taxonomy (3)

shinhc@jnu.ac.kr]

- Hyeon Seo Cho, Ph.D.
   [Professor. Chemical Oceanography, hscho@jnu.ac.kr]
- Ho Young Soh, Ph.D.
   [Professor, Zooplankton systematics and Ecology, hysoh@jnu.ac.kr]
- Ihn-Sil Kwak, Ph.D. [Professor, Zoology, iskwak@jnu.ac.kr]

Graduate School of Public Policy \_\_Contact Information Phone: +82-62-530-5195~6 Fax: +82-62-530-2266 URL: http://cnugspp.jnu.ac.kr

#### Graduate Studies in our School

Since 1980, the Graduate School of Public Policy has focused its efforts on teaching and studying the modern theories and applications of public policy. It also aims to contribute the development of the nation and local communities by educating competent leaders and administrators.

#### Degree Requirements

Candidates eligible for the master's degree program are those who have a bachelor's degree, or who are recognized by the Ministry of Education and Human Resources as having equivalent qualifications to the coursework requirements of a regular four-year college program.

Our school has three academic divisions: ① Public Administration, ② Society, Culture, and Welfare, and ③ Real estate and Community Development. The length of the each division's coursework shall normally be two years and six months. A period of no longer than four years and six months shall be allowed for completion of the master's degree program.

The number of class days must exceed 180 for each academic year. A minimum of 24 credits are required for completion of the master's degree. A student who has a different major area from that of his undergraduate courses will have to take some undergraduate courses. The GPA should be 3.0(B) or better.

Up to twelve credits earned at other foreign or domestic universities and colleges can be transferred for the master's degree program of the School. However, a maximum of 6 credits earned at other foreign or domestic universities or colleges before entering our school may be transferred for the master's degree program.

The courses offered in our school are evening classes. Students are required to attend more than two-thirds of their classes to get credits.

Master's degrees shall be conferred upon the candidate who has fulfilled all of these requirements: ① 24 credits hours, ② comprehensive examination, and ③ additional 6 credit hours or thesis writing and oral examination.

Our school may offer non-credit programs to individuals who need specialized or technical knowledge in order to carry out their jobs. International students or government officials who have equivalent qualifications may be accepted as special supernumerary students through an extra examination.

#### What Do You Study

Studies on Policy Process Social Science Methodology Understanding Contemporary Society Contemporary Korean Politics

#### Public Administration Division

Understanding Administration Government Budget Theory Studies on Political Process Administrative Law Theory Administrative Organization Theory Personnel Matters of Administration Administration Investigation Theory Local Administration Theory Theory of Local Autonomy Local Government Budget Theory Korean Administration Theory Administrative Philosophy Crisis Management Theory Electronic Government Theory Comparative Administration Theory Regulation Policy Theory Studies on Government & NGOs Police Administrative Theory Intergovernmental Relationship Science & Technology Policy Environmental Policy Educational Administration Social Welfare Administration Seminar on Local Governance City Administration Autonomy of Police Administration Seminar on Local Council Politics & Women Theory of International Politics Seminar on Global Governance Theory of Foreign Policy Theory of Constitution Theory of Criminal Policy Seminar on Corruption Offense Law of Local Government Law of Labor Law of Development Administration Criminal Law & Economic Crime

### Society, Culture, and Welfare Division Theory of Culture Policy Introduction of Social Welfare Contemporary Society & Media Information Policy Theories of Social Change Theories of Social Movement Seminar on Visual Sociology Seminar on Local Community Human Rights and Society Gender and Society Deviation and Control Social Psychology Cultural Psychology Psychology of Decision Making Contemporary Society & Mental Health Psychology of Health Positive Psychology Counselling Psychology Organizational Psychology Law and Psychology Valuation of Archival Records Public Information Service Understanding Public Information Use Studies on Archival Culture Studies on Reading Culture Studies on Information Culture Cultural Resources & DB Building Mass Media and Government Studies on Information Society Studies on Local Media Regional Development and Media Studies on Mass Culture Seminar on Cultural Study Media & PR Studies on Media Policy

Theory of Culture Industry Culture Creation and Planning Seminar on Cultural Management Seminar on Culture and Tourism Policy Globalization & Local Culture Culture Policy & Cultural Interaction Culture Policy & Cultural Space History on the Cultural Policy Social Welfare Policy Social Welfare and Law Social Policy of the Elderly Case Studies on Program Development & Evaluation Social Work and Family Human activity & Social Welfare Studies on Regional Society Multiculturalism and Social Welfare

#### Real estate & Community Development Division

Regional Development Policy Real Estate Policy Urban Planning Studies on Real Estate Industry Urban Policy Urban Regeneration Policy Transportation Policy Real Estate Economy Studies on local culture Case Studies on Urban Policy Case Studies on Regional Policy Tourism Policy Development Rural Development Policy Study on Community Development Policy Study on Urban & Regional Economic Policy Study on Urban Growth Management Management on Real Estate Brokerage GIS Analysis on Real Estate Seminar on Future Urban Structure Case Studies on Real Estate Policy Studies on Real Estate appraisal Green Urban Policy Green Planning of Urban Area Regional Landscape Planning Real Estate location Analysis

#### Committee Members of Graduate School

• Kyung-Hak Kim, Ph.D. Dept. of Anthropology, khkim@jnu.ac.kr • Woo-Kwon Chang, Ph.D. Dept. of Library and Information science, wk1961@jnu.ac.kr • Moon-Soo Bok, Ph.D. Dept. of Administration, davidbok@hanmail.net • Jong Won Yoo Ph.D. Dept. of Mass Communication, jwyoo@jnu.ac.kr • Young-Jin Ahn, Ph.D. Dept. of Geography, yjahn@jnu.ac.kr • Byeong-Ro Min, Ph.D. Law School,

byungro@jnu.ac.kr • Jin-Yeon Kang, Ph.D. Dept. of Sociology, jinyeon@gmail.com • Eun-Jung Choi, Ph.D. Dept. of Political Science and Diplomacy, ejchoi1976@gmail.com • Myong-Gyu Lee, Ph.D. Dept. of Library and Information science, gyulee@jnu.ac.kr • Jeong-Ha Hwang, Ph.D. Dept. of Welfare at the Living Environment, jhwang@jnu.ac.kr • Mun Soo Kim, Ph.D. Dept. of Psychology, munsookim@jnu.ac.kr



# X. Undergraduate Schools



# College of Nursing

*\_\_Contact Information* Tel: +82-62-530-4930-4 Fax: +82-62-220-4544 E-mail: a1045@jnu.ac.kr URL: http://nursing.jnu.ac.kr

# Department

· Department of Nursing

## Affiliated Research Centers

- · Center for Supporting Field-Specific Technology
- · Center for Evidence-Based Nursing Education & Research
- $\boldsymbol{\cdot}$  Center for Nursing Simulation
- $\boldsymbol{\cdot}$  Center for Mental Health Promotion
- · Center for Multicultural Family Health Promotion

# Nursing

*\_\_Contact Information* Phone: +82-62-530-4937~4939 Fax: +82-62-227-4009 E-mail: a1045@jnu.ac.kr URL: http://nursing.jnu.ac.kr/

#### What is Nursing?

Nursing is defined as the diagnosis and treatment of human responses to health and illness. The following phenomena are the focus of nursing care and research:

- Self-care process
- Physiological and pathophysiological processes such as rest, sleep, respiration, circulation, reproduction, activity, nutrition, elimination, skin, sexuality, and communication
- · Comfort, pain, and discomfort
- · Emotions related to health and illness
- · Meanings ascribed to health and illness
- · Decision making and the ability to make choices
- · Perceptual orientations such as self-image and control over one's body and environment
- Transitions across the lifespan, such as birth, growth, development, and death
- · Affiliative relationships, including freedom from oppression and abuse
- Environmental systems: Safety and Quality Management

#### College of Nursing at Chonnam National University

The Department of Nursing, which held its centennial anniversary in 2012, has the longest history among Chonnam National University's numerous departments. In 2005, the department was promoted to a nursing college, defining CNU as a leader of nursing in the Honam area. Based on truth, creation, and service, which are the missions of CNU, the educational purpose of the College of Nursing is to help students learn scientific nursing, knowledge, respect for clients they encounter in a variety of clinical settings, and develop communication skills necessary for collaborating with health professionals from other disciplines. Furthermore, the undergraduate curriculum is focused on training creative and talented global nurses as well as creating new jobs via innovative teaching/learning strategies.

After 4 years of study, students acquire licensure through the national board of nursing examination.

#### Professors

- Lee, Eun-Sook, Ph.D. [Professor, Women's Health Nursing, eslee4347@jnu.ac.kr]
- Kim, Su-Jin, Ph.D. [Professor, Mental Health and Psychiatric, pinehillkim@naver.com]
- So, Hyang-Sook, Ph.D.
   [Professor, Adult Nursing, Oncology Nursing hsso0075@jnu.ac.kr]
- Oh, Sang-Eun, Ph.D. [Professor, Pediatric Nursing, seoh@jnu.ac.kr]
- Jang, Keum-Seong, Ph.D.
   [Professor, Nursing Management, jangks@jnu.ac.kr]
- Choi, Ja-Yun, Ph.D. [Professor, Adult Nursing, choijy@jnu.ac.kr]

- Chung, Hyang-In, Ph.D. [Professor, Nursing Policy and Research, hchoch@hanmail.net]
- Kim, Jeong-Sun, Ph.D.
   [Professor, Gerontological Nursing, kjs0114@jnu.ac.kr]
- Kweon, Young-Ran, Ph.D. [Associate Professor, Mental Health and Psychiatric, yrk@jnu.ac.kr]
- Yoo, Sung-Hee, Ph.D. [Associate Professor, Adult Nursing, shyoo@jnu.ac.kr]
- Chae, Duckg-Hee, Ph.D.
   [Associate Professor, Community Health Nursing, dheechae@jnu.ac.kr]

#### Professors Emeritus

- Kim, Young-Sook Ph.D. [hannaysk@yahoo.co.kr]
- Kim, Mi-Won Ph.D. [mwkim@jnu.ac.kr]
- Park, Oh-Jang Ph.D. [ojpark@jnu.ac.kr]
- Lee, Chung-Sook Ph.D. [julia4779@hanmail.net]
- Cho, Bok-Hee, Ph.D. [bhcho@jnu.ac.kr]

- Lee, Seon-Ah, Ph.D. [Associate Professor, Women's Health Nursing, salee@jnu.ac.kr]
- An, Min-Jeong, Ph.D. [Associate Professor, Adult Nursing, anminjeong@jnu.ac.kr]
- Kim, Youn-Kyoung, Ph.D. [Assistant Professor, Community Health Nursing, ykim0307@jnu.ac.kr]
- Park, Hyun-young, Ph.D.
   [Assistant Professor, Fundamentals of Nursing, hypark@jnu.ac.kr]
- Yang, Hyun-Ju, Ph.D. [Assistant Professor, Fundamentals of Nursing, huy130@jnu.ac.kr]
- Lee, Young-Sook Ph.D. [yslee@jnu.ac.kr]
- Kang, Hae-Young, Ph.D. [hykang@jnu.ac.kr]
- Hong, Mi-Soon, Ph.D. [mshong@jnu.ac.kr]
- Park, In-Hyae, Ph.D. [ihpark23@jnu.ac.kr]
- Choi, Soon-Hee, Ph.D. [choish@.jnu.ac.kr]

#### Degree Requirements

To earn a bachelor's degree, completion of 130 credit hour courses is required, including 27 credit hours of general cultural courses, 78 credit hours of major core courses, and 35 credit hours of major elective courses.

#### What Do You Study

The freshman courses consist mostly of liberal arts subjects. Students take 10-12 courses, including General Biology 2, Creative Problem Solving, Anatomy, and Introduction to Nursing, all of which are major requirements.

During the sophomore year, students undertake theory and practice in the principles of nursing care and basic health-related science courses and electives.

During the junior and senior years, students study theory and practice in Adult Care, Pediatrics, Women's Health Issues, Psychiatry, and Community Health Nursing. In addition, Nursing research and Evidence-based nursing must be completed. Electives are Gerontological Nursing, Clinical Nursing Practice and Theory, Health Education, and Multicultural nursing.

#### ■ Core Courses (90 credits)

Research & Survey Methods (2) Preclinical Practicum (1) Mental Health and Psychiatric Nursing 2 (2) Mental Health and Psychiatric Nursing Practicum (2) Nursing Management 1 (2) Evidence Based Nursing (2) Adult Health Nursing 3 (2) Adult Health Nursing Practicum 3 (2) Women's Health Nursing2 (2) Women's Health Nursing Practicum (2) Community Health Nursing 1 (2) Comprehensive Simulation1 (1) Nursing Management 2 (2) Nursing Management Practicum (2) Adult Health Nursing 4 (2) Adult Health Nursing Practicum 4 (2) Child Health Nursing 2 (2) Child Health Nursing Practicum (2) Community Health Nursing 2 (2) Community Health Nursing Practicum (2) Practice of Nursing Counseling (2) Evidence-Based Comprehensive Clinical Nursing Practicum (2) Healthcare relevant laws and Bioethics (2) Comprehensive Simulation2 (1) Introduction to Nursing (2) Critical Thinking and Creative Problem Solving (3) Gross Anatomy (3) Fundamentals of Nursing 1 (2) Fundamentals of Nursing Practice 1 (1) Microbiology (2) Pathology (2) Physiology (3)

Human Understanding and Communication (3) Health Assessment (2) Health Assessment Practice (1) Fundamentals of Nursing 2 (3) Fundamentals of Nursing Practice 2 (1) Adult Health Nursing 1 (3) Child Health Nursing 1 (2) Pharmacology (2) Mental Health and Psychiatric Nursing 1 (2) Adult Health Nursing 2 (2) Adult Health Nursing Practicum 1 (2) Adult Health Nursing Practicum 2 (2) Women's Health Nursing1 (2)

#### Electives

Global Citizenship (2) Multicultural Familiy Health Care Nursing (2) Nursing Informatics (2) Public Health (2) Nutrition in Health & Nursing Care (2) Gerontological Nursing (2) Gerontological Nursing Practicum (1) Complementary and Alternative Therapy (2) Empathy Nursing Design(Developmental disabilities or rehabilitation) (2) Empathy Nursing Design(Cancer or Hospice) (2) Empathy Nursing Design(Vulnerable subject) (2) Curriculum Design in Health Education (2) Health Policy & Nursing Leadership (2) Critical and Emergency Care Nursing (2) Critical Care and Emergency Nursing Practicum (2) Community Mental Health Nursing Practicum (1)

#### Careers

- Clinical Nurses
- Educators: Researchers, Professor, School Nurses
- · Administrators: Civil Servants Related Health, Government Employees
- · Community Nurses: Industrial Nurses, Public Health Nurses
- Other: Child Care Centers, Army Nurses, Welfare Facilities, Nursing Home Employees

# **College of Business Administration**

<u>Contact Information</u> Phone: +82-62-530-1405~7, 1412, 1506 Fax: +82-62-530-1539 E-mail: cba@jnu.ac.kr URL: http://cba.jnu.ac.kr

#### Profile of the College of Business Administration

The college was established in 1952, as one of the five founding colleges of Jeonnam National University (CNU). It has turned out over 15,000 highly talented and qualified business professionals since 1955. The college consists of the Faculty of Business Administration and the Faculty of Economics. It offers masters and doctoral programs in 5 major areas of study.

#### Educational Goals and Strategies

The vision of the college is to become one of the leading business schools in Korea. The college's mission is to cultivate leaders in various business sectors of society. It aims to produce highly competent graduates with a balance between theory and practice to develop the organizations in which they are employed. The College aspires to pursue the educational values of in-depth professional knowledge, high ethical standards and integrity, interdisciplinary teamwork, entrepreneurial spirit, global perspective, productive collaboration, and development of individual potential. To accomplish these values, the College has as its key educational goals for the cultivation of its students the following areas:

· Practice-oriented knowledge: profound professional knowledge in business, ability to apply theory to solve real life problems

· Global perspective: foreign language ability, global business issues

· Innovative thinking and entrepreneurial spirit: entrepreneurial spirit and innovative activity, ability to make creative decisions

· Ethical understanding: ethical aspects of complex business environments

Faculty of Business Administration *Contact Information* Phone: +82-62-530-1430, 1450, 1470 Fax: +82-62-530-1449 E-mail: cba@jnu.ac.kr URL: http://biz.ac.kr

#### Faculty of Business Administration

The Faculty of Business Administration helps students learn about general management theories and methodologies in logical and systematic ways. The learning goals of the faculty are to deepen practice-oriented professional management knowledge, promote global perspectives, enhance innovative thinking, and nurture entrepreneurship and ethical understanding with integrity. The faculty aims to cultivate competent and creative business leaders by instilling problem solving capabilities.

- Marketing: To learn a diverse range of issues of how to identify customers' potential needs, design products and services, promote them in effective ways, and set prices in order to create values to customers as well as firms and the society
- Operations and Technology management: To study various management topics encompassing operations and technology strategies, production planning, implementation, controlling, and coordination within an organization as well as among organizations in order to produce and deliver products and services in an efficient and effective way
- Organizational Behavior and Human Resource Management: To learn various issues regarding human behavior in an organization, human resource development at micro-levels as well as organization design and development in the macro-level
- Finance: To study various theories and cutting-edge practical financial techniques related to funding and running of capital for effective management of a firm, dividend policies, investment decisions, and management of financial institutions
- Accounting: To learn and train in methods related to a set of activities of in the gathering, booking, summarizing, and controlling of data and monetary information as well as communicating within an organization and with external stake-holders
- Management information systems: To learn a wide range of theories and practices regarding how to strategically utilize IT, the Internet, and various information resources of a firm
- International business: To cultivate practical decision making and problem solving capabilities under global business environments by learning theories and international trade, FDI, international finance, and the marketing of multinational enterprises

#### Professors

• Il Sang Ko, Ph.D.	[Professor, Organizational Behavior,
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• Joon Ko, Ph.D.	• Min-Jeong Kim, Ph.D.
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• Kyung-Su Kim, Ph.D.	Management and Organizational Behavior,

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• Sang-Jun Lee, Ph.D.

[Professor, MIS, s-lee@jnu.ac.kr] • Su-Yol Lee, Ph.D. [Professor, Environmental and Operations Management, leesuvol@jnu.ac.kr] • Su-Jin Lee, Ph.D. [Assistant Professor, Organizational Behavior and Leadership, soojinlee@jnu.ac.kr] • Myung-Sook Jun, Ph.D. [Associate Professor, Human Resource Management and Industrial Relations, msjun@jnu.ac.kr] • Sung-Il Jeon, Ph.D. [Professor, Financial Accounting, sijeon@jnu.ac.kr] • Ki-Ju Cheong, Ph.D. [Professor, Marketing, kcheong3@chonnam.ac.kr] • Sung-Chang Jung, Ph.D. [Professor, Finance, scjung@jnu.ac.kr] • Yong-Ki Jung, Ph.D. [Professor, Accounting Information Systems, ykchung@jnu.ac.kr] • Geon Cho, Ph.D. [Professor, Operations Management, gcho@inu.ac.kr] • Sung-Do Cho, Ph.D. [Professor, Marketing, matt@chonnam.ac.kr] • In-Seon Jo, Ph.D. [Professor, Tax Accounting, isjo@jnu.ac.kr] • Sung-Ho Choi, Ph.D. [Professor, Finance, shchoi@jnu.ac.kr] • Yong-Duk Choi, Ph.D. [Assistant Professor, Organizational Behavior and Leadership, ydchoi@jnu.ac.kr ] • Ung-Yong Choi, Ph.D. [Professor, Cost and Managerial Accounting, uychoi@jnu.ac.kr] • Ji-Ho Choi, Ph.D. [Professor, Marketing, jihocool@jnu.ac.kr] • Byoung-Sop Han, Ph.D. [Professor, International Business, hanbs@jnu.ac.kr] • Jang-Hui Han, Ph.D.

[Professor, Marketing, hanjh@jnu.ac.kr]

#### Degree Requirements

Students are required to earn more than 130 credits. Among the 130 credits, students must earn at least 45 credits from Business Administration courses. If students take more than 45 credits from other major courses, they will have earned a joint-degree (double major). Students who earn at least 21 credits from other major courses will have earned a minor. Students who earn the minimum major credit requirements (45) by 21 credits will have earned an intensive major.

#### What Do You Study?

BUS2020 Management Information System BUS2012 Organizational Behavior BUS2004 Intermediate Accounting1 BUS2018 Marketing Management BUS2017 Financial Management BUS3009 Production & Operations Management UNV4008 Field Practice1 BUS1001 Principles of Management BUS1003 Introduction to International Trade BUS1002 Principles of Accounting BUS2013 Mathematics for Management BUS2032 Management Information and Big Data BUS2014 Organization Theory BUS2031 Business Communications and Negotiation BUS2001 Business Statistics BUS2027 Introduction to Civil Law BUS2010 Managerial Accounting Practices BUS2003 Managerial Accounting 1 **BUS2011** Financial Accounting Practices BUS2015 Managerial Accounting 2 BUS2035 Global Business Management BUS2021 Business Law BUS2030 Managerial Decision Making BUS3011 Human Resources Management BUS2029 Computerized Accounting BUS2023 Intermediate Accounting2 BUS3012 Management Analysis BUS3006 Advanced Accounting BUS3005 Management of Multinational Enterprise BUS3008 Tax Accounting1 BUS3001 Consumer Behavior

BUS3002	Investment Theory
BUS3003	Auditing
BUS3004	Accounting Information System
BUS3018	International Finance Management
BUS3034	Understanding and Using of Multimedia
BUS3021	Insurance
BUS3015	Tax Accounting2
BUS3014	Marketing Research
BUS3016	Strategic Management
BUS3033	Governmental Accounting
BUS3022	Organizational Development
BUS3030	Starting Business and Small Business Management
BUS3035	Introduction to e-Business
BUS4025	Management Innovation
BUS3031	Global Marketing
BUS4005	Financial Institution Management
BUS4003	Labor Relations
BUS3024	International Trade Practice
BUS4026	Service Marketing
BUS4032	Quality Management and Environmental
	Management
BUS4034	Business Case Seminar
BUS4027	Supply Chain Management
BUS4023	Advertising Management
BUS4035	Management of Technology and Innovation
BUS4028	Business Ethics
BUS4033	Knowledge Management and Intellectual
	Property Right Management

BUS4031 Options, Futures, And Other Derivatives

# Faculty of Economics

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#### Faculty of Economics

The learning goal of the Faculty of Economics is to grow economic-minded specialists who are able to solve a diverse range of economic problems with professional knowledge. This goal is being achieved through the educational strategies of the faculty:

- · Problem-solving focused: fostering professional with economic mind and practical capabilities
- Market-community balanced: developing basic grounding in liberty, truth, and contribution to community and society
- Communicative skills: enhancing flexibility of educational programs to meet the demands of society and students

#### Major of Economics

The Major of Economics places great value on practical applications of economic theories and strives to provide a market economy-oriented education. The instructional focus is on educating students to understand principles of economic activities forming the foundation of society, and learn various economics theories and applications how to tackle real-life economic problems

#### Professors

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- Il-Tae Kim, Ph.D. [Professor, Microeconomics, kit2603@jnu.ac.kr]
- Won-Gi Kim, Ph.D. [Assistant Professor, Macroeconomics, wgkim@jnu.ac.kr]
- · Jae-Ho Kim, Ph.D.
- [Professor, Economic History, jhokim@jnu.ac.kr]
- Tae-Gi Kim, Ph.D. [Professor, International Economics, tgkim@jnu.ac.kr]

- Hyun-Ho Kim, Ph.D. [Associate Professor, Industrial Organization, hyunkim@jnu.ac.kr]
- Kyung-Suk Park, Ph.D.
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- Jeong-Hwan Bae, Ph.D.
- [Associate Professor, Environmental and Resource Economics, jhbae@jnu.ac.kr]
- Sang-Ho Lee, Ph.D. [Professor, Industrial Organization, sangho@jnu.ac.kr]
- Chan-Young Lee, Ph.D. [Associate Professor, Labor Economics, chanyounglee@jnu.ac.kr]
- Woo-Young Jeon, Ph.D. [Assistant Professor, Energy Economics,

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Kee-Hwa Chung, Ph.D.
 [Professor, Law and Economics, ckh8349@jnu.ac.kr]

 Yoon-Seok Choi, Ph.D.
 [Assistant Professor, International Economics, yoonchoi3@jnu.ac.kr]

#### Degree Requirements

Students are required to earn more than 130 credits. Among the 130 credits, students must earn at least 36 credits from Economics courses. If students take more than 36 credits from other major courses, they will have earned a joint degree (double major). Students who earn at least 21 credits from other major courses will have earned a minor. Students who earn the minimum major credit requirements (36) by 21 credits will have earned an intensive major.

#### What Do You Study?

Required	History of Economic Theory	
Principles of economics 1	Finance and Banking Economics	
Principles of economics 2	Digital Economics	
Microeconomic Theory	International Finance	
Macroeconomic Theory	Public Economics	
Electives	Economic Development Theory	
Economic Statistics	Economics of Insurance	
Mathematical Analysis for Economics	Financial Market Analysis	
Economic History	International Economic Policy	
Market and Economic Regulation	History of Economic Thought	
Game Theory	Law and Economics	
Korean Economic History	Theory of Political Economy	
International Trade Theory	International Commerce	
Business Economics	International Political Economy	
Labor Economics	Special Issues in Economics	
Industrial Organization	Economics Seminar	
Money and Banking	Cultural Economics	
Econometrics	East Asian Economy	
Resource and Environmental Economics	Economics of Human Resources	

#### Major of Regional Development

The Regional Development major track aims to help students gain an understanding of economic theories and their implications for urban planning, regional development, and the environment. The track educates students to build an understanding of modern methods of urban planning that will reduce the gap among different cities and regions, producing regional development experts with thorough theoretical and practical knowledge. Urban studies provides students with theories and techniques for urban planning and real estate development, while the Regional studies provides students with tools and understanding to solve various regional problems such as environmental, traffic, housing, logistics, etc.

#### Professors

- Ju-Mong Na, Ph.D.
   [Professor, Urban and Regional Economics, najumong@jnu.ac.kr]
- Woo-Jin Shin, Ph.D.
   [Associate Professor, Urban Economics & Real Estate, sayurban@jnu.ac.kr]
- Bong-Hyun Jeong, Ph.D. [Professor, Transportation Economics Policy and Logistic Planning, bhjeong@jnu.ac.kr]
  Dong-Wu Hyun, Ph.D.
- [Assistant Professor, Real Estate and Planning, d.hyun@jnu.ac.kr]

#### Degree Requirements

Students are required to earn more than 130 credits. Among the 130 credits, students must earn at least 36 credits from Regional Development courses. If students take more than 33 credits from other major courses, they will have earned a joint degree (double major). Students who earn at least 21 credits from other major courses will have earned a minor. Students who earn the minimum major credit requirements (36) by 21 credits will have earned an intensive major.

#### What Do You Study?

#### Required

Introduction to Regional Development Introduction to Real Estate Science Regional Economics Transportation Economics

#### Electives

Introduction to Urban Studies Principles of Economics 1 Principles of Economics 2 Urban Planning Regional Community Development Social Research Methods Planning Law Real Estate Mathematics Urban Economics Introduction to Urban Development Principles of Real Estate Development Microeconomic Theory Macroeconomic Theory National and Regional Planning Seminar in City and Regional Development Overseas Regional Development Resource and Environmental Economic Overseas Regional Development Urban History Urban Analytical Techniques City and Regional Logistics Management Urban Management Land Economics Real Estate Market Analysis Fundamentals of Real Estate Appraisal Urban and Regional Regeneration Public Economics National Logistics Polices International Development and Cooperation Regional Economic Analysis

# College of Engineering

# School of Architecture

· Architecture & Urban Design · Architectural Engineering School of Mechanical Engineering · Mechanical Engineering · Automotive Engineering School of Materials Science and Engineering · Metallurgical Engineering · Ceramic Engineering · Optoelectronic Materials School of Chemical Engineering · Chemical Engineering Materials · Chemical Engineering Safety · Chemical Process Engineering School of Electronics and Computer Engineering · Electronics Engineering · Software Engineering · Computer Engineering School of Polymer Science and Engineering · Polymer Engineering · Fiber Science Engineering Department of Industrial Engineering Department of Biotechnology and Bioengineering Department of Energy and Resources Engineering Department of Electrical Engineering Department of Civil Engineering Department of Environment and Energy Engineering Affiliated Research Center · Construction & Environment Research Center Institute · Electronic & Telecommunication Technology Research Center Center · Research Facilities Center · Engineering Education Research Center

- · Institute of Advanced Materials & Technology
- · Institute of Bio-industrial Technology
- · Mining and Urban Contamination Protection
- · Polymer Science and Technology Research
- · Soil Technology Research Institute
- · Solar Energy Research Institute
- · System Automation Research Institute

School of Architecture *Contact Information* Phone: +82-62-530-1630 Fax: +82-62-530-1639 E-mail: usyoo@jnu.ac.kr URL: http://archi.jnu.ac.kr

#### What is Architecture?

Architecture is a profession where technology, ecology, philosophy, art, and science combine to solve the problems of the building environment.

The buildings we live and work in shape our experiences, our memories, and the way we view the world. Homes, office buildings, opera houses, art galleries, schools, and factories are all designed by architects. It is the role of the architect to analyze a client's needs and to design a building which fulfills those needs. The architect then documents the design and manages the construction process. The architectural engineer develops new technologies and materials to construct buildings.

#### School of Architecture at Jeonnam National University

Emphasizing the awareness of social and cultural contexts that underpin the architectural practice, encouraging a comprehensive and creative thinking ability among students, and researching the conditions of the environment of human dwelling, the School of Architecture remains committed to educating architects who can contribute to social progress and welfare.

Founded in 1952, the School of Architecture continues to make efforts to be a core architectural institute leading regional academic research and quality education open to the community.

In 2002, the Department of Architecture was reorganized into the School of Architecture with a five-year Bachelor of Architecture program and a four-year Bachelor of Architectural Engineering program. With a common curriculum in the first semester of studies, students can select and advance to one of the two programs in their second semester.

To achieve this goal, the School of Architecture provides an opportunity for students to understand the methods of creating buildings and architectural environments through design and experiments. The objective is to develop creative, scientific, and future-oriented architect engineers with a professional and comprehensive overview in order to contribute to the creation of architecture culture and academic development of Korea.

In addition, the nationally funded Bio-housing Institute is both designing and researching various aspects of environmentally-friendly architecture based on ecology, health, and sustainability. The goal of the Institute is to develop models of bio-housing through the integration of traditional materials and high technology, and to educate professionals who are equipped with original future technologies and expertise.

Undergraduate and graduate students of the School of Architecture are eligible for various scholarships and funding for overseas training.

#### Architecture & Urban Design Major

The Architecture & Urban Major provides education with the recognition that architecture is not only to provide places in which human beings live and aesthetic structures which gives pleasure but also to become a public device where individuals and society, as a whole, can gather and interact. On such recognition the program has set to realize architectural and urban products that secure human dignity, fulfill social responsibility and pursue aesthetic beauty. Therefore, the goals of the Architecture & Urban major is to cultivate creative and internationalized professional architects and urban designers who understand socio-cultural interconnections through a competitive curriculum including lectures, design studios, and an internship for developing students' architectural and urban professional skills in a comprehensive manner.

#### Architectural Engineering Major

Architectural Engineering helps students fulfill their roles as competent professionals who can design, construct, and manage safe and rational buildings and structures after graduation.

The Architectural Engineering Major intends to develop competitive talents in architectural environments at home and abroad. It pursues realistic architecture by studying engineering applications with a focus on curricula such as Architectural Construction, Architectural Structure, and Architectural Environment and Equipment.

#### Professors

#### Architecture & Urban Design Major

Se-Gyu Oh, Ph.D.
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Hyo-Won Lee, Ph.D.
[Professor Architectural Design Design Theory]

- [Professor, Architectural Design, Design Theory, Planning and Research of Facility for the Aged, Louis I. Kahn, leehw@jnu.ac.kr]
- Uoo-Sang Yoo, Ph.D. [Professor, Architectural Design and Evaluation, usyoo@jnu.ac.kr]
- Seung-Hoon Han, Ph.D.
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- Min-Seok Lee, Dr.-Ing [Professor, Urban Design Planning, leeminseok@jnu.ac.kr]
- Yunnam Jeong, Ph.D.
   [Assistant Professor, Architectural Planning, ynj@jnu.ac.kr]

#### Architectural Engineering Major

- Jin-Kyu Song, Ph.D.
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- Bang Yeon Lee, Ph.D. [Professor, Advanced Building Materials, bylee@jnu.ac.kr]
- Jong Kwan Ryu, Ph.D. [Associate Professor, Architectural Environment & Acoustics, jkryu@jnu.ac.kr]
- Kanghyeok Yang, Ph.D. [Assistant Professor, Construction Informatics, kyang@jnu.ac.kr]

### Degree Requirements

#### Architecture & Urban Design Major

Architecture & Urban Design students are required to earn 160 credits to graduate, taking an average of 18 credits per semester. The program is based on the Bachelor of Architecture program which normally takes 5 years to complete.

#### Architectural Engineering Major

Architectural Engineering students are required to earn 140 credits to graduate, taking an average of 18 credits per semester. The program is based on the Bachelor of Engineering Program which normally takes 4 years to complete.

### What Do You Study?

Architecture & Urban Design Major Architecture Environmental Control System Design Interior Planning Reinforced Concrete Structure Design 1 Steel Structure Design 1 Landscape Architecture Free-form Architecture Intelligent Building System Asian Architecture Design Theory Region, Culture and Space Advanced Course in Computer-Aided Architectural Design Introduction to Urban Planning Practical English City and Culture Culture Planning and Remodeling Digital Design Contents of Urban Space Theory of Contemporary Architecture Place Planning Design Research Methodology Architectural Estimation and Supervision Regional Industry and Architecture History of Western Architecture Introduction to Building Structure History of Korean Architecture History of Modern Architecture Architectural Mechanical System Architectural Planning Architectural Structure System

Practical Internship Environmental Technology Housing and Culture Presentation of Spatial Forms Fundamentals of Computer-Aided Architectural Design Spatial Design Environment-Friendly Architecture **Building Materials** Program and Design Building and City Codes Environment-Friendly Design Site Planning Community Housing Design Urban Planning and Rehabilitation Integrative Design Construction Management **Professional Practice** Urban Design Integrated Architectural Planning Research and Design Practical Design Fundamental Space Design Architectural Space and Society Structural Mechanics

# Architectural Engineering Major

Building Structure Computer Science Foundation Computer Science Application Building Materials Experiment

Numerical Analytics	Building Structural Mechanics 1
System of Building Structure	Architecture Environmental Technology
Architectural Equipment Application	Building Materials
Architecture Environmental Technology Experiment	Architecture Environmental Control System Design
Architectural Estimate	Construction Technology
Architectural Acoustics	Structure Dynamics
Soil & foundation engineering	Architectural Equipment
Building Code & Regulation	Reinforced Concrete Structure Design 1
Steel Structure Design2	Steel Structure Design 1
Architectural Management	Practical Internship
Architectural Capstone Design 2	Architectural Capstone Design 1
Architectural Engineering Design	Housing and Culture
Creative Architectural Engineering Design	Presentation of Spatial Forms
Mechanics of Materials	Construction Method & Technique Design
Engineering Mathematics 2	Engineering Mathematics 1
Statics	Introduction to Creative Design

# Careers

There is a diverse and exciting range of career opportunities for architecture graduates. As well as a career in private architectural practice, career opportunities include Architectural Design, Interior Design, Architectural and Urban Planning, Construction, Structural/Mechanical Engineering, Public Authorities, Project management, Property Development, Research, Restoration, and Conservation.

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### What is Mechanical Engineering?

Mechanical engineering is the branch of engineering concerned with design, manufacture, installation, and operation of engines, machines, and manufacturing processes. Mechanical engineering involves application of the principles of dynamics, control, thermodynamics and heat transfer, fluid mechanics, strength of materials, materials science, electronics, and mathematics. It is a creative and total academic field that materializes scientific imagination into reality by mechatronics, nano/micro system technology, IT-based intelligent mechanical systems, thermo-fluids, and energy systems. Technological innovation by mechanical engineering involves systematic technological materialization through scientific principles and engineering designs. Mechanical engineering has been continuously advancing, setting a base for modern industrial development, and leading the future industry.

Mechanical engineers play a central role in such industries as automotive (car chassis, engine, transmission); aerospace (airplanes, aircraft engines, control systems for airplanes and spacecraft); biotechnology (implants, prosthetic devices, fluidic systems for pharmaceutical industries); computers and electronics (disk drives, printers, cooling systems, semiconductor tools); MEMS (sensors, actuators, micropower generation); energy conversion (gas turbines, wind turbines, solar energy, fuel cells); environmental control (HVAC, air-conditioning, refrigeration, compressors); automation (robots, data and image acquisition, recognition, control); and manufacturing (machining, machine tools, prototyping, microfabrication).

### School of Mechanical Engineering

The School of Mechanical Engineering at JNU was established in 1970. Today, the school has 25 faculty members, 650 undergraduate students, and 80 graduate students. The school aims to provide an excellent education to our undergraduate and graduate students and to conduct leading-edge research in mechanical engineering.

The School of Mechanical Engineering has successfully accomplished several government- supported projects such as the National Project to Foster the Engineering College ('94~'98), Brain Korea 21 (BK21, '99~'05), New University for Regional Innovation (NURI, '04~'09), and post- BK21 ('06~'13) for graduate education. In 2013, the school was selected again for the BK21+ project ('13~'20). Through these projects, the school continually strives to recruit the best new students, provide sufficient scholarships for students, support short-term overseas language training and various educational activities, invite competitive faculty members, support cooperation with regional industries, and update its educational and laboratory facilities. Since 2014, the school was selected CK-1('14~'19), through the fusion of ICT-based eco-friendly cars characterization education, are raising regional strategic industry leader and global creative talent.

The School of Mechanical Engineering acquired accreditation in engineering education from ABEEK in 2010. The mechanical engineering program satisfied all the requirements set by ABEEK.

The goal of the program is to keep its educational program at pace with the rapidly changing circumstances both within and outside the country, while providing the creative research opportunities required for essential industries and research institutions, and to train students to work in related fields.

All students must complete a basic curriculum by the first semester of their junior year, after which they will choose a major of mechanical engineering or automotive engineering.

#### **Mechanical Engineering Major**

The mechanical engineering major offers basic courses in mechanical engineering such as fluid dynamics, materials science, solid mechanics, controls and manufacturing processes, thermodynamics, and heat transfer. Students will also take advanced computer classes that deal with design.

#### Automotive Engineering Major

The automotive engineering major provides specialized knowledge of the latest technological developments in automotive applications of mechanical engineering, including internal combustion engines, vehicle dynamics and aerodynamics, industry-standard CAD tools, and renewable energy and alternative fuels.

### Professors

• Ki-Ju Kang, Ph.D. ygkim@jnu.ac.kr] [Professor, Mechanics of Solids and • Chang-Sei Kim, Ph.D. Structures, [Assistant Professor, Dynamics and Control, jkang@jnu.ac.kr] Biomedical System, · Bo-Seon Kang, Ph.D. ckim@jnu.ac.kr] [Professor, Spray Analysis using • Moon, Chang-bae, Ph.D. Optical Techniques, [Assistant Professor, Mobile Robot bskang@jnu.ac.kr] / Autonomous Vehicle, • Hyun Wook Kang, Ph.D. cbmoon@jnu.ac.kr] [Associate Professor, Micro Fluidics, Nano • Gyuhae Park, Ph.D. Technology and System [Professor, Smart Material/sensor/actuator, kanghw@jnu.ac.kr] gpark@jnu.ac.kr] • Seong-Yong Ko, Ph.D. • Su Han Park, Ph.D. [Associate Professor, Medical Robotics, [Associate Professor, Alternative Energy Vehicle Service Robotics, /Spray Atomization, sko@jnu.ac.kr] suhanpark@jnu.ac.kr] · Young-Bae Kim, Ph.D. • Jong-Oh Park, Ph.D. [Professor, Vibration and Rotor Dynamics, [Professor, Service Robotics, ybkim@jnu.ac.kr] Micro/Nano Robotics, • Woohyun kim, Ph.D. jop@jnu.ac.kr] [Assistant Professor, Modeling, analysis • Jinsoo Park, Ph.D. and control of thermal systems, [Assistant Professor, Microfluidics / whkim@jnu.ac.kr] Flow Visualization, • You-Gon Kim, Ph.D. jinsoopark@jnu.ac.kr] [Professor, Experimental and • Seoung-Yun Seol, Ph.D. Computational Fluid Mechanics, [Professor, Super Conductors,

syseol@jnu.ac.kr] wonohlee@jnu.ac.kr] • Young-Soo Yang, Ph.D. • In-Su Jeon, Ph.D. [Professor, Analysis of Welded Structures, [Professor, Mechanics of Materials, ysyang@jnu.ac.kr] i jeon@jnu.ac.kr] • Byeong-Soo Oh, Ph.D. • Seunghun Jung, Ph.D. [Professor, Non-pollution Hydrogen [Associate Professor, Electrochemical energy Engine and Cryogenic Storage, system, hybrid vehicles bysoh@jnu.ac.kr] shjung@jnu.ac.kr] • Hi-Seak Yoon, Ph.D. • Jae-Tack Jeong, Ph.D. [Professor, Nano-Composite Materials, [Professor, Theoretical and Computational hsyoon@jnu.ac.kr] Fluid Mechanics, • Dong-Weon Lee, Ph.D. jtjeong@jnu.ac.kr] [Professor, MEMS and NEMS, • Byung-Chul Choi, Ph.D. mems@jnu.ac.kr] [Professor, Combustion Engineering, • Bong-Kee Lee, Ph.D. Technology for Engine After-treatment, [Associate Professor, Multiscale Molding & bcchoi @jnu.ac.kr] Manufacturing, • Eunpyo Choi, Ph.D. b.lee@jnu.ac.kr] [Assistant Professor. Medical micro/nano • Lee, Wonoh, Ph.D. robotics, [Associate Professor, Composite Materials / eunpyochoi@jnu.ac.kr] Mechanics of Inelastic Materials,

# Degree Requirements

The undergraduate programs are designed to help students develop both understanding and capability needed to meet the challenges of the modern technological society in mechanical engineering. Students are required to earn at least 140 credit hours (78 from Department courses and 20 from electives), which normally takes four years of full-time study. Students are also able to earn double majors or minors as a means of broadening the scope of their studies.

# What Do You Study?

Air Conditioning and Refrigeration	Creative Engineering Design 1
Alternative Energy Vehicles	Creative Engineering Design 2
Applied Fluid Mechanics	Design of Fluid machinery
Applied Heat Transfer	Design Of Machine Elements 1
Applied Mechanical Engineering Lab	Design of Machine Elements 2
Applied Solid Mechanics	Design of Thermo-Fluid System
Applied Thermodynamics	Dynamics
Automotive and Environmental Engineering	Elementary Mechanical Engineering Lab
Automotive Chassis Systems	Engine design and performance
CAD/CAM with Practice	Engineering Mathematics 1
Computer Aided Engineering Graphics	Engineering Mathematics 2
Control Engineering	Environment-Friendly Vehicles

Finite Element Method	Measurement Engineering
Fluid Mechanics	Mechanical Engineering Capstone Design 1
Fuel and Combustion Engineering	Mechanical Engineering Capstone Design 2
Fuel Cell Vehicles	Mechanical Materials
Gas Dynamics	Mechanical Metallurgy
General Drawing	Mechanical Vibrations
Heat Transfer	Mechatronics Application
Hydraulic Engineering	Microprocessor Basic
Intelligent Vehicle	Mold Design with Practice
Internal Combustion Engine	Numerical Analysis
Internship 1	Plastic Forming
Internship 2	Renewable Energy
Introduction of Electricity and Electronics	Robot Engineering
Introduction To Automobile	Service Robotics
Introduction to Automotive Engineering	Signals and System
Introduction to Engineering Design	Special Lecture on Industrial Topics
Introduction to MEMS(micro electro mechanical	System Engineering
systems)	Theories of Engineering Education
Introduction to Sensors	Thermodynamics
Introduction to Solid Mechanics	Vehicle Dynamics
Kinematics of Mechanisms	Welding Engineering
Manufacturing Processes with Practice	

# **Careers Options**

Graduates are able to pursue careers in engineering, electronics, automobile industry, and construction firms. They may also enroll in a graduate program in the field of mechanical engineering.

Specific positions that graduates may be qualified for include technical public officials, and government officers.

# School of Polymer Science and Engineering

\_\_*Contact Information* Phone: +82-62-530-1770, 1880 Fax: +82-62-530-1779, 1879 E-mail: hjcho@jnu.ac.kr URL: http://pf.jnu.ac.kr/

## What is the School of Polymer Science and Engineering?

The goal of the School of Polymer Science and Engineering is to promote the development of engineering education by improving standards and guidelines of educational programs for engineering colleges and related education, thereby performing certification and consultation, and ultimately producing competent engineers.

# School of Polymer Science and Engineering

The School of Polymer Science and Engineering runs the following two majors to foster the understanding that is necessary for the development of engineering: Polymer Engineering and Fiber Science Engineering.

# Professors

- Gyun-Taek Lim, Ph.D.
   [Professor, Emulsion Polymerization, gtlim@jnu.ac.kr]
- Dong-Il Yoo, Ph.D.
   [Professor, Eco-friendly Regenerated Cellulose Process, diyoo@jnu.ac.kr]
- Yang-Il Huh, Ph.D. [Professor, Polymer Membranes, yihuh@jnu.ac.kr]
- Yoong-Ahm Kim, Ph.D.
   [Professor, Nano Carbon Materials, yak@jnu.ac.kr]
- Jong-Jin Park, Ph.D.
   [Professor, Functional Polymer, Electronic Materials, jjpark@jnu.ac.kr]
- Hyeon-Seok Yoon, Ph.D.
   [Professor, Functional Nano Materials, hyoon@jnu.ac.kr]

- Soo-Mi Huh, Ph.D. [Associate Professor, Theory and Simulations for Soft Materials, shur@jnu.ac.kr]
  Min-Cheol Chang, Ph.D. [Associate Professor, Polymer Semiconductor
- [Associate Professor, Polymer Semiconductor Materials & Devices, mcchang35@jnu.ac.kr]
- Hyung-Woo Kim, Ph.D. [Assistant Professor, Design and synthesis of organic materials, kimhw@jnu.ac.kr]
- Doo-Jin Lee, Ph.D.
  [Assistant Professor, Smart Polymers Processing, dlee@jnu.ac.kr]
  Won-Seok Chi, Ph.D.
- [Assistant Professor, Energy Material, wschi@jnu.ac.kr]

### Degree Requirements

Students are required to earn 140 credits, with 72 credits from School of Polymer Science and Engineering, and 41 credits from general courses.

Students in the ABEEK Program are required to earn 12 credits from general courses, 30 credits from MSC courses, and 54 credits from engineering topics courses.

# What Do You Study?

**Polymer Engineering Major Courses** Core Courses Mathematics 1 Mathematics 2 General Chemistry 1 General Chemistry 2 Chemistry Laboratory 1 Chemistry Laboratory 2 Writing Global Communication English Computer for Real Life Introduction to Engineering Design Engineering Mathematics 1 Engineering Mathematics 2 Organic Chemistry 1 Physical Chemistry 1 Chemical Process Calculation 1 MATLAB Programming and Practice Basic Experiment of Engineering Lab.1 Basic Experiment of Engineering Lab 2 Polymer Chemistry 1 Thermodynamics Fluid Mechanics Polymer Processing 1 Properties of Polymer 1 Polymer Engineering Lab. 1 Polymer Engineering Lab. 2 Separation Process

#### Electives

Materials Science Energy Science and Technology Organic Chemistry 2 Physical Chemistry 2 Chemical Process Calculation 2 Polymer Materials Basic Design of Polymer Engineering Polymer Chemistry 2 Instrumental Analytical Methods and Practice1 Nano Surface Science Instrumental Analytical Methods and Practice2 Functional Polymers Reaction Engineering Heat Transfer Polymer Processing 2 Properties of Polymer 2 Polymer Engineering Capstone Design 1 Polymer Engineering Capstone Design 2 Reactions of Polymers Polymeric Composite Materials Tests of Polymer Materials and Practice Engineering Seminar Elastomer Engineering Rheology Polymeric Nano-composites Polymer Physical Chemistry and Practice Plastics Recycling Biopolymer Energy Materials Electronic Materials

### Fiber Science Engineering Major Courses

Core Courses Mathematics 1 Mathematics 2 General Chemistry 1 General Chemistry 2 Chemistry Laboratory 1 Chemistry Laboratory 2 Writing Global Communication English Fiber Physics Computer for Real Life Carbon Materials Science and Technology Introduction to Engineering Design Synthetic Fibers Energy Science and Technology Nano Bio-technology Engineering Mathematics 1 Color Science Engineering Mathematics 2 Fiber Function Design Organic Chemistry 1 Convergence Materials Testing Organic Chemistry 2 Electrochemistry Physical Chemistry 1 Electronic Materials Physical Chemistry 1 Nano Science and Technology MATLAB Programming and Practice Engineering Seminar Basic Experiment of Engineering Lab.1 Basic Experiment of Engineering Lab 2 Fiber Assembly Engineering Introduction to Polymer Science Introduction to IT Convergence Engineering Nano Surface Science Medical polymers Fundamental Design in Convergence Engineering Convergence Engineering Lab. 1 Functional Fiber Convergence Engineering Lab. 2 Smart Fiber Materials Electives

Materials Science Natural polymers Instrumental Analytical Methods Application of coloring material and experiment Capstone Design 1 in Convergence Engineering Capstone Design 2 in Convergence Engineering Property Design of Carbon Fibers Applied Engineering for Nano Materials Energy Materials High Tech Fibers IT Applications in Convergence Engineering with Experiments

#### Careers

Graduates obtain employment in chemical plants (oil refinery, petrochemical, fertilizer, synthetic resin, oil and fat, food industry, inorganic chemistry, explosives, cement, glass, dye, rubber, paint, pulp and paper, metal, and smelting) in all parts of the country, including the Yeocheon and Ulsan districts, thermo-electrical and nuclear power plants, steel mills, photoelectron fields (semiconductor component/ equipment, LCD, and photo component manufacturing), textile-related fields, sales fields for trading companies, pharmaceutical fields, cosmetics fields, polymer-related fields, research institutes, and civil service.

Department of Industrial Engineering *Contact Information* Phone: +82-62-530-1780 Fax: +82-62-530-1789 E-mail: iejnuackr@gmail.com

### What is Industrial Engineering?

Industrial Engineering (IE), which plays a more important role in modern society than ever before due to the advent of the 4<sup>th</sup> industrial revolution, is a discipline that focuses on design, management, and improvement of systems composed of humans, machines, materials, energy, and information in a rapidly changing industrial environment. IE is primarily concerned with how to organize people, machineries, information, technologies, money, and materials to produce and distribute products and services more efficiently. Its main objectives are to improve the productivity, safety, and resilience of systems and to find their optimal operation schemes. It is an interdisciplinary program, using engineering analyses, design principles and methods as well as natural scientific theories such as mathematics and physics, management, software-related studies, and professional knowledge of social sciences.

# Department of Industrial Engineering

In the department of Industrial Engineering (IE), students learn about the design, management, and improvement of systems composed of human beings, machines, materials, energy, and information under rapidly changing industry surroundings, ultimately to determine the optimal operation schemes of a system and to improve system productivity and efficiency. The department of IE teaches students to analyze the cardinal characteristics of the industry and the business environment, and trains them how to utilize various methods towards optimal design, management and operation under given circumstances. The educational goals of IE program are to help students cultivate their management skills as well as engineering proficiency, to guide them to develop their problem solving and decision making skills, and to encourage them to be competent engineering leaders in a range of work domains.

Students are expected to obtain strong academic basics in undergraduate programs that are developed to offer classical as well as modern subjects in the field of IE in a systematic and logical manner.

### Professors

Chung, Namkee, Ph.D.	• Lee, Jae Yeol, Ph.D.
[Professor, TOC,	[Professor, HCI Design,
tockorea@jnu.ac.kr]	jaeyeol@jnu.ac.kr]
Chung, Sang Wook, Ph.D.	• Kim, Nam Ki, Ph.D.
[Professor, Reliability Engineering,	[Professor, Stochastic Systems & Creative
swchung@jnu.ac.kr]	Problem Solving,
• Lee, Joon-Woong, Ph.D.	freedom@jnu.ac.kr]
[Professor, Computer Vision &	• Ham, Dong-Han, Ph.D.
Software Development for Autonomous Vehicles,	[Professor, Knowledge Service
joonlee@jnu.ac.kr]	Engineering & Human Computer Interaction,

dhham@jnu.ac.kr]

 Jeong, Young-Seon, Ph.D.
 [Associate Professor, Statistical Data Mining, Intelligent Transportation Systems,

#### Degree Requirements

young.jeong@jnu.ac.kr]
Joo, Si-Hyung, Ph.D. [Assistant Professor, Management of Technology, innovation@jnu.ac.kr]

Students are required to earn 130 credit hours with 30 credits from liberal arts courses, 15 credits from department core courses, 33 credits from department electives, 21 credits from other courses, and 31 from general electives.

# What Do You Study?

#### Core Courses

Basics of computer programming Introduction to Probability and Statistics System Analysis & Design Production Management 1 Capstone Design for Industrial Engineering

#### Electives

Introduction to Industrial Engineering Introduction to Engineering Design Engineering Mathematics Case Studies of Industrial Engineering Engineering Economy Management of Technology Work & Process Management Manufacturing engineering and practice Matrix and Linear Algebra **Object-Oriented Programming** Operations Research 1 DB Modeling Data Analysis and its Applications Financial and Management Analysis Creative Problem Solving and Starting Up a Venture **Business** Application of C Programming Operations Research 2

Introduction to Data Mining Design Engineering Marketing and Technological Innovation Strategy Computer Applications for Industrial Engineering Knowledge Engineering Quality Control Special Topics in Industrial Engineering Production Management 2 Design of Experiments Human Factors Engineering Artificial intelligence and applications Quality Engineering Human Interface Engineering Management Information System Digital Design and Applications Project of Industrial Engineering Service Engineering Simulation and S/W Practice Reliability Analysis & Design Logistics Management System Safety Engineering Information & Communication Systems Product development engineering Case Studies on Product and Technology Innovation Project Management

#### Careers

Graduates often find lucrative careers in the manufacturing industry. Alumni have also found positions in academia, civil service, and IT. The degree promises to be even more valuable in the future. (http://ie.jnu.ac.kr/joblist)

Department of Biotechnology & Bioengineering *Contact Information* Phone: +82-62-530-1048 Fax: +82-62-530-1949 E-mail: biohsj@jnu.ac.kr URL: http://bte.inu.ac.kr

# What is Biotechnology & Bioengineering?

Biotechnology & Bioengineering is believed to be one of the key disciplines leading to solve some of the most challenging problems that face our world today. Biotechnology & Bioengineering is defined as the biological application of engineering principles or engineering equipment in biological systems, food, energy, and the environment as well as healthcare. Incorporating recent advances in science and engineering including the fields of biology, chemistry, medicine, electrical and mechanical engineering, and information technology, Biotechnology & Bioengineering allows us to understand the phenomena of life and develops effective biology-based technologies.

### Department of Biotechnology & Bioengineering

In 2012, the Biotechnology & Bioengineering department was reorganized into the College of Engineering from the major of Bioengineering at the School of Biological Sciences and Technology. Our department has been creatively fusing a broad area of bioengineering and life sciences to train and foster students to have an impact in corporate, professional and academic communities. Our mission aims to provide a fundamental bioengineering discipline grounded in basic sciences and the ability in realizing many various biological applications powered by practical and comprehensive curricula. It will allow students to acquire a high degree of confidence and motivation as bio-technologists and bio-engineers and to become engines in the fields of biotechnology including foods, medicine, pharmaceuticals, cosmetics, bioenergy and the environment.

### Professors

- Jong-il Choi, Ph.D.
   [Biomolecules Engineering, choiji01@jnu.ac.kr]
- Seung Hwan Lee. Ph.D. [Metabolic Engineering. leesh@jnu.ac.kr]

Sooim Shin, Ph.D.
[Protein Engineering, sooim.shin@jnu.ac.kr]
Tae Wan Kim, Ph.D.
[Bioprocess Development & Optimization, chekimtw@jnu.ac.kr]

#### Degree Requirements

The undergraduate programs are designed to help students learn bioengineering disciplines as well as mathematics, physics, chemistry and biology. Students also obtain broad exposure to Chonnam National University's other great classes offered in other departments and colleges such as humanities and social sciences. Undergraduate students are required to earn at least 140 credits of coursework for graduation

(a minimum of 69 units in department courses, a minimum of 41 units in liberal arts courses and a minimum of 30 units in elective courses). It normally takes four academic years of full-time study. Students may also undertake a second major or minor to broaden the scope of their studies.

### What Do You Study?

Core Courses Writing for Self-reflection and Communication College Physics 1 Mathematics 1 Mathematics 2 General Chemistry 1 Chemistry Laboratory 1 Career Plan and Self Understanding General Biology 1 General Biology 2 Biology Laboratory 1 Biology Laboratory 2 Introduction to Engineering Design **Biochemical Process Calculation Biochemical Separation Process** Bio Engineering 1 Biochemical engineering Lab 1 Biochemical engineering Lab 2 Biochemical engineering Lab 3 Microbiology

Bioprocess Engineering 1 Biochemistry 1 Organic Chemistry Physical Chemistry Engineering Mathematics 1 Capstone Design

#### Electives

Bio Engineering 2 Applied Microbiology Introduction to Bioengineering and Biotechnology Transfer Operation Bioreaction Engineering and Design Bioanalytical Chemistry **Bioprocess** Control **Bioinfomatics** Metabolic Engineering Plant Design Bio Engineering Seminar 1 Fermentation Technology and Design Basic Research for Biotechnology & Bioengineering 1 Basic Research for Biotechnology & **Bioengineering** 2 MATLAB programing & Practice Enzyme Engineering Bioseparation and Purification Techniques **Bioengineering Exercise** Biochemical engineering Lab 4 Biomedical Engineering Instrumental Analytical Methods Protein Engineering Introduction to Biomedical Engineering **Bioprocess Engineering 2 Biomaterials** Environmental Biotechnology Biochemistry 2 Molecular Biology Principles of Chemical and Textile Engineering Education Materials Evaluation and Teaching Methods of Chemical and Textile Logic and Essay Writing in Chemical and Textile Engineering Engineering Mathematics 2 Food Engineering Genetic Engineering

### Careers

Some undergraduate students continue their academic endeavor by entering graduate schools in Korea as well as abroad. Others take a position in academia, public and private research institutes, and the industry. Moreover, some become involved in bio-venture businesses quite successfully.

School of Materials Science and Engineering \_\_*Contact Information* Phone: +82-62-530-1700, 1710, 1711 Fax: +82-62-530-1699 E-mail: kye7@jnu.ac.kr URL: http://mse.jnu.ac.kr/

# What is Materials Science and Engineering?

Materials Science and Engineering (MSE) is an interdisciplinary field which deals with the discovery and design of new or high-performance materials constituting modern civilization and industrial developments. The field involves studying materials through the materials paradigm-synthesis, structure, properties and performance. It incorporates elements of physics and chemistry and is at the forefront of nanoscience and nanotechnology research. Mechanical, electrical, optoelectronic, and electrochemical properties of metals and ceramic materials are utilized for the transport machinery, semiconductor devices, energy and environmental devices such as batteries, fuel cells, and solar cells, and also medical applications.

# School of Materials Science and Engineering

In order to keep up with the world-wide trend and to make the most of the interdisciplinary nature, Department of Metallurgical Engineering and Department of Ceramic Engineering were integrated in 1999 into School of Materials Science and Engineering (SMSE) with two Majors. In 2002, upon the regional and national industrial demands Optoelectronic Materials Major was additionally established. SMSE is currently constituted of about 360 undergraduate 80 graduate students, and 18 faculty members. Since 2007 SMSE has implemented ABEEK curriculum and Materials Science and Engineering Program was officially accredited in 2014. The students are encouraged to aim for the comprehensive knowledge and understanding of Materials Science and Engineering in general until 4th year when they choose a Major to focus on. For the last decade or so SMSE has run the major large-scale education programs such as NURI, LINC, and CK-1, which provide undergraduates with scholarships and opportunities for language and engineering training courses (6 Sigma, TRIZ etc), industrial internships, domestic and international excursions etc. The undergraduate students are also greatly benefited by the research experience provided by the Laboratories operated by the faculty members. Their research activities, indicated by the eminent national projects such as WCU, BRL, Get-Future, and BK21<sup>+</sup> as well as numerous industrial projects and collaborations, are further supported by the continued studies in the graduate course of the motivated undergraduate students.

### Professors

- Choong-Nyeon Park, cnpark@jnu.ac.kr [Hydrogen Storage Materials, Ni-MH Secondary Batteries]
- Byung-Teak Lee, btlee@jnu.ac.kr
   [Thin Film Growth & Fabrication of Optoelectronic

Devices]

- Ho-Sung Kim, symmetry@jnu.ac.kr
   [Crystal Structure Analysis & Crystal Growth]
- Kwangmin Lee, kmlee@jnu.ac.kr [Nano- & Bio-materials]

- Youngman Kim, kimy@jnu.ac.kr [Mechanical & Thermal Characterizations of Thin Films]
- Jong-Ha Moon, jhmoon@jnu.ac.kr [Photonic Electronic Thin Films]
- Sung-Kil Hong, skhong@jnu.ac.kr [Light Metals, Mold & Automotive Parts Materials]
- Jin-Hyeok Kim, jinhyeok@jnu.ac.kr [Photonic Electronic Thin Film Growth & Characterization]
- Jaekook Kim, jaekook@jnu.ac.kr [Design, Synthesis, Characterization of Nano Energy Materials]
- June Key Lee, junekey@jnu.ac.kr [Semiconductor Process Design]
- Jong-Sook Lee, jongsook@jnu.ac.kr [Electroceramics]

- Sun-Ju Song, song@jnu.ac.kr [Ionics, Energy Materials]
- Chan-Jin Park, parkcj@jnu.ac.kr [Corrosion & Energy Materials, Materials Electrochemistry]
- John Gerard Fisher, johnfisher@jnu.ac.kr [Green Energy Materials]
- Jaeyeong Heo, jheo@jnu.ac.kr [Nanodevices & Materials for Energy]
- Hoonsung Cho, cho.hoonsung@jnu.ac.kr [Biomaterials]
- Uk Sim, usim@jnu.ac.kr
   [Synthesis and characterization of multi-functional low-dimensional nanostructured materials]
- Jang-Yeon Hwang, hjy@jnu.ac.kr [Synthesis and Characterization of energy storage materials]

# Degree Requirements

Students are required to earn at least 140 credit hours (73 major required courses, 45 general courses and 22 elective courses), which normally takes four years of full-time study. Students have the option to double major or to earn additional submajor within Materials Science and Engineering or in other programs.

# What Do You Study?

Instrumental Analytical Methods Engineering Mathematics Introduction to Engineering Design Materials Science Seminar 1/2/3/4 Introduction to Materials Science and Engineering 1/2Special Lecture on Industrial Topics 1/2 Engineering Internship Thermodynamics in Materials Crystal Structures and Defects Materials Engineering Project 1/2/3 Electrical and Magnetic Properties of Materials Mechanical Properties of Materials Electrical Engineering for Materials Engineers X-ray and Electron Diffraction Taguchi Method

Capstone Design 1/2 Design and Machining Physical Chemistry Numerical Methods for Materials Science and Engineering Nanocrystalline Materials and Biomaterials

# **Metallurgical Engineering Major**

Mechanics of Materials Ferrous Alloys Metallography Ferrous Production Metallurgy Solidification Engineering Nonferrous Materials Metalworking Corrosion and Oxidation Materials Electrochemistry Phase Transformation Foundry Engineering Materials Joining 3D Printing and Metal Powder Processing Manufacturing Process of Light Metals

# **Ceramic Engineering Major**

Phase Equilibria Diffusion and Crystal Defect Electroceramics Solid State Chemistry Materials in Energy Applications Theory and Phenomena of Sintering Interfacial Engineering Nano Composite Materials Solid State Physics Introduction to Organic Chemistry Amorphous Energy Materials

# **Optoelectronic Materials Major**

Electromagnetics Optoelectronic Materials Thin Film Process Engineering Semiconductor Device Physics Semiconductor Materials and Processing Electronic Display Engineering Optoelectronic Device Engineering Optical Fiber Communications Semiconductor Device Design Sensor Materials Engineering Optics

# Careers

Graduates are currently playing major roles in various industrial fields of steel, automotive, semiconductor, display, optical communication, and energy storage devices. Many students study further in graduate courses and are trained for the research and development career path.

Department of Energy & Resources Engineering *Contact Information* Phone: +82-62-530-1720 Fax: +82-62-530-1729 E-mail: energy@jnu.ac.kr

# ■ What is Energy & Resources Engineering?

These days, natural resources are essential to develop domestic economies. Each country is trying to secure natural resource stability due to a lack of resources. Currently, our government is making efforts to develop the technology of resource extraction and to encourage advanced resource engineers because the issue of gaining resources is not simply based on geopolitical situations. In order to meet the demands of the time, the Department of Energy & Resource Engineering deals with applied geology & geochemistry, geophysical prospecting, resource development engineering, petroleum engineering, mineral processing, mine safety & environment, drilling engineering, and resource economics.

# Professors

• Yang Hyungsik, Ph.D.	• Lee Jong-Un, Ph.D.
[Professor, Rock Mechanics and Blasting	[Professor, Microbial Geochemistry,
Engineering, hsyang@jnu.ac.kr]	jongun@jnu.ac.kr]
• Yoon Wangjung, Ph.D.	• Lee Jeonghwan, Ph.D.
[Professor, Geophysical Prospecting,	[Associate Professor, Petroleum & Natural Gas,
wjyoon@jnu.ac.kr]	jhwan@jnu.ac.kr]
• Kim Myungjun, Ph.D.	• Kil Youngwoo, Ph.D.
[Professor, Hydro-metallurgy and Recycling,	[Associate Professor, Applied Geology &
junkim@jnu.ac.kr]	Geochemistry, ykil@jnu.ac.kr]

# Degree Requirements

Students are required to earn 140 credits, with 48 credits from core courses within the Department, and 29 from general electives. Students will also be required to submit a graduate thesis, and demonstrate ability in a foreign language.

### What Do You Study?

#### Core Courses

Engineering Mathematics 1 Introduction to Creative Design Petrology and Lab Exploration of Geochemistry & Lab Exploration Geophysics & Design Reservoir Engineering Rock Mechanics & Design Petroleum Engineering Laboratory Seismic Prospecting & Lab Hydrometallurgy and Lab Resource Recycling Engineering & Lab Resource Development Engineering Field Training Applied Geochemistry and Lab Resource Economics Energy & Resources Engineering Capstone Design

#### Electives

Engineering Mathematics 2 Mineralogy and Lab Introduction of Energy Resources Engineering Geology Information System Application Power Technology, Mineral Processing & Design Future Energy Resources Development Engineering Rock Blasting and Design Environmental geology Science of Ore Deposits and Lab Industrial Mineralogy and Lab Tunnel Engineering & Design New and Renewable Energy Engineering Petroleum Production Engineering Petroleum Drilling Engineering Remote Sensing & Lab GPR and Electromagnetic Prospecting Interface Reactions-Flotation Design Resource Evaluation and Design Petroleum Geology Mineral Processing & Plant Design Safety Engineering for Resources Development Underground Fluid Engineering Mine Planning and Design Thermodynamics of Natural Systems

### Careers

#### **Government Ministry**

Ministry of Environment Republic of Korea, Ministry of Knowledge Economy

#### Institutes

Korea Institute of Geoscience and Mineral Resources(KIGAM), Korea Ocean Research & Development(KORDI), Korea Environment Institute, Korea Institute of Science & Technology Evaluation and Planning, etc.

#### **Public Organization**

Korea National Oil Corporation(KNOC), Korea Resources Corporation(KORES), Korea Rural Community Corporation, Korea GAS Corporation (KOGAS), etc.

#### **Domestic Companies**

SK, SK Energy, GS Caltex, SK E&C, GS E&C, Samsung C&T, Posco, Daewoo International Corporation, Daewoo Shipbuilding and Marine Engineering, STX Energy, etc.

#### The others

Mine Reclamation Corporation, Korea Energy Management Corporation, Korea Petroleum Association, etc.

Department of Electrical Engineering *\_\_Contact Information* Phone: +82-62-530-1740 Fax: +82-62-530-1749 E-mail: middle74@chonnam.ac.kr URL: http://elec.inu.ac.kr/eng/

### What is Electrical Engineering?

Electrical Engineering (EE) is based on sciences such as mathematics, physics, and chemistry. Electrical engineering students learn how to transform power sources such as fossil fuels, hydro-electricity, atomic, wind, solar light or heat, and tidal energy into electricity. Students learn how to transport this energy efficiently and steadily to distant places. Students also study how to transform electricity into other types of energy such as light, heat, and power. Ultimately, students search for the best materials, components, and systems when generating and transforming electricity.

### Department of Electrical Engineering

The Department's primary educational goal is to train professionals who will play leading roles in the electrical engineering field. It also aims to cultivate students' abilities to earn careers in the industry by providing them with broad research opportunities that build on the academia-industry cooperation system.

- The Department's goals can be broken down into the following practical aims:
- · acquiring systematic knowledge and skills about general electrical engineering fields
- · mastering the development, operation, and management ability of electrical application skills
- making effort toward the development of the electrical engineering industry.

The Department was chosen to participate in the Electrical Industry Basic Human Power Fostering Project and the New University for Regional Innovation Project by the Ministry of Commerce, Industry, and Energy. It provides students with various educational opportunities and scholarships. It recognizes the importance of rewarding scholarship systems to encourage outstanding students who have exceptional academic records and demonstrate good conduct, and welfare scholarship systems that support financially-limited students.

### Professors

• In-Seon Yeo, Ph.D.	[Professor, Design of Electronic System Based
[Professor, Illuminating Systems,	on Micro Processors, sjpark1@jnu.ac.kr]
isyeo@jnu.ac.kr]	• Seon-Ju Ahn, Ph.D.
• Kyung-Woo Ryu, Ph.D.	[Associate Professor, Smart Grid,
[Professor, Superconductivity Applications,	sjahn@jnu.ac.kr]
kwryu@jnu.ac.kr]	• Yong-Hoon Choi, Ph.D.
• Joon-Ho Choi, Ph.D.	[Associate Professor, Wired/Wireless Innovative
[Professor, Power System and Electrical Apparatus,	Technologies and Hybrid, yh.choi@jnu.ac.kr]
joono@jnu.ac.kr]	• Sang-Yun Yun, Ph.D.
• Sung-Jun Park, Ph.D.	[Associate Professor, Power System,

drk9034@jnu.ac.kr]

• Dong-Hee Kim, Ph.D.

[Assistant Professor, Energy Mechatronics, kimdonghee@jnu.ac.kr]

### Degree Requirements

The undergraduate programs are designed to help students develop the understanding and capabilities needed to meet the challenges of a modern technological society. The students are required to take 140 credit hours (101 credits in a major of related courses and 39 credits in general studies courses), which normally takes four years of full-time study. The minor and double major programs are offered to give students an opportunity to broaden the scope of their major field.

### What Do You Study?

#### Major required

Engineering Mathematics Vector Analysis Applied Mathematics Electrical Engineering Basic Lab Theory of Electrical Materials Properties Electromagnetism 1 Electromagnetism 2 Circuit Theory 1 Circuit Theory 2 Automatic Control Engineering Micro electronics Lab Electric Machines Smart Power System Engineering1 Electromagnetic Energy Conversion Electronic Circuit

#### Major Electives

Internship Introduction to Engineering Design Introduction to Electrical Engineering Engineering Software Applications Computer Programming Language for Engineers Introduction to Data Visualization and Analysis Digital Circuit Design of Microprocessor Applications High Voltage and High Current Engineering Digital System Engineering Renewable Energy System Engineering Sensor Engineering Automation of Industrial Process Micom Applications Lab Smart Power System Engineering 2 **Dielectrics** Engineering Materials Engineering Power Electronics Illuminating Design LED and OLED Lighting Electric Vehicle Technology Electrical Engineering Capstone Design 1 Display Optics and Color Engineering Power Distribution System Engineering **Display** Electronics Electrical Energy Storage Systems Vehicle Power Conversion Control Fundamentals of Power Communication Systems Information and Communication Technology for Power System Power System Operation Practice Electricity Market Theory and Practice Recent technical trends in Smart Grid Electric Circuit Basic Lab Electrical Engineering Seminar Elecric Machine Applications Lab Engineering Economy

#### Minor Required

Electromagnetism 1 Circuit Theory 1 Electromagnetic Energy Conversion Electric Machine

#### Minor Electives

At least 9 credit hours of the major courses should be chosen.

# Careers

Thanks to the fundamental engineering characteristics of electrical engineering, graduates are obtaining distinction in all industrial positions, including key national industrial companies and IT venture companies. In particular, many graduates are currently employed by KEPCO, Samsung Electronics, LG Electronics, and Hyundai Heavy Industries.

School of Electronics and Computer Engineering \_\_\_*Contact Information* Phone: +82-62-530-1750, 1751, 1800, 1801, 3420 Fax: +82-62-530-3439 E-mail: A0274@jnu.ac.kr URL: http://ece.jnu.ac.kr

# What is Electronics and Computer Engineering?

The goals of Electronics and Computer Engineering (ECE) are to introduce concepts in electronics and computers in an integrated manner; to motivate basic concepts in the context of real applications; to illustrate a logical way of thinking about problems and their solutions; and to convey excitement about the profession. These goals are attained through the analysis, construction, and testing of systems that incorporate concepts from a broad range of areas within electronics and computer engineering.

### School of Electronics and Computer Engineering

#### School of Electronics and Computer Engineering

The School of Electronics and Computer Engineering is a combined department, originating from a merger in 2002 of the former two Departments of Information & Communication Engineering in the Engineering College and the Computer Information in Science College. The objectives of the department are not only to improve personal capability but also to largely contribute to nationwide development, by obtaining and utilizing the technology in information and communication engineering leading to contributions to the information-oriented society of the 21st century. To achieve the goals, students are required to start the basic subjects relevant to the major based on their own ability & aptitudes and finally complete the entire courses. The curriculum of the department is segmented into three majors: Electronics Information & Communication Engineering; Computer Information & Communication Engineering; and Software Engineering, which are options for students to determine at the beginning of the second year. The studies for postgraduates will mainly focus on the basic theories in order to perform research creatively onwards, while students desiring to start careers at the companies in the same industry are to acquire practical skills as well as the theoretical knowledge for the purpose of being competent engineers. In addition, the syllabi include another aim which is to form a well-rounded personality because good attitudes and philosophies are necessary for beneficial research for the wider community.

#### Division of Electronic Information and Communication Engineering

Electronics Engineering is shown everywhere in our lives, including in smartphones, televisions, game consoles, etc. and has an advantage of a broad range of applications into lots of areas. For example, the professors of the Electronics Engineering faculty of Chonnam National University deal with technology applied to various fields in modern society, including with semi-conductors, in communications, signal processing for image & sound, biometric & medical technologies, intellectual control, etc.

The distinct characteristic of Electronics Engineering is an integration of relevant technologies and fast-growing innovation. Furthermore, it, as a leading discipline initiatives the development of other industries by a convergence with other technologies. Especially, it is closely associated with the electronics business such as with regards to semi-conductors, smartphones, etc. and the industry demands a large number of qualified manpower. Accordingly, it gives students opportunities to work in the better workplaces.

The Electronics Engineering faculty of Chonnam National University highlights reasonable thinking as well as forward-thinking to comply with the fourth industrial revolution. To do so, it mainly aims for students to be qualified as experts in the electronic engineering discipline by broadening itself, encompassing the following: a balanced syllabus having both theoretical and design classes; work-based experiments and practice; and an advanced educational program based on projects for encouraging students to enhance their creative technological abilities.

#### **Division of Computer and Information Communication Engineering**

Electrical appliances, communication equipment, medical equipment, and information service systems that are easily seen in our daily lives result from the combination of electronic circuit technology, imbedded computer technology, and software operation technology. The combination of hardware and software occurs simultaneously in all the current industries and the combination of computer-based IT and other technologies can manufacture high value products. As hardware manufacturing technology becomes more diversified and generalized, engineers with hardware and software-related knowledge are needed in various fields of the industry.

Computer and Information Communication Engineering is the study of the technologies of mobile equipment such as Smartphones, and software technologies needed for the manufacturing of network systems such as clouds, internet service systems, etc. Courses include logic circuits, basic circuit theory, computer structures, digital synthesis design, etc. In addition, communication theory, data communication, and computer networking are taught for the understanding of information communication systems and intelligence systems, multimedia systems, imbedded systems, and computer medical systems as well as generic IT application systems.

In Computer and Information Communication Engineering, the concepts of hardware and software are taught and understood through experimentation. The combination of SOC (System on a Chip) design technology and computer OS helps students understand the technology needed for applied systems in IC components such as MP3 players. Also, understanding data communication and multimedia transmission technology software helps them experience futuristic multimedia systems, such as smart TVs, and students operate robots and vehicles through programming and acquire knowledge. Courses also provide chances for field experience in connection with industry (companies). Customized scholarship programs benefit students in school and after graduation with the cooperation of prominent local companies, Samsung Electronics, LG Innotek, Hynix Semiconductor, Inc, and LG Display among others.

#### **Division of Software Engineering**

Now the world is in a software supremacy struggle. It accounts for 52.4% of the automobile industry, 40.9% of the medical industry, and 51.4% of the warplane industry.

Korea was ranked 10th in the world economy due to a combination of basic industries such as automobile, steel, electronics, and software industries. However, as the demand for manpower in software development increases, the supply of highly-skilled people is insufficient. The majority of people working in the software industry are non-specialists.

Technologies and methods in developing and utilizing computer software are taught in software engineering. There are many departments for computer engineering in other universities, but there are only a few universities specializing in computer software. Software Engineering at Chonnam National University trains talented persons in combined software technology to lead the future information society. CNN Money announced the top 100 jobs in America, based on quality of life, and software designer was ranked at the top. Software designers are technicians developing and utilizing software, and making blueprints that

are equivalent to those of an architect.

Microsoft, the leader in the global operation systems market; Apple, the leader in the intelligent mobile phones market with the iPhone; Google the dominant force in the information search market (and seeking to enter telecommunications); and Naver, leading the domestic information search market are all prominent software companies.

These companies have also grown rapidly in recent times. Dear young people, full of passion and dreams, challenge yourselves and embrace the learning. Software engineering awaits you. Find your own Blue Ocean and become an important person in the infinity of cyberspace.

Machines like Smart phones enable us to access anything. Mobile phone operation systems such as Android, iOS, or Windows as well as game or utility apps can be made and installed by you..

# Professors

- Buhyun Hwang, Ph.D. [Professor, Database, bhhwang@jnu.ac.kr]
- Jayjeong Kim, M.S.
   [Professor, Computer Graphics, jaykim@jnu.ac.kr]
- Bongnam Noh, Ph.D. [Professor, Information Security, bbong@jnu.ac.kr]
- Yeongseog Lim, Ph.D. [Professor, Microwave, limys@jnu.ac.kr]
- Gueesang Lee, Ph.D.
   [Professor, Multimedia image processing, gslee@jnu.ac.kr]
- Hyeongseok Lim, Ph.D. [Professor, Algorithm, hslim@jnu.ac.kr]
- Seongmo Park, Ph.D.
   [Professor, ASIC/SoC Design, smpark@jnu.ac.kr]
- Daewook Kang, M.S. [Professor, Network, dwkang@jnu.ac.kr]
- Deokjai Choi, Ph.D.
   [Professor, Computer Network, dchoi@jnu.ac.kr]
- Youngchul Kim, Ph.D. [Professor, SoC (System on a Chip), yckim@jnu.ac.kr]
- Jiseung Nam, Ph.D.

[Professor, Computer Networking, jsnam@jnu.ac.kr]

- Jinyoung Kim, Ph.D.
   [Professor, Signal Processing, beyondi@jnu.ac.kr]
- Chilwoo Lee, Ph.D.
- [Professor, Computer Vision & Human Interface, leecw@jnu.ac.kr]
- Daejin Kim, Ph.D. [Professor, Digital Communication, djinkim@jnu.ac.kr]
- Soohyung Kim, Ph.D. [Professor, Artificial intelligence, shkim@jnu.ac.kr]
- Yonggwan Won, Ph.D. [Professor, Intelligent Computing & Biomedical Engineering,
- ykwon@jnu.ac.kr]
- Hyukro Park, Ph.D.
   [Professor, Information Retrieval, hyukro@jnu.ac.kr]
- Sunghoon Hong, Ph.D. [Professor, Image Processing, hsh@jnu.ac.kr]
- Sungjune Baek, Ph.D.
   [Professor, Digital Signal Processing, tozero@jnu.ac.kr]
- Jaehyung Park, Ph.D.
   [Professor, Network Technology, hyeoung@jnu.ac.kr]
- Dongkook Kim, Ph.D.

# Degree Requirements

### Electronic Information & Communication Engineering Major Courses

Electronic Information Communication Engineering students are required to earn 140 credits including 20 credits from liberal arts education courses, 32 credits from MSC courses, 33 credits from EE compulsory courses, 27 credits from EE electives, and 28 credits from general electives.

#### Computer and Information Communication Engineering Major Courses

Computer and Information Communication Engineering students are required to earn 140 credits including 24 credits from liberal arts, 26 credits from MSC courses, 37 credits from core CE courses, 26 credits from CE electives, and 27 credits from electives.

#### Software Engineering Major Courses

Software Engineering students are required to earn 140 credits including 24 credits from liberal arts education courses, 26 credits from MSC courses, 37 credits from CE compulsory courses, 27 credits from CE electives, and 26 credits from general electives.

# What Do You Study?

### Electronic Information & Communication Engineering Major Courses

Core Courses Engineering Mathematics 1 Introduction to Engineering Design C Programming & Practice Advanced Computer Programming & Practice Linear Algebra Logic Circuits Design Circuit Theory 1 Engineering Mathematics 2 Basic Electronic Engineering Lab 1 Basic Electronic Engineering Lab 2 Electromagnetics Signals and System Engineering Basic Probability Theory Electronic Circuit 1 Electronic Engineering Seminar 1 Introduction Project of Electronic Engineering Basic Project of Electronic Engineering Design Project of Electronic Engineering Capstone Design 1

#### Electives

ICT Fusion Introduction Computer System Architecture Circuit Theory 2 Electronic Circuit 2 Physical Electronics Microprocessors Radio Engineering Integrated circuit Design Communication Theory Digital Signal Processing Control Engineering 1 Digital Communication Engineering & Design Design of Microprocessor Applications Microwave Frequency Engineering & Design Digital Image Processing Semiconductor Engineering Electronic Engineering Seminar 2 Control Engineering 2 Numerical Analysis

Data Communication Introduction to Robotics Automotive Multimedia System Design of applied Optical System Digital Synthesis Design Antenna Engineering & Design Embedded System Acoustic Communication Engineering Mobile Communication Engineering & Design Multimedia Applications Communication System Engineering Intelligent Vehicle SOC Design Optical Communication System ICT Convergence Automotive Experiment Electronic Engineering Field Practice 1 Electronic Engineering Field Practice 2

#### Computer and Information Communication Engineering Major Courses Core Courses

Engineering Mathematics 1 Introduction to Engineering Design C Programming & Practice Linear Algebra Logic Circuits Design **Discrete** Mathematics Computer System Architecture Data Structures Basic Practice in Computer Engineering Probability and Statistics C++ Programing and Lab Operating System Computer Engineering Project Embedded Software Computer Engineering Project 1 (Capstone Design) Computer Engineering Project 2 (Capstone Design)

#### Electives

ICT Fusion Introduction Basic Circuit Theory Engineering Applied Mathematics Data Communication Electronic Circuit 1 Electromagnetics Signals and System Engineering Software Application Project Data Base Systems Digital Synthesis Design Project Digital Signal Processing Artificial Intelligence Microprocessors Communication Theory Computer Engineering Seminar 1 Ubiquitous Computing Computing Algorithm Digital Communication Engineering Computer Networks Digital Image Processing Embeded System Computer Systems in Medicine Mobile Communication System Smart Vehicle System Computer Engineering Seminar 2 Introduction to smart sensing systems Distributed Systems Human Interface Multimedia System Intelligence System Routing Protocol Network Programming & Practice Embedded Application Software Application of Computer Fusion Computer Information Security Field Practice of Computer Engineering 1

#### Software Engineering Major Courses

Core Courses C Programming & Practice Java Programming and Lab Discrete Mathematics Linear Algebra Data Structures Computer System Architecture Probability and Statistics Theory of Software Engineering Data Base Systems Operating Systems Career Exploration Software Engineering Integrated Project (Capstone Design) Algorithm Computer Networks Theory of Programming Languages

#### Electives

Logic Circuits Linux System Software Engineering-based Projects Network Programming C/C++ Programming and Lab Object-oriented Design Project Data Communication Problem Solving Project Computer Graphics Windows Programming Project Database Design Project Web Programming and Lab Artificial Intelligence Computer & Networks Security Compilers **3D** Animation Pattern Recognition Mobile Application Software **Field Practice** Distributed Systems Theory of Computation Embedded Software Digital Image Processing

### Careers

Graduates of Electronic and Computer Engineering are actively working in various fields of society such as domestic companies, TV stations, and in public and venture companies as high-ranking public

officers or patent agents.

Otherwise, they continue their studies at graduate schools for masters or doctoral degrees and become professors at universities or leading researchers in many industrial institutes or laboratories headed by large domestic companies and national and public laboratories. They include Samsung, LG, Daewoo, Hyundai, SK Hynix, TV stations, financial companies, KEPCO (Korea Electric Power Corporation), KT, SKT, NHN, ETRI, etc.

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# What is Civil Engineering?

The fields of civil engineering offer careers in the planning, design, construction and management of the built environment as well as in the interaction between the built environment and the natural environment. Civil engineering plays an essential role to our community. There are significant interdisciplinary challenges in refining and maintaining the quality and sustainability of the infrastructure of interconnected systems, which are important to our quality of life. These systems include transportation, highways, rapid transit lines, airports, civil structures, construction materials, land surveying, stream channels, pipelines and wastewater treatment systems. The response of this infrastructure to natural hazards and environmental interaction is a critical challenge in this area. The faculty and staff within the civil engineering department are committed to educating the next generation of engineers and leading the development of this field through research and outreach

### School of Civil Engineering at Jeonnam National University

The School of Civil Engineering is concerned with the control of the environment for the benefit of humankind. Civil engineers provide modern society with vital infrastructure and lifeline systems such as cities, roads, buildings, bridges, railroads, and water systems.

- 1951. 01: Establishment of Department of Civil Engineering
- 1999. 03: Reorganization of Departments of Civil, Earth, and Environmental Engineering
- 2002. 03: Reorganization of Departments of Civil, Geosystems, and Environmental Engineering
- 2009. 03: Reorganization of Department of Civil Engineering

### Professors

- Kyong-Hoon Rhee, Ph.D. [Professor, Water Resources, Water Supply and Sewage Engineering, water@jnu.ac.kr]
- Tae-Jun Ha, Ph.D.
   [Professor, Traffic Engineering & Urban Planning, tjha@jnu.ac.kr]
- Inkyu Rhee, Ph.D.
   [Professor, Structural Mechanics and Material Science, rheei@jnu.ac.kr]
- Jae-min Kim, Ph.D.

[Professor, Structural Engineering, jm4kim@jnu.ac.kr

- Young-sang Kim, Ph.D. [Professor, Geotechnical Engineering, geoyskim@jnu.ac.kr]
- Jae-JIn Park, Ph.D.
   [Professor, Road Engineering, tjha@jnu.ac.kr]
- Young-Uk, Ryu, Ph.D.
   [Professor, River and Coastal Engineering, yuryu@jnu.ac.kr]

#### Degree Requirements

The undergraduate programs are designed to help students develop the understanding and capabilities needed to meet the challenges of a modern technological society. Students are required to earn at least 130 credits (102 credits from Department courses and 28 from electives), which normally takes four years of full-time study to complete. The minor and the double major programs are offered to give students an opportunity to broaden the scope of their major fields.

### What Do You Study?

#### Courses

Introduction to Civil Engineering & Design Surveying and Practice 1 Fluid Mechanics Probability and Statistic Hydraulics and lab Mechanics of Materials Civil Engineering Materials and Lab Civil Engineering (AI) Structural Mechanics Engineering Mathematics 1 Engineering Mathematics 2 Surveying and Practices 2 Dynamics Hydrology Applied Hydraulics Environmental Engineering Advanced River Hydraulics Soil Mechanics and Lab 1 Design of Concrete Structures 1 Highway Engineering and Design Transportation Engineering Soil Mechanics and Lab 2 Photogrammetry Design of Concrete Structures 2 Construction Works & Design Water Supply, Sewage Engineering & Design Steel Structural Engineering Dam Engineering

Pre-stressed Concrete Urban & Transportation Planning Foundation Engineering & Design Coastal & Harbor Engineering Geospatial Information Surveying Construction Environment Influence Valuation & Design Environmental Impact Assessment & Design Noise and Vibration Bridge Engineering Railroad Engineering Transportation Engineering Rock Engineering & Design Design for Soil Structure Pavement Engineering & Design Practical Design of Civil Engineering Water Resources Engineering Basic Computer Programming & Practice Physics Laboratory 1 Chemistry Laboratory 1 Educational Theory in Construction Study and Guidance on Constructional Teaching Constructional Technology Logic and Essay Writing Teaching Children with Learning Disabilities Practical Affairs for the Teaching Profession Teaching Practice 1 Teaching Practice 2

#### Careers

Graduates are currently playing active roles in central and local government organizations (e.g., Ministry of Construction and Transportation, Ministry of Environment, etc.), public corporations (Korea Water Resources Corporation, Korea SH Corporation, Korea Rural Community Corporation, Korea Highway Corporation, etc.), and research institutes (e.g., Korea Institute of Construction Technology). Also, private companies and corporations dealing with bridges, harbors, roads, and dams prefer to hire environmental engineers. Some graduates go on to graduate school to further specialize in their discipline in the field of civil engineering.

School of Chemical Engineering *Contact Information* Phone: +82-62-530-1850 Fax: +82-62-530-1909 E-mail: jsha@jnu.ac.kr URL: http://ace.inu.ac.kr

### What is Chemical Engineering?

The goal of the School of Chemical Engineering (SCE) is to promote the development of engineering education by improving standards and guidelines of educational programs for engineering colleges and related education, thereby performing certification and consultation, and ultimately producing competent engineers.

### School of Chemical Engineering

The SCE was established in March 2002 by merging the existing faculty of Chemical Engineering and faculty of Applied Chemistry. The newly restructured School of Chemical Engineering comprises the following three departments to foster understanding that is necessary for the development of engineering: chemical engineering materials, chemical engineering safety, and chemical process engineering.

### Professors

- Hee Moon, Ph.D.
   [Professor, Adsorptive Separations, hmoon@jnu.ac.kr]
- Yo-Soon Song, Ph.D. [Professor, Catalytic Reaction Engineering, yssong@jnu.ac.kr]
- Sung-Ju Kang, Ph.D.
   [Professor, Process Systems and Control, sjkang@jnu.ac.kr]
- Chang-Bock Chung, Ph.D. [Professor, Processing Systems, chungcb@jnu.ac.kr]
- Jin-Bong Kim, Ph.D.
   [Professor, Polymer Synthesis, Photonic Devices, jbkim@jnu.ac.kr]
- Choon-Hyoung Kang, Ph.D. [Professor, Supercritical Fluid Extraction, chkang@jnu.ac.kr]
- Taek-Hyeon Kim, Ph.D.
   [Professor, Design and Synthesis of Drug, Organic Synthesis, thkim@jnu.ac.kr]

- Jong-Ho Kim, Ph.D.
   [Professor, Catalytic Chemistry, jonghkim@jnu.ac.kr]
- Moo-Sung Lee, Ph.D. [Professor, Polymer/Hybrid Materials, moosung@jnu.ac.kr]
- Young-Chul Kim, Ph.D.
   [Professor, Hydrogen Production from Hydrocarbon, youngck@jnu.ac.kr]
- Hyung Jin Kim, Ph.D. [Professor, Organic Synthesis, hyungkim@jnu.ac.kr]
- Do-Heyoung Kim, Ph.D.
   [Professor, Metal Organic Chemical Vapor, kdhh@jnu.ac.kr]
- Wan-Jin Lee, Ph.D. [Professor, Fuel Cells, Polymer Batteries, wjlee@jnu.ac.kr]
- Jong-Il Rhee, Ph.D.
   [Professor, Development for Optic Biosensors and Biochips,

jirhee@jnu.ac.kr] jsha@jnu.ac.kr] • Young-Dae Kim, Ph.D. • Chang-Hyun Ko, Ph.D. [Professor, Rheology, Conduction Polymer, [Professor, Synthesis and Catalytic youngdae@jnu.ac.kr] Application of Inorganic Materials, • Eun-Mi Han, Ph.D. chko@jnu.ac.kr] [Professor, Opto-electronic Materials, • Jeong-Woo Yun, Ph.D. [Associate Professor, Fuel Cell, Capacitor, emhan@jnu.ac.kr] • Kwang Ha, Ph.D. Fuel reforming, [Professor, Organometallic Chemistry, jwyun@jnu.ac.kr] hakwang@jnu.ac.kr] • Yong-Il Park, Ph.D. • Sung-June Cho, Ph.D. [Associate Professor, Nano Materials [Professor, Production and ypark@jnu.ac.kr] • Young-Si Jun, Ph.D. Storage of Methane and Hydrogen, sjcho@jnu.ac.kr] [Associate Professor, Photocatalysis, • Yun-Sung Lee, Ph.D. Polymer semiconductors [Professor, Lithium Secondary Battery, • Byung-Chol Ma, Ph.D. leeys@jnu.ac.kr] [Assistant Professor, Process Safety Design, • Jong-Hoon Han, Ph.D. Process Risk Analysis [Professor, Nano Carbon Convergence Materials, anjeon@jnu.ac.kr] • Chang-Kook Hong, Ph.D. • Dae-Sung Song, Ph.D. [Professor, Solar Cells, Energy [Assistant Professor, Process Design, Process Engineering, Polymer Materials, Optimization, Process Safety, dssong@jnu.ac.kr] hongck@jnu.ac.kr] • Jun-Seok Ha, Ph.D. [Professor, Nano Photonic Devices,

# Degree Requirements

Students are required to earn 140 credits, with 84 credits from Chemical Engineering courses, and 40 credits from general courses.

Students in the ABEEK Program are required to earn 12 credits from general courses, 32 credits from MSC courses, and 75 credits from engineering topics courses.

# What Do You Study?

#### **General Courses**

Core Courses Writing for Self-reflection and communication Career Plan and Self Understanding Mathematics 1 General Chemistry 1 College Physics 1 Chemistry Laboratory 1 Computer for Real Life Mathematics 2 General Chemistry 2 College Physics 2 Chemistry Laboratory 2

# Chemical Engineering Materials Major Courses Core Courses

Polymer Chemistry

Engineering Mathematics 1 Chemical Process Calculation 1 Instrumental Analytical Methods Physical Chemistry 1 Organic Chemistry 1 Transfer Operations 1 Materials Science Electro Chemistry Introduction to Creative Design Basic Experiment of Chemical Engineering Lab 1 Basic Experiment of Chemical Engineering Lab 2 Design of Chemical Engineering and Materials Experiments for Chemical Materials Chemical Engineering Lab. Chemical Engineering Capstone Design

#### Electives

MATLAB Programming Chemistry of Interface Introduction to Polymer Processing Polymer Materials Industrial Analytical Chemistry Engineering Mathematics 2 Chemical Process Calculation 2 Chemical Process Thermodynamics Chemical Process risk assessment Chemical Process Control Fundamentals of Photonics **Fuctional Polymers Display Engineering** Inorganic Materials Inorganic Chemistry Physical Chemistry 2 Semiconductor Photonic Devices Engineering Semiconductor Device Fabrication Reaction Engineering Separation Process Separation And Purification Processes Nonuniform Reaction Engineering Engineering Seminar 1 Engineering Seminar 2 **Biochemical Engineering** Petrochemical Industry Combustion and Explosion Protection

Engineering Organic Industrial Chemistry Organic Reaction Mechanism Organic Synthetic Organic Chemistry 2 Medicinal Chemistry Transfer Operations 2 Catalyst Chemistry Carbon Materials Engineering Plant Safety Facility Fundamentals & Design to Chemical process Numerical Analysis in Chemical Engineering Chemical Safety Engineering Chemical Engineering Termodynamics Chemical Engineering Quality Control Field Practice for Chemical Engineering 1 Field Practice for Chemical Engineering 2 Environmental Chemistry

# Chemical Enginieering Safety Major Courses

Core Courses Introduction to Creative Design Transfer Operations 1 Chemical Process Calculation 1 Physical Chemistry 1 Organic Chemistry 1 Engineering Mathematics 1 Basic Experiment of Chemical Engineering Lab 1 Basic Experiment of Chemical Engineering Lab 2 Chemical Engineering Lab Chemical Safety Experiment Chemical Engineering of Chemicals Combustion and Explosion Protection Engineering Chemical Precess risk assessment Plant Safety Facility Chemical Process Design Chemical Engineering Capstone Design

#### Electives

MATLAB Programming Transfer Operations 2 Chemical Process Calculation 2 Organic Chemistry 2 Physical Chemistry 2 Engineering Mathematics 2 Basic Design of Chemical Engineering Inorganic Chemistry Materials Science Chemical Engineering Thermodynamics Reaction Engineering Separation Processes Chemical Process Control Petrochemical Industry Nonuniform Reaction Engineering Separation Purification Processes Chemical Precess Control System Analysis Chemical Precess Thermodynamics Numerical Analysis in Chemical Engineering Electrochemistry Polymer Chemistry Energy Engineering Engineering Economy Patent based Research and Development Environmental Engineering Instrumental Analytical Methods Chemical Engineering Quality Control Industrial Safety Regulations Engineering Seminar 1 Engineering Seminar 2 Technology Management Chemical Equipment and Facilities Energy Storage System Engineering Measurement Sensor Engineering Field Practice for Chemical Engineering 1 Field Practice for Chemical Engineering 2

### Chemical Process Engineering Major Courses

Core Courses Introduction to Creative Design Transfer Operations 1 Chemical Process Calculation 1 Physical Chemistry 1 Organic Chemistry 1 Engineering Mathematics 1 Basic Experiment of Chemical Engineering Lab 1 Basic Experiment of Chemical Engineering Lab 2 Nonuniform Reaction Engineering Separation and Purification Processes Chemical Process Thermodynamics Chemical Process Control System Analysis Numerical Analysis in Chemical Engineering Chemical Engineering Lab Chemical Engineering Intensive Lab Chemical Process Design Chemical Engineering Capstone Design

#### Electives

MATLAB Programming Transfer Operations 2 Chemical Process Calculation 2 Organic Chemistry 2 Physical Chemistry 2 Engineering Mathematics 2 Basic Design of Chemical Engineering Inorganic Chemistry Materials Science Reaction Engineering Separation Processes Chemical Engineering Thermodynamics Chemical Process Control Organic Composite Materials Petrochemical Industry Energy Engineering Electrochemistry Inorganic Materials Measurement Sensor Engineering Combustion and Explosion Protection Engineering Polymer Chemistry Organic Reaction Mechanism Particle Engineering Transfer Phenomena Chemical Safety Engineering Computer Aided Design of Chemical Engineering Catalyst Engineering Engineering Seminar 1 Engineering Seminar 2 Green Chemistry Technology Energy Storage System Engineering Chemical Equipments and Facilities Environmental Engineering

Instrumental Analytical Methods Quality Control Technology Management Engineering Economy Chemical Technology and Patent Chemical Process risk assessment Plant Safety Facility Chemical Engineering Quality Control Field Practice for Chemical Engineering 1 Field Practice for Chemical Engineering 2

### Careers

Graduates obtain employment in chemical plants (oil refinery, petrochemical, fertilizer, synthetic resin, oil and fat, food industry, inorganic chemistry, explosives, cement, glass, dye, rubber, paint, pulp and paper, metal, and smelting) in all parts of the country, including the Yeocheon and Ulsan districts, thermo-electrical and nuclear power plants, steel mills, photoelectron fields (semiconductor component/ equipment, LCD, and photo component manufacturing), textile-related fields, sales fields for trading companies, pharmaceutical fields, cosmetics fields, polymer-related fields, research institutes, and civil service.

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### What is Environment and Energy Engineering?

The main objectives of environment and energy engineering are controlled use and preservation of environment and developing new renewable energy. Environment and energy engineering applies engineering and scientific principles to protect human health and to maintain and improve eco-systems. Our graduates are trained to design, build, operate, and manage organizations and facilities that protect people and the environment by developing new renewable energy. Environment and energy engineering is generally treated as an independent engineering discipline by the engineering profession. We live amid intricate interactions and complex problems created between living beings and their environments, or by variabilities of nature itself. These problems can have disastrous consequences of enormous magnitude and are very difficult to resolve. Environmental researchers investigate these interactions to guard each being from the harmful effects of others.

# Department of Environment and Energy Engineering at Jeonnam National University

- 1992. 03: Establishment of Department of Environmental Engineering
- 1999. 03: Reorganization of Departments of Civil, Earth, and Environmental Engineering
- 2002. 03: Reorganization of Departments of Civil, Geosystems, and Environmental Engineering
- 2009. 03: Reorganization of Department of Environmental Engineering
- 2013. 03: Reorganization of Department of Environment and Energy Engineering

### Professors

[Professor, Treatment of

• Seon-Yong Chung, Ph.D.	Contaminated Soils and Wastes,
[Professor, Environmental Microbiology and Ecology,	parkjeo1@jnu.ac.kr]
sychung@jnu.ac.kr]	Seung-Shik Park, Ph.D.
• Yong-Woon Lee, Ph.D.	[Professor, Air Quality Management,
[Professor, Water Quality Management System,	park8162@jnu.ac.kr]
ywlee@jnu.ac.kr]	• Ho-Young Jung, Ph.D.
• Sung-Yong Cho, Ph.D.	[Associate Professor, Environmental Energy
[Professor, Eco-Energy and Air Pollution Engineering,	Materials,
syc@jnu.ac.kr]	jungho@jnu.ac.kr]
• Seong-Jun Kim, Ph.D.	• Sok-Hee Jung, Ph.D.
[Professor, Environmental Biotechnology,	[Assistant Professor, Microbial Fuel Cells
seongjun@jnu.ac.kr]	Bioenergy,
• Jeong-Hun Park, Ph.D.	sokheejung@jnu.ac.kr]

## Degree Requirements

The undergraduate programs are designed to help students develop both the understanding and capability needed to meet the challenges of a modern technological society. Students are required to earn at least 140 credit hours (69 from Department courses, 42 from cultural studies and 29 from electives), which normally takes four years of full-time study. Students may also earn double majors or minors as a means of broadening the scope of their studies.

## What Do You Study?

Core Courses	Environmental Ecology
Introduction to Engineering Design	Environmental and Energy Engineering Laboratory
Renewable Energy	Engineering Mathematics 2
Environmental Chemistry	Wastewater Treatment Engineering and Practice
Water Quality Management and Practice	Environmental Fundamental Laboratory
Environmental Microbiology	Environmental Engineering Laboratory 1
Environmental Reaction and Design Engineering	Environmental and Climate Change Impact
Environmental Biotechnology and Practice	Assessment
Coping Engineering with Air Pollution and Climate	Atmospheric Particle Engineering and Experiments
Change	Wastewater Treatment Engineering and Practice
Design of Combustion Facilities	Environmental Engineering Laboratory 2
Waste Resource Treatment and Energy Engineering	Water Supply and Sewage Engineering
Environmental Energy Engineering and Practice	Energy Convergence Engineering
Air Pollution Management	Waste Energy Engineering
Energy System Design	Field Practice
Hazardous Wastes Management and Soil Remediation	Environmental Toxicology and Practice
Engineering	Environment and Safety Engineering and Practice
Environmental Engineering Capstone Design	Resources from Biomass
Environmental Electrochemistry	Bioenergy
	Noise and Vibration
Electives	Environmental Chemistry of Soils
Green Energy	Industry-oriented Education and Practice
Fluid Mechanics	Environmental Process Design and Practice
Probability and Statistics	Environmental Laws
Engineering Mathematics 1	Intellectual Properties in Environmental Energy
Introduction to Environmental Engineering	Engineering

## Careers

Graduates are currently playing active roles in central and local government organizations (e.g., Ministry of Environment), some public corporations (Korea Water Resources Corporation, Korea Environment Corporation, Korea Electric Power Corporation) and research institutes (e.g., National Institute of Environmental Research, Korea Institute of Energy Research).

Graduates also have careers in business corporations dealing with environmental impact assessment, air pollution control facilities, wastewater treatment, hazardous wastes treatment, environmental remediation, new renewable energy, and waste recycling facilities. They are usually in charge of the environment and safety of their company. Some graduates go on to graduate school to further specialize in their discipline of environment or energy engineering.

# College of Engineering Sciences

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## School of Electrical, Electronic Communication, and Computer Engineering

- · Major in Electronic Communication Engineering
- · Major in Computer Engineering
- · Major in Electrical and Semiconductor Engineering

## School of Mechanical Design Engineering

- · Mechanical Design Engineering major
- · Mechanical Systems Engineering major
- · Plant Engineering major
- Department of Refrigeration and Air Conditioning Engineering
- Department of Marine and Civil Engineering
- Department of Environmental System Engineering
- Department of Biotechnology
- Department of Chemical and Biomolecular Engineering
- Department of Architecture
- Department of Biomedical Engneering

#### Affiliated Research Centers

- · Ocean Civil Engineering Research Center
- · Refrigerating Techniques Research Center
- · Chemical and Safety Engineering Research Center
- · Environmental Research Center
- · Innovation cener of education-Engineering

Electrical, Electronic Communication, and Computer Engineering <u>Contact Information</u> Phone: +82-61-659-7310, 7230, 7250 Fax: +82-61-659-7319, 7259 E-mail: 2song2@jnu.ac.kr URL: http://eec.jnu.ac.kr

## What is Electrical, Electronic Communication, and Computer Engineering?

In the school of Electrical, Electronic Communication, and Computer Engineering, advanced engineers are cultivated to develop and apply appropriate technologies. Every major in the school focuses on high-level technology, and there are interesting fields such as new generation mobile communications, computer communications, speech recognition and digital signal processing, antenna manufacture/design, optical communication, servomechanism and electronic measurement, power electronics, semiconductor, power system, digital and computer circuit layout, computer graphics, design and application of embedded systems, artificial intelligence, computer program development, ubiquitous systems, and web application developing fields. To fulfill student expectations, there are several education programs, such as special education programs.

## School of Electrical, Electronic Communication, and Computer Engineering

In this school, education is supported by offering numerous scholarships and overseas training opportunities, as well as employment guidance and field experience.

Students are able to participate in many programs. In their first year of study, students are provided with a wide range of courses from basic to high technology education, and in their second year of study will decide a specific major (such as Electronic Communications, Computers, and Electrical and Semiconductor Engineering). Students must study major theories, hardware and their experiments. These studies focus on both theory and practice, and students can apply skills acquired from these studies to future fields.

#### Professors

## Major in Electrical and Semiconductor Engineering

- Nam-Sup Choi, Ph.D.
   [Professor, Power Electronics, nschoi@jnu.ac.kr]
- Yi-Gon Kim, Ph.D.
   [Professor, Automatic Control, yigon@jnu.ac.kr]
- Buhm Lee, Ph.D. [Professor, Power Systems, buhmlee@jnu.ac.kr]
- Yang-Hee Joung, Ph.D.

[Professor, VLSI, Semiconductor Materials, and Process, jyanghee@jnu.ac.kr]
Young-Chul Bae, Ph.D.
[Professor, Chaos Synchronization, ycbae@jnu.ac.kr]
Kyoung-Min Kim, Ph.D.
[Professor, Computer Vision and Signal Processing, kkm@jnu.ac.kr]

 Seong-Jun Kang, Ph.D.
 [Professor, VLSI, Processing and Design, ferroksj@jnu.ac.kr]

## Major in Electronic Communication Engineering

- Hee-Jong Suh, Ph.D.
   [Professor, Computer Communication Networking, hjsuh@jnu.ac.kr]
- Ki-Ryang Cho, Ph.D. [Professor, Optimization, krcho@jnu.ac.kr]
- Seung-Yeop Rhee, Ph.D.
   [Professor, Microwave Engineering, ysrsy@jnu.ac.kr]
- Dae-Ik Kim, Ph.D. [Professor, Integrated Circuit Design, daeik@jnu.ac.kr]
- Han-Seung Jang, Ph.D.
   [Assistant Professor, IoT & Machine-to-Machine Communications, Smart Grid, hsjang@jnu.ac.kr]

#### Major in Computer Engineering

- Chang-Soo Jang, Ph.D. [Professor, High Performance Computer, csjang@jnu.ac.kr]
  Jae-Hung Yoo, Ph.D.
- [Professor, Graphics, jhy@jnu.ac.kr]
- Kang-Chul Kim, Ph.D. [Professor, VLSI Design, and Embedded Systems, kkc@jnu.ac.kr]
- Chang-Gyoon Lim, Ph.D.
   [Professor, Artificial Intelligence, cglim@jnu.ac.kr]
- Gwang-Jun Kim, Ph.D.
   [Associate Professor, Computer Communication, kgj@jnu.ac.kr]

## Degree Requirements

Students are required to earn 140 credits, with 27 credits from electives (15 credits from cultural studies courses) and 82 credits from department courses (32 credits from core courses).

## What Do You Study?

Major in Electrical and Semiconductor	Automatic Control 1
Engineering	Electric Machinery 1
Core Courses	Power Engineering 1
English for Global Communication 1	Electronic Circuit 1
Mathematics 1	
Mathematics 2	Electives
General Physics 1	Introduction to Electrical and Semiconductor
Electrical Engineering Basic Lab	Engineering
5 5	Engineering Mathematics
Electromagnetics 1	Digital Circuit Design 1
Electromagnetics 2	Digital Circuit Design 2
Circuit Theory 1	Semiconductor Engineering
Circuit Theory 2	Applied Computer
Solid State Electronic Device Engineering 1	Programming Language
Robot Engineering	Advanced Engineering Mathematics

Digital Circuit Lab Introduction Capstone Design Solid State Electronic Device Engineering 2 Artificial Intelligence Automatic Control 2 Electric Machinery 2 Electric Energy Conversion Engineering Power Engineering 2 Electronic Circuit 2 Microelectronics Design and Lab Field Practice (Electrical and Semiconductor) Field Practice 1 (Electrical and Semiconductor) Field Practice 2 (Electrical and Semiconductor) Field Practice 3 (Electrical and Semiconductor) VLSI Process 1 VLSI Process 2 Signals and System Engineering Applied Power Electronics Experience Intern Experience Intern 1 Experience Intern 2 Electrical Machinery and Lab Power Systems Electronic Display Engineering Control system Design Digital Signal Processing Microprocessor and Lab Electrical Engineering Materials Physical Electronics Instrumentand Lab Soft computing Creative Engineering Design 1 (Capstone Design) Creative Engineering Design 2 (Capstone Design)

#### Major in Electronic Communication Engineering

Core Courses English for Global Communication 1 Mathematics 1 General Physics 1 Mathematics 2 General Physics 2 Electro-magnetics Electronic Circuit Experiments 1 Circuit Theory 1 Communication Theory Radio Engineering Integrated Circuit Design 1 Computer Communications Electronic Design and Experiments Microwave Engineering Communication Circuit Design and Experiments

#### Electives

Electronic Communication Introduction Engineering Mathematics **Digital Engineering Optimization Programming** Basic Microprocessor Numerical Analysis and Laboratory Applied Engineering Mathematics Electronic Circuit Experiments 2 Circuit Theory 2 Data Communication Electromagnetic Field Creative Engineering Design Digital System and Experiment Signal Processing Integrated Circuit Design 2 Antenna Engineering Acoustic Engineering Capstone Design (Electronic Communication) Computer System Architecture Optical Fiber Communications Computer Network VLSI/CAD Design Practice in Jobsite (Electronic Communication)

#### Major in Computer Engineering

#### Core Courses

English for Global Communication 1 Mathematics 1 General Physics 1 Computer Graphics Database Management Introduction of Artificial Intelligence Computer Architecture 1 Operating System Design and Practice ASIC Design HDL Language Network and Socket Programming Actual Training Software Engineering Microprocessors

### Electives

Operating System Internet Applications and Practice Algorithms Data Structure C Language Programming and Practice Windows Programming and Practice 1 Windows Programming and Practice 2 Advanced Programming Application and Practice Computer Programming and Practice Data and Computer Communication Computer Applications Circuit Design Electronic Circuit Digital Logic Design and Experimentation Computer Architecture 2 Embedded System Application Fuzzy and Neural Network System Field Practice Parallel Computer Mobile Programming Application Image Processing Multimedia System Embedded System Engineering Mathematics Computer Mathematics Numerical Analysis and Practice

#### Careers

Graduates tend to advance to positions in domestic and foreign graduate schools, educational organizations (middle schools), government and public offices, broadcasting fields, communication enterprises, computer network industries, information investment organizations, semiconductor companies, electronic companies, semiconductor device research organizations, Bio-metric System companies, CCTV companies, security maintenance companies, Korean Electric Power, Korean Water Resources, nuclear power generation fields, game planning fields, game graphic design fields, game programming production fields, character design fields, advertisement design fields, game graphic fields, web design fields, H/W fields, venture foundation, and other related fields.

School of Mechanical Design Engineering *\_\_Contact Information* Tel: +82-62-659-7220, 7280, 7380 Fax: +82-62-659-7229, 7289 E-mail: dj3220@jnu.ac.kr URL: http://mechauto.jnu.ac.kr/

### School of Mechanical Design Engineering at Chonnam National University

The curriculum of the School of Mechanical Engineering is designed to provide students with the basic principles of basic mechanics (fluid, thermodynamics, solids), materials and processing, mathematics and computer learning; in the second year, students study basic subjects (material dynamics, thermodynamics, dynamics, fluid mechanics) for understanding and understanding of mechanical systems; in the third year, students studying in mechanical engineering, mechanical engineering, mechanical engineering, vibration engineering, piping engineering, and welding engineering are selected for mechanical system design and production, Window design, hydraulic engineering, energy engineering, CAE, CAD, noise engineering, structural analysis).

Therefore, in this department, the theoretical education of mechanical engineering specialty is combined with sufficient experimental and practical training to cope with the rapidly developing industrial technology. In the future, not only mechanical engineering but also other fields will expand; the purpose of this training is to educate qualified professionals capable of serving as leaders in industries, government agencies, research institutes, and academia and serving the national and human society to achieve prosperity.

## What is Mechanical Design Engineering?

In Mechanical Engineering, we focus on basic Dynamic (fluids, thermal dynamics, solid), Materials and Processing, Mathematics and Computer Learnings to equip our students with durable basic skills. By offering them various application subjects (Robotics, Creative Engineering Design, Refrigeration and Air Conditioning, Systems Engineering) we expect our students to carry specialized knowledge through social participation. In addition, the academic foundation for graduate education is to acquire knowledge as researchers.

On the other hand, by expanding the usage of application Software (CATIA, CAD, 3G) we intend to experience actual engineering, and to enhance the engineering problem solving adaptation as mechanical design engineers now and in the future. As the level of human civilization is identified by the tools it uses, mechanical engineering makes human lives more convenient and enables humans to use energy more efficiently, and a tech that creates Synergy, and there is continuous demand for Mechanical and Design Engineering Professionals.

## What is Mechanical System Engineering?

The Department of Mechanical Systems Engineering is based on mechanical engineering and deals with the fields of science that can be applied to the design and manufacture of mechanical devices. This course aims to train students who can play a pivotal role in the field of mechanical engineering in industrial fields and research institutes by providing theoretical and practical applications of mechanical system engineering and creative problem solving in future high-tech industries. Comparisons and processes. The curriculum is designed to combine theoretical and practical skills through basic mechanics, computer-aided design (CAD), laboratory / laboratory and capstone design, field practice, and mechanical engineering projects. In addition, various comparative courses are conducted to nurture engineers who have a sense of professional ethics, cooperative ability, and sound personality as members of the industrial society.

## What is Plant Engineering?

This plant engineering major is a major that trains basic and professional knowledge related to smart plants made by convergence of ICT (Information Communication Technology) and aims to train and discharge competent personnel who lead high-tech fields in the 4th Industrial Revolution era.

The smart plant is a futuristic plant that has built a solution that enhances the safety of the process by utilizing big data, the Internet of Things and artificial intelligence, and minimizes errors that can be caused by humans.

Although automation of processes in oil and chemical industries has already been established due to its characteristics, it has gone beyond the concept of the smart factory and is increasing to a point where it can detect risks early and detect abnormalities and increase efficiency of production by using accumulated data.

Therefore, South Korea's oil and chemical industries are actively introducing smart plants that converge ICT to raise production efficiency and process stability to a new level.

#### Professors

- Sang-Kyoo Park, Ph.D. kos2@jnu.ac.kr] [Professor, Fluid Engineering and Turbulence, • Kyung-Jo Park, Ph.D. psk@jnu.ac.kr] • Kang Chung, Ph.D. kjpark40@jnu.ac.kr] [Professor, Noise and Vibration Engineering, • Chung-Youb Kim, Ph.D. Numerical Analysis and Structural Vibration, ckang@jnu.ac.kr] kimcy@jnu.ac.kr] • Young-Wan Kim, Ph.D. • Hei-Cheon Yang, Ph.D. [Professor, Mechanical Design and Mechanics of Composite Materials, hcyang@jnu.ac.kr] • Hoon Kim, Ph.D. wannkim@jnu.ac.kr]
- Ki-Seong Kim, Ph.D. [Professor, Heat and ParticleImaging Velocimeter, sngkim@jnu.ac.kr]
- Seung-Uk Ko, Ph.D. [Associate Professor Dynamics Control and Biomedical,

- [Professor, Dynamics and Vibration,
- [Professor, Solid Mechanics,
- [Professor, Thermal and Fluid Engineering,
- [ Professor, Mechanics Control and Measurements, khoon97@jnu.ac.kr]
- Bong-Ho Moon, Ph.D. [Professor, Tribology, mbh@jnu.ac.kr]

## Degree Requirements

Students are required to earn 140 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

## What Do You Study?

#### School of Mechanical Design Engineering Major of Courses

General Physics 1 General Physics 2 Field Practice English for Global Communication 1 Mathematics 1 Statics **Engineering Mathematics** Mechanical Element Drawing Kinematics of Mechanisms Introduction to Production Engineering Thermodynamics 1 Fluid Mechanics 1 Mechanics of Materials 1 Dynamics Thermodynamics 2 Fluid Mechanics 2 Mechanics of Materials 2 Introduction to Electrical Engineering Computer Programming for Engineers Plastic process of casting and plastic working Computer programming and practice

#### Mechanical Design Engineering Major of Courses

Machine Tools and Practice Mechanical Design Internal Combustion Engine Dynamic system design Mechanics of Living Body Motions Sensor and Experiment Engineering Automatic Control Field Training1 Material Engineering Nondestructive Testing Energy Conversion Engineering Fluid Machinery Welding/Joining Engineering and Practice Field Practice 2 CAD & Practice Mechanical Vibration Mechatronics & Practice Hydraulic Engineering Computational mechanical design and practice Design of Computational thermal system Precision of Mechanism Field Practice Field Practice 3 Structure Analysis Renewable Energy Safety Engineering of Chemicals Fluid thermodynamics and Practice capstone design Field Practice 4

## Mechanical System Engineering Major of Courses

Rigid body dynamics and Practice Measurement Engineering Machine Element of Design Conveyance Engine Creative Mechanical System Design Lab1 Field Training1 Numerical Analysis Heat ·Material Transfer And Practice Analysis and Design of Fluid System Material science Creative Mechanical System Design Lab2 Automatic Control Ultrasonic Testing Field Practice 2 3D modelling and Practice) Hydraulic Engineering Mechanical Project Lab 1 Energy air conditioning systems Mechanical Vibrations Vehicle Dynamics Capstone Design1 Plants System Design Field Practice Field Practice 3

Mechanical Project Lab 2 Future transportation system and energy Production System Design Lab Noise Analysis Capstone Design2 Plants System Design 2 Field Practice CAE and Practice

## Plant Engineering Major of Courses

Rigid body dynamics and Practice Introduction to Plant Engineering Plant Digital Engineering Plant Electric Machinery1 Plant Electromagnetics1 Plant Power Engineering1 Plant Computer Aided Design Plant Piping Engineering Plan Heat Transfe Plant Welding Engineering Plant Automatic Control Plant Electric Machinery2 Plant Circuit Theory Plant Electromagnetics2 Field Training1 Mechatronics System Design Nondestructive Testing Capstone Design1 Plant Signals and System Engineering Plant Electrical Machinery Lab. Plant Structural Vibrations Field Practice2 Mechatronics & Practice Capstone Design2 Plant Structure Analysis Plant Digital Signal Processing Plant Noise Analysis Plant Power Engineering2

#### Careers

Graduates are able to pursue careers in engineering, electronics, automobile, and construction firms. They may also enroll in graduate programs in the field of mechanical systems engineering.

Graduates may be qualified to work as heavy industry employees, technical public officials, and government officers.

Department of Refrigeration and Air-Conditioning Engineering

*Contact Information* Fel: +82 61 659 7270 Fax: +82 61 659 7279 F-mail: refair@jnu.ac.kr JRL: http://refri06.jnu.ac.kr

## What is Refrigeration and Air Conditioning Engineering?

The Department of Refrigeration Engineering was established in 1988, and was then reorganized as the Department of Refrigeration and Air Conditioning in 2007. Refrigeration and Air Conditioning Engineering studies have become essential to achieving energy efficiency and product optimization. The range of applications includes computer and electronic cooling systems, medical processes and equipment, semiconductor and microprocessor fabrication, and power and energy industries.

Refrigeration engineering plays an important role in manufacturing and production processes, including food preservation technologies (processing, freezing, storage and transportation), to provide sufficient quantities to feed the growing population. Air Conditioning Engineering has been applied to provide and maintain controlled environments in buildings such as offices, houses, and factories (Korea leads the world in small air conditioner exports), as well as other large structures, such as tunnels. In the aviation fields, its application includes human-occupied spaces, aircraft equipment operation, satellites, and space stations. It is also present in manufacturing and fabrication technologies and within pharmaceutical processes to provide controlled atmosphere conditions. The Refrigeration and Air Conditioning industries are developing technical know-how to support the increasing rate of growth in Korea.

The Department of Refrigeration and Air Conditioning Engineering perseveres in its efforts to improve its curriculum and educational environment which international students are also able to study. The Department offers a variety of scholarships to international and domestic students.

# School of Department of Refrigeration and Air Conditioning at Chonnam National University

The educational goal of the Department of Refrigeration and Air Conditioning Engineering is to cultivate talented thinkers who develop ideas in these fields of engineering. The faculty members teach and train international and domestic students in the design of refrigeration and air conditioning systems, the design of refrigeration plants including chemical processes and food storages, design of energy-saving machines and mechanical systems including heat exchangers, effective use of energy including natural and unused energy, and fundamental theoretical applications of engineering. The Department offers students the best conditions in relation to their study and discipline and life on campus.

The Department aims to cultivate engineers and researchers who are able to contribute to the national development of science, engineering, and industry in the field of refrigeration and air conditioning and other related fields upon graduation.

## Professors

- Min-Young Kim, Ph.D.
   [Professor, Food Refrigeration Engineering, kmy@jnu.ac.kr]
- Jong-Taek Oh, Ph.D.
   [Professor, Heat Engineering (Refrigeration Engineering), ohjt@jnu.ac.kr]
- Ki-Won Park, Ph.D. [Professor, Air Conditioning Engineering, pkw@jnu.ac.kr]
- Young-Woo Shin, Ph.D. [Professor, Mechanical Engineering, (Material Forming), shin5381@jnu.ac.kr]
  Yongseok Jeon, Ph.D. [Professor, Energy, Refrigeration and Heat Engineering,
- silverriver@jnu.ac.kr]

## Degree Requirements

The Department prepares students to meet the challenges of new ideas and technical developments in their professional fields. Students are required to earn 130 credits, with 66 credits from core courses and 28 credits from electives over a 4-year period.

Assessment is generally made based on results from exams, homework, and lab assignments.

## What Do You Study?

Programming **Differential Equations** Fluid Mechanics Thermodynamics Electrical Engineering Refrigeration and Cooling Differential Mechanics Heat Transfer Mechanics of Materials Physical Chemistry Electronic Engineering Fluid Mechanical Food Freezing Theory Mechanical Drawing Air Conditioning Engineering Machine Element Design Sanitary Engineering Design of Air Conditioning Equipment District Heating and Cooling Energy Utilizing Engineering

Design of Sanitary Equipment **Refrigeration Engineering** Food Freezing Refrigeration and Air Conditioning System Control Pipe Engineering Manufacturing Process of Machines Design of Refrigeration Machinery and Heat Exchanger Air Conditioning Equipment Principle of Refrigeration and Air-Conditioning Equipment Principle of Refrigeration and Air-Conditioning Low Temperature Physics Exercises of Refrigeration and Air-Conditioning Design of Refrigeration Equipment Cold Chain and Equipment CAD/CAM Ultra Cryogenic Engineering Design of Thermal Systems

## **Careers**

Graduates may seek careers both in Korea and overseas, in engineering firms, construction companies, industrial refrigeration firms, marine and transportation refrigeration companies, public enterprises, automobile firms, and in the civil service.

Marine and Civil Engineering *Contact Information* Phone: +82-61-659-7240 Fax: +82-61-659-7329 E-mail: hozilla@jnu.ac.kr URL: http://oce.jnu.ac.kr

## What is Marine and Civil Engineering?

Civil engineering serves the planning, design and construction of infrastructure, including paths and roads, harbors, airports, bridges, tunnels, power plants, dams and water supply, drainage, and public transportation systems. Traditionally, civil engineering includes the following studies: structural, hydraulic and water resource engineering, geotechnics, surveying, construction materials, transportation, and construction management.

Marine and civil engineering involves the planning and preservation of oceans, the training of interdisciplinary engineers in the field of oceanography, as well as the classical fields of civil engineering. Marine and civil engineering is required in the construction of ocean support structures and IT-related functions.

## Professors

- Sam-no Lee, Ph.D.
   [Professor, Hydraulic and Water Resource Engineering, samno@jnu.ac.kr]
- Jae-min Kim, Ph.D.
   [Professor, Structural Engineering, jm4kim@jnu.ac.kr
- Dae-hyon Kim, Ph.D.
   [Professor, Highway and Traffic Engineering, daehyon@jnu.ac.kr
- Jung-won Huh, Ph.D.
   [Professor, Structural Reliability Engineering, jwonhuh@jnu.ac.kr]

- Young-sang Kim, Ph.D.
   [Professor, Geotechnical Engineering, geoyskim@jnu.ac.kr]
- Dong-yeob Han, Ph.D.
   [Associate Professor, Geomatics Engineering, hozilla@jnu.ac.kr]
- Jong-in Lee, Ph.D.
   [Professor, Coastal and Harbor Engineering, jilee@jnu.ac.kr
- Changho Lee, Ph.D.
   [Assistant Professor, Geotechnical Engineering, changho@jnu.ac.kr

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

#### Core Courses

Introduction to Marine Civil Engineering and Engineering Ethics Mechanics of Materials and Lab Surveying and Practice Structural Mechanics and Lab Elementary Fluid Mechanics Soil Mechanics and Lab 1 Hydraulics and Lab 1 Creative Design in Civil Engineering 1 Design of Reinforced Concrete Structure 1 Creative Design in Civil Engineering 2 Civil Engineering Construction Coastal Hydraulics and Lab

#### Electives

Engineering Mechanics Civil Engineering Drawing Civil Engineering Materials and Lab Engineering Mathematics Ocean Surveying and Field Training Transportation Engineering Computational Structural Engineering Soil Mechanics and Lab 2 Design of Steel Structures Foundation Engineering Highway Engineering Hydraulics and Lab 2 Design of Reinforced Concrete Structure 2 Ocean Hydraulics and Experiment Water Supply and Sewage Engineering Intelligent Transportation Systems Surveying Practice Geology Engineering Pre-stressed Concrete Structures Bridge Structure Design Transportation Facilities Design Reclamation and Dredging Engineering Disaster Prevention Engineering Hydrology and River Engineering Harbor Engineering Design Practice for Coastal Structure Ocean Civil Engineering Construction Water Resource Design Rock Mechanics Remote Surveying Introduction to Finite Element Method Design for Soil Structures Design Practice for Port and Harbor Structure Offshore Structural Engineering Students are required to earn 130 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

## What Do You Study?

Structural Engineering Geotechnics Transportation Engineering/Surveying Hydraulics/Ocean Hydraulics/Harbor Engineering

#### Careers

Graduates currently play active roles in central and local government organizations (e.g., Ministry of Construction and Transportation, Ministry of Environment), public corporations (Korea Water Resources Corporation, Korea Land Corporation, Korea Highway Corporation), and research institutes (e.g., Korea Institute of Construction Technology). Private companies and corporations dealing with bridges, harbors, roads, and dams require the expertise of environmental engineers. Some graduates go on to graduate school to further specialize in their disciplines in the field of civil engineering.

Environmental System Engineering *Contact Information* Phone: +82-61-659-7260 Fax: +82-61-659-7269 E-mail: tmd1029@jnu.ac.kr URL: http://environ.jnu.ac.kr

## Introduction of Environmental System Engineering

Environmental System Engineering provides the solution for the environmental problems such as water and air pollution, waste disposal, and public health issues. Environmental system engineers have knowledge of advanced principles of multidisciplinary engineering, biology, chemistry, and environmental science to protect wildlife and natural resources as well as human life. The important role of environmental system engineers is to support the optimal ways for obtaining safe drinking water, the treatment of wastes, air quality maintenance, water pollution control and remediation of contaminated sites by disposal of hazardous substances. In addition, environmental system engineers can inspect and evaluate industrial and municipal facilities and programs to assess their compliance with environmental regulations. Environmental system engineers can work with environmental scientists, planners, hazardous waste technicians, engineers, and other specialists to address environmental problems in industrial and academic fields.

#### Professors

- Woo Bum Lee, Ph.D. [Professor, Water Quality and Wastewater Engineering, woolee@jnu.ac.kr]
- Byeong Cheon Paik, Ph.D.
   [Professor, Water and Wastewater Treatment System, bpaik@jnu.ac.kr]
- Seong Gyu Seo, Ph.D. [Professor, Air Pollution Control Engineering, sseo@jnu.ac.kr]
- Eun Sik Kim, Ph.D. [Assistant Professor, Environmental Materials and Membrane Water Treatment]
- Min Jin Hwang, Ph.D.
   [Professor, Industrial Environmental engineering, vip7080@jnu.ac.kr]

## Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

## Curriculum

#### Mandatory Courses

Hydraulics Air Pollution Engineering Water and Wastewater Treatment Engineering I Environmental Microbiology and Lab Solid Waste Engineering II Environmental System Engineering and Design

Selective Courses

Unit Operation of Water and Wastewater Treatment Water Quality Engineering Practice I Environmental and Fundamental Lab I Design of Water and Wastewater Treatment Plant Physical Chemistry for Environmental Engineers and Lab Applied Mathematics for Environmental Engineers Water Treatment Engineering Micrometeorology Solid Waste Management and Lab Analytical Chemistry and Lab Environmental Chemistry Air Pollution Engineering Practice I Hydrology Solid Waste Engineering I Water Quality Engineering Practice II Environmental and Fundamental Lab II Solid Waste Engineering Practice Air Pollution Management Marine Pollution Air Pollution Treatment and Lab Legislation for Environmental Protection Planning and Design of Water Supply and Air Pollution Engineering Practice II Sewerage System Water Quality Engineering Practice III Water Quality Management and Lab Environmental Safety Engineering Water and Wastewater Treatment Engineering II Environmental Impact Assessment Instrumental Analytical Methods Environmental Project Lab Water Supply and Sewage Engineering Resources recycling

#### Future Careers

Environmental engineers find careers in many places, such as the following:

- Environmental engineers find careers in many places, such as the following:
- · Engineering consulting firms that design and construct air and water pollution control systems
- · Industries that need to treat their air or wastewater discharges
- · Private and municipal agencies that supply drinking water
- · Companies that treat and dispose of hazardous chemicals
- · Companies that operate treatment facilities for municipalities or industries
- Government agencies that monitor and regulate waste discharges
- · Universities that teach and conduct research on environmental control
- · Private and government laboratories that develop the new generations of pollution control systems
- · International agencies that transfer knowledge and technology to the developing world
- · Public interest groups that advocate environmental protection

Department of Biotechnology *Contact Information* Tel: +82-61-659-7300 Fax: +82-61-659-7309 E-mail: mpo92@jnu.ac.kr URL: http://biotech.jnu.ac.kr

## What is Department of Biotechnology?

Biotechnology is a broad term that applies to all practical uses of living organisms containing plants, animals, and microorganisms, as well as biological processes created for human benefit. For example, biotechnology is used to produce some valuable foods, pharmaceuticals, tests for diseases, and waste removal. It has made rapid progress over the last quarter of the 20th century. Much of this success is due to the expectation that the development of new technologies can produce various compounds beneficial to the daily lives of human beings and preserve environmental health. It utilizes the sciences of biology, chemistry, physics, engineering, computers, and information technology to develop tools and products that hold great promise and interest.

#### Department of Biotechnology

The Department of Biotechnology, part of the School of Biotechnology, was established in 1991. This department has a vision to be a viable target for students who wish to pursue a degree program in bio-technology, and to undertake and produce research at an international standard.

The department contributes to several undergraduate and graduate programs. The teaching activities in the department are well-supported by dedicated faculty members, responsible for a large number of courses. More specific descriptions can be found online.

#### Professors

- Myeong-Rak Choe, Ph.D.
   [Professor, Food Biotechnology, mrchoe@jnu.ac.kr]
- Jin-Man Kim, Ph.D.
   [Professor, Molecular Biology, jinmank@jnu.ac.kr]
- Jong-Deog Kim, Ph.D.
   [Professor, Biological Pharmaceutics,

pasteur@jnu.ac.kr]

- Seung-Hwan Yang, Ph D. [Associate Professor, cell technology, ymichigan@chonnam.ac.kr]
  Ji-Heon Noh Ph D. [Associate Professor, RNA genomics,
- journi@chonnam.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, and pass qualifying exams or a dissertation.

## What Do You Study?

#### Core Courses

Writing Global English

## Biotechnology Major Courses

Microbiology and Lab 1 Genetics 1 Biochemistry 1 Cell Culture Engineering and Lab 1 Molecular Biology 1

#### Electives

Bioindustry 1 Study for Functional Capacity of Useful Materials Organic Chemistry 1 Microbiology and Lab 2 Bioindustry 2 Food Biotechnology Lab Quantitative Analysis Genetics 2 Industrial Microbiology and Lab Biotechnology Exercise Marine Biotechnology 1 Cell Biology Biochemistry 2 Food Preservation Cell Culture Engineering and Lab 2 Food Biotechnology 1 Medical Resources Marine Biotechnology 2 Molecular Biology 2 **Biostatistics Biochemical Engineering** Microbial Engineering Lab Study for Physiological Activities 2 Life Pharmaceutics 1 Plant Biotechnology and Lab 1 Food Biotechnology 2 Natural Products 1 Enzymology Microengineering and Technology Study for Physiological Activities 2 Selected Topics in Biotechnology Life Pharmaceutics 2 Plant Biotechnology and Lab 2 Organic Waste Treatment Natural Products 2 Genetic Engineering

## Careers

Graduates may pursue careers in public or private research institutes, biotech companies, graduate or medical schools, and chemical plants.

Department of Chemical and Biomolecular Engineering *Contact Information* Tel: +82-61-659-7290 Fax: +82-61-659-7299 E-mail: jhb7025@jnu.ac.kr URL: http://chemeng.jnu.ac. 1

## What is Chemical and Biomolecular Engineering?

The Chemical and Biomolecular Engineering involves the study and research for the development, design, operation and management of chemical, physical, and bio-processes to provide necessary materials, which are required in cultural living of humans from natural and bio-resources. The integration of chemical and biomolecular engineering fields is a new research field reflecting the trend of fusion technologies in the advanced 21st century. Conventional chemical and biomolecular engineering deal with crude oil processing, fabrication of plastic and synthetic fibers, synthetic rubber, the separation of gases from air, environmental problems, fertilizers and foods, isolation of isotopes and development of medicines and antibiotics; these studies provide us a wealthier and more comfortable life. The chemical and biomolecular engineering takes a major role in leading the future development through nanotechnology, biotechnology, information technology, energy/environmental technology, as well as the fusion of all these technologies. The study will open the way to substantiate the future technologies in our actual human beings.

## Department of Chemical and Biomolecular Engineering

The Department of Chemical and Engineering has the educational aim to provide knowledge about the manufacturing processes of bio-chemical products and operations for the conversion of raw materials into final products, as well as to cultivate creativity and a challenging spirit toward new things. To reach this goal, the department presents a curriculum that centers on teaching the basics in chemistry, physics, and biochemistry, which form the basis of natural science and on helping students to experiment and practice. The spectrum of research and educational opportunities in our department also includes biomolecular engineering, biochemical engineering, environmental engineering, chemical reaction engineering, particle technology, electrochemical engineering, semiconductor processing, and polymer and material engineering. The department has produced engineers who have greatly contributed to the nation's industrial development as sophisticated experts in inorganic and organic industrial fields including petrochemicals, fertilizers, acid-alkali, rubber, synthetic fibers, biosensors, fine chemicals, ceramics and fine polymers.

#### Professors

- Youn-Sop Kim, Ph.D.
   [Professor, Polymer Chemistry, yskim1@jnu.ac.kr]
- Ho-Joon Seo, Ph.D.
   [Professor, Catalytic Reaction Engineering, hjseo@jnu.ac.kr]
- Oh-Yun Kwon, Ph.D.

[Professor, Physical Chemistry, oykwon@jnu.ac.kr]
Hun-Soo Byun, Ph.D.
[Professor, Thermodynamics and Separation Processes, hsbyun@jnu.ac.kr]
Soon-Do Yoon, Ph.D. [Associate Professor, Process and Control of Chemical Engineering Materials, yunsd03@jnu.ac.kr]  Heon-Ho Jeong, Ph.D.
 [Assistant Professor, Bio-application Engineering, jeonghh29@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 140 credits, and pass qualifying exams or a dissertation

## What Do You Study?

Core Courses
Physical Chemistry 1
Chemical Process Calculation 1
Chemical Engineering Thermodynamics 1
Chemical Engineering Lab 1
Chemical Engineering Lab 2
Chemical Engineering Lab 3
An Introduction to Industrial Chemistry

#### Electives

Polymer Chemistry Polymer Materials Chemical Engineering Fluid Mechanics Chemical Process Calculation 2 Engineering Mathematics 1 Engineering Mathematics 2 Inorganic Chemistry Physical Chemistry 2 Organic Chemistry 1 Organic Chemistry 2 Inorganic Material Design Chemical Reaction Engineering 1 Chemical Reaction Engineering 2 Chemical Engineering Thermodynamics 2 Chemical Plant Design Chemical Engineering Unit Operation 1 Chemical Engineering Unit Operation 2 Petro Chemical Engineering Computer Calculation in Chemical Engineering Chemical Safety Engineering Transport Phenomenon Biopolymer Properties of Polymer **Energetics Seminar** Basic Design of Chemical Engineering Recent fusion technology and understanding Chemical Plant Design Process Dynamics and Control Process Systems Analysis and Control Computer Program and Practice of Chemical Engineering Environmental Chemical Engineering(Project Lab1) Analytical Chemistry 1 Bioprocess engineering **Biological Chemistry Bioprocess Engineering** Organic Synthesis Engineering(Capstone Design) ProjectLab2

#### Careers

Graduates may pursue careers in public or private research institutes, biotech companies, graduate or medical schools, and chemical plants.

Department of Architecture

Contact Information

## What is Architecture?

The Department of Architecture aims to understand the basis of architectural development considering the background of architecture's comprehensive character, rapid innovation of technology, and recognition of various cultures and values. The department cultivates students' abilities to think critically and comprehensively. In addition, students are encouraged to understand nature, society, and technology through studies in architecture.

## Dept. of Architecture at Chonnam National University

Supervisors are assigned to students based on the preferences of both students and faculty members. Faculty members are limited to supervising up to 5 master's degree candidates and 3 Ph.D. candidates.

Faculty members may not teach more than 2 courses per semester with the exception of jointly taught courses. Students may earn up to 9 credits each semester. Master's degree candidates must earn a total of 24 credits, of which 12 must be from the department. Ph.D. candidates are required to earn at least 18 credits from the department.

A foreign language examination is required for all graduate students. Students will have to present a thesis plan before submitting the actual thesis. Supervisors will sit on a thesis supervision committee 6 months prior to submission of a master's degree thesis and 1 year before submission of a Ph.D. thesis.

#### Professors

- Hyun-tae Kim, Ph.D. [Professor, Architectural Planning and Design, jsjeong@jnu.ac.kr] htkim@jnu.ac.kr] • Kum-ho Chung, Ph.D. · Chan Park, Ph.D. [Professor, History of Architecture and kumho@jnu.ac.kr] • Jun Taek Kim, Ph.D. Architectural Design, [Professor, Architectural Design and urban chan@jnu.ac.kr]
- Joo-seong Jeong, Ph.D.

[Professor, Architectural Planning and Design,

- [Professor, Architectural Planning and Design,
  - Design, juntaek.kim@jnu..ac.kr]

#### Degree Requirements

Students are required to earn 160 credits, normally over a period of 5 years. Students on average earn 18 credits per semester.

#### What Do You Study?

Introduction to Architecture Architectural Design 1 Architecture Expression Career Plan and Self Understanding Architectural Design 2 Introduction to Building Structure Digital Design 1 Architectural Design 3 Environmental Technology Digital Design 2 History of Western Architecture Structural Analysis Architectural Design 4 Theory of behavior in architecture & Barrierfree Space History of Korean Architecture Architecture & Society Architectural Design 5 Architectural Equipment English for Architectural Practical Building Materials

Architectural Design 6 History of Modern Architecture Site Planning Digital Design analysis Architecture and Urbanism Architectural Structure System Building Code & Regulation Architectural Design 7 Architectural Design 8 MethodologyArchitecturalDesign Construction Technology Architectural & Design Practice sustainable Urban Design Theory of Contemporary Architecture Architectural Design 9 Ecological Friendly Buliding System Architectural Business Planning & management Architectural Design 10 Urban Planning practice History of Oriental Architecture

#### Careers

Students may receive scholarships and funding to pursue educational opportunities overseas. Upon graduation, they may pursue careers in the architecture design sector, architecture construction sector, architecture structure sector, and architecture safety diagnosis office, in public and private institutes, and with public companies such as the Korea National Housing Corporation and Ministry of Construction and Transportation.

Department of Biomedical Engineering *Contact Information* Fel: +82-61-659-7360 Fax: +82-61-659-7369 E-mail: hyuny@jnu.ac.kr JRL: http://bme.jnu.ac.kr

## What is Biomedical Engineering?

Biomedical engineering (BME) is the application of engineering principles and design concepts to medicine and biology for healthcare purposes. BME is advancing rapidly and producing important innovations that improve the quality of human life. The aim of BME is to create new technologies which can improve the work done in such areas as disease diagnosis, patient monitoring, medical treatment, and lifestyle improvement after illness or injury.

## Department of Biomedical Engineering at Chonnam National University

The Department of BME at Chonnam National University was established in 2012 as a next-generation growth engine. The BME undergraduate degree program emphasizes engineering design in preparation for employment in biomedical industries and for graduate study.

This department is integrated science including medicine, electronic engineering, computer engineering, mechanical engineering, and a wide range of basic and applied biology knowledge. The courses and academic programs of BME are linked to the biomedical industry that requires substantial overall knowledge and skills.

## Professors

- Chang-Moon Lee [Professor, Molecular Imaging and Therapy, Nanomedicine, Biomaterials, Drug Delivery System, cmlee@jnu.ac.kr]
- Jihoon Kang [Associate Professor, Medical Imaging System, jihoon.kang@jnu.ac.kr]
- Hang-Sik Shin
  [Associate Professor, Biomedical Signal Processing, hangsik.shin@jnu.ac.kr]
  Dowon Kim
- [Assistant Professor, Neuroengineering, Biomedical Signal Processing, dowon.kim@jnu.ac.kr]

#### Degree Requirements

The undergraduate programs are designed to help students develop both the understanding and capability needed to meet the challenges of a modern technological society.

Students are required to earn at least 140 credit hours (109 from Department courses and 31 from electives), which normally takes four years of full-time study.

Students are also able to earn double majors or minors as a means of broadening the scope of their studies.

## What Do You Study?

Human Anatomy	Adcanced VHDL Practices
Human Physiology	Brain Engineering
Body structure and Function	Digital Signal Processing
Medical Terminology	Microprocessor and Practices
Digital Fundamentals	Mobile Programming and Practices
Circuit Theory & Practices	Bionanotechnology
Biomaterials	Biosensor Engineering
Signals and Systems	Biomedical radiology
Introduction to Biomedical Engineering	Hospital Information System
Medical polymers	Biomechanics
Biomedical Instrumentation	Biochemistry
Biomedical Advanced Programming and Practices	Cell Biology
Biomedical Digital System Design and Practices	Organic Chemistry
Biomedical Electronic Circuits and Practices	Medical Devices Regulation
Biomedical Signal Processing and Practices	Biomedical Equipment and System
Biomedical Image Processing and Practices	Biomedical Optical Engineering
Biomedical System Design and Practices	Understanding of Clinical Medicine
Biomedical Programming language and Practices	Rehabilitation Engineering
LabView Programming and Practices	Tissue Engineering and Regenerative Medicine
Matlab Programming and Practices	

## Careers

Graduates are employed at universities, in industry, in hospitals, in research facilities of educational and medical institutions, and in agencies for medical devices.

They often serve a coordinating or interfacing function, using their background in both the engineering and biomedical fields. Graduates may also enroll in a graduate program in the field of biomedical engineering.

## College of Agriculture and Life Sciences

<u>Contact Information</u> Phone: +82-62-530-2004 Fax: +82-62-530-2002 E-mail: y-choi@jnu.ac.kr URL: http://agric.inu.ac.kr

- Department of Applied Plant Science
- Department of Horticulture
- Department of Applied Biology
- Department of Forest Resources
- Department of Wood Science and Engineering
- Department of Landscape Architecture
- Department of Agricultural & Biological Chemistry
- Division of Food Technology, Biotechnology
  - · Food Science and Technology · Molecular Biotechnology
- Department of Animal Science
- Department of Rural and Bio-systems Engineering
  - $\cdot$  Rural System Engineering
  - · Biosystem Engineering
- Department of Agricultural Economics
- Department of Bioenergy Science and Technology

#### Research Centers

- · Institute of Agricultural Science and Technology
- · Biotechnology Research Institute
- · Asian Pear Research Institute
- · Bioenergy Research Center
- · Institute of Environmentally-Friendly Agriculture

## Applied Plant Science

*Contact Information* Phone: +82-62-530-2050 Fax: +82-62-530-2059 E-mail: zzxcv0418@jnu.ac.kr URL: http://agro.jnu.ac.kr/

## What is Applied Plant Science?

The Department of Applied Plant Science teaches basic and applied scientific theories and methodology, technique and practice related to the production of indigenous crops for human life and health such as edible and special crops, quality new variety breeding and crop physiology. Currently, the professors provide a variety of educational and research spectrums ranging from crop breeding to global climate change countermeasures.

To clarify the life phenomena from plant molecular units to populations at the point of genetic, environmental, and interrelationships, and apply the principles to improve the productivity and quality of plants. It also deals with theories and techniques of crop production that harmonize with the natural and production ecosystems of human survival.

This major aims to create a new variety by using molecular biology techniques, to search for adaptation mechanism of plants to bad environment, to search for new functional plant resources, to identify the substance, to search for mechanism of action, to minimize the biological obstacles of plant production, . To identify the responses of plants to global environmental changes, and to develop countermeasures.

Graduates are employed by national and public research institutes, government agencies, researchers and leaders of various seed and pesticide companies.

#### Professors

#### Applied Plant Science

- Han-Yong Kim, Ph.D. [Rice Crop Science, hyk1020@jnu.ac.kr]
- Jonghan Ko, Ph.D.
   [Crop Environmental Ecology, jonghan.ko@jnu.ac.kr]
- Ok Ran Lee, Ph.D. [Special Crop Science, mpizlee@jnu.ac.kr]

## What Do You Study?

General Courses General Biology 1 (3) General Chemistry 1 (3) Bo-Keun Ha, Ph.D. [Crop Genetics & Breeding, bkha@jnu.ac.kr]
Jaeil Cho, Ph.D. [Climatological Crop Physiology, chojaeil@jnu.ac.kr]

Basic Lab of Crop Production 1 (2)

## Basic Lab of Crop Production 2 (2)

Core Courses

#### Electives

Plant Breeding and Experiment (3) Food Crops 1 and Practice (3) Food Crops 2 and Practice (3) Principles of Crop Production (3) Climatological Crop Physiology (3) Plant Biochemistry (3) Genetics (3) Agricultural Meteorology (3) Seed Science (3) Soil and Production Environment (3) Crop Ecology (3) Environmental Vegetation Ecology (3) Biostatistics (3) Environmental Vegetation Management and Practice(3) Molecular Crop Breeding (3) Crop Molecular Genetics (3) Quality Assessment and Management (3) Pragmatic management of climatic damage (3) Industrial Crop Science and Practice (3) Crop Growth Modeling (3) Farm Management (3) Principles of Crop Protection (3) Medicinal Plant Science (3) Production of Functional Materials (3) Environment Conservative Plant Production (3) Management of Crop Post-harvest (3) Plant Tissue Culture (3) Understanding of Agricultural Science (3) Capstone Design Practice (3) Field Practice 1 (2) Edible Plant Resources (3) Integrated Agro-ecosystem (3) Crop Production Systems (3) Introduction of Environmental Agriculture (3)

#### Minor Courses

21 credits must be chosen.

Department of Horticulture *Contact Information* Phone: +82-62-530-2060 Fax: +82-62-530-2069 E-mail: yohong@jnu.ac.kr URL: http://hort.jnu.ac.kr/

## What is Horticulture?

Department of Horticulture deals with theories and techniques for plant production harmonized with nature and agro-ecosystems, which are the basis of life. It also pursues the exploration of life phenomena in crop plants at various levels from plant molecular to community through understanding heredity, environment, and their interrelationships, in order to ensure both the productivity and quality of crop plants. The goal of the Department is to promote global talents through teaching and training on (1) breeding novel crop varieties using traditional and molecular tools, (2) understanding the mechanisms of plant adaptation to abiotic and biotic stresses, (3) identifying, understanding, and producing new substances in industrial and medicinal plants having specific functions, (4) establishing sustainable agricultural systems by minimizing limiting factors to crop production, and (5) understanding crop responses to global environmental change (GEC) and strategies to cope with GEC.

#### Professors

• Tae-Ho Han, Ph.D. [Floriculture, hanth@jnu.ac.kr]

• Jeong-Hyun Lee, Ph.D. [Greenhouse, leetag@jnu.ac.kr]

• Sung-Gil Kim, Ph.D. [Horticultural Crop Breeding & Genetics, dronion@jnu.ac.kr] SangHyeon Lee, Ph.D.
[Propagation of Horticultural Crops, pear@jnu.ac.kr]
Kang-Mo Ku, Ph.D.
[Propagation of Horticultural Crops, ku9@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits to graduate.

## What Do You Study?

#### General Courses

General Biology 1 (3) General Chemistry 1 (3) Understanding of Science History (3) Writing in the Natural Sciences and Engineering(3) Career Plan and Self Understanding (2) Electives Field Practice 1 (5)

- Field Practice 2 (5)
- Core Courses

General Botany (3) Introduction of Vegetable Crops (3) Introduction of Ornamental Plant Science (3) Introduction of Pomology (3) Genetics (3)

#### Electives

Introduction to the horticultural sciences (3) Vegetable seedlings and practice (3) Molecular Biology (3) Biochemistry 1 (3) Plant Physiology 1 (3) Proposal construction for farming settlement (2) Basic principle and practice for farming settlement 1 (3) Promotion of Agricultural Business (3) Actual principle and practice for farming settlement 1 (3) Advanced principle and practice for farming settlement 1 (3) Propagation of Horticultural Crops (3) Horticultural Crop Product Development Designy (3) Field vegetable sciences and practice (3) Plant Pathology (3) Hydroponics (3) Business administration in Agriculture (3) Basic principle and practice for farming settlement 2 (3) Actual principle and practice for farming settlement 2 (3) Advanced principle and practice for farming settlement 2 (3)3D design and convergence manufacturing of horticulture equipment (3) Ornamental Plant Breeding (3) Introduction of Pomology (3) Climate Change on Horticulture Industry (3) Controlled Horticulture & Lab.y (3) Principle of Plant Breeding (3) Law and Regulation in Horticulture (3)

Horticultural Plant Resourcesg (3) Molecular Breeding of Horticultural Crops (3) Floral Design 1 (3) ICT adaptation of Horticultural Field Crops (3) Plant ecology (3) Plant Tissue Culture (3) Greenhouse climate management and practice (3) Vegetable Science and Technology (3) Floral Design 2 (3) **Biostatistics** (3) Laboratory and Field Practice for Horticulture and Biotechnology1 (3) Laboratory and Field Practice for Horticulture and Biotechnology<sub>2</sub> (3) Horticultural Therapy (3) Metabolomic research and practice for horticultural crops (3) Postharvest Management of Horticultural Crops (3) Seed Production (3)

#### Teaching Profession Courses

A Research Of Biology Teaching Materials & Teaching Method (3) Biology Education (3) A Course on Biology Logic and Essay Writing (2)

## Minor Courses

General Botany (3) Introduction of Vegetable Crops (3) Introduction of Ornamental Plant Science (3) Introduction of Pomology (3) Genetics (3)

#### Minor Electives

6 credits must be chosen

#### Careers

Students become experts in agricultural industries. They find work as educators or researchers in government laboratories or private institutions. Other employment opportunities exist in seed and seedling companies, agro-chemical companies, agricultural cooperatives, and plant quarantine organizations.

University positions such as assistantships in the areas of teaching and/or conducting are open to graduate students.

Department of Applied Biology *Contact Information* Phone: +82-62-530-2070 Fax: +82-62-530-2079 E-mail: yckimyc@jnu.ac.kr URL: http://agribio.jnu.ac.kr/

## What is Department of Applied Biology?

The Department of Applied Biology at Jeonnam National University is composed of 3 main fields: Plant Pathology, Entomology, and Stress Biology. The educational goal at Department of Applied Biology is to foster professional individuals who learn both basic and applied sciences on plant response to pathogens, agricultural pests, and environmental stresses that significantly diminish plant and crop productivity.

Plant Pathology field focuses mainly on plant-pathogen (bacteria, fungi, virus) interactions, molecular genetics to understand mechanisms and biological control of plant diseases, and ecology and evolutionary biology of plant-associated microbes. Entomology field focuses mainly on the damage analysis and integrated pest management by the fundamental studies of classification, phylogeny, chitin biotechnology, and ecology of insect pests. Interactions between microbial natural enemy and insect pests are also studied for the eventual biological control of agricultural insect pests. Stress Biology field focuses mainly on the identification and determination of potential genes involved in plant responses to environmental stresses (drought, high and low temperatures, salt, UV), which would provide novel means to develop stress-tolerant agronomic crops.

The Department's curricula cover all necessary subjects for basic and applied sciences. We will educate students with a vision of becoming leading scientists in future agriculture.

### Professors

- Hun-Seung Kang, Ph.D. [Biochemistry, hskang@jnu.ac.kr]
- Young-Cheol Kim, Ph.D. [Plant Pathology, yckimyc@jnu.ac.kr]
- Yeon-Soo Han, Ph.D. [Insect Pathology, hanys@jnu.ac.kr]
- Cheol-Soo Kim, Ph.D.
   [Plant Functional Genomics, cskim626@jnu.ac.kr]

Laboratories

- Kwang-Yeol Yang, Ph.D. [Molecular Plant Pathology, kyyang@jnu.ac.kr]
- Ik-Soo Kim, Ph.D.
   [Insect Molecular Phylogenetics and Ecology, ikkim81@jnu.ac.kr]
- Yasuyuki Arakane, Ph.D.
   [Insect Chitin Biotechnology, Yasuyuki Arakane@jnu.ac.kr]
- Rae-Dong Jeong, Ph.D. [Plant Virology, jraed2@jnu.ac.kr]

- Plant Molecular Biology Lab
- Plant Pathology Lab
- · Insect Pathology Lab
- Plant Molecular Biology Lab

## Degree Requirements

Students are required to earn 130 credits to graduate.

## What Do You Study?

#### Core Courses

Insect Pests of Plants (3) Plant Pathology (3) Laboratory and Field Practice for Applied biology (3)

#### Electives

Insect Physiology (3) Ouarantine Insect Pest (3) Functional Insect Genomics (3) Insect Innate Immunity and its application (3) Insect Diversity (3) Insect Molecular Diagnosis (3) Insect Physiology (3) Insect Biotechnology (3) Insect-inspired biomimetics (3) Insect Ecology (3) Insect gut symbionts and its application (3) Insect cuticle structure and function (3) Climate Response and Plant Stress Control (3) Climate Smart Plant Disease Control (3) Molecuar Insect Pathology (3) Molecuar Vector Entomology (3) Molecular Biology (3) **Biostatistics** (3) Biochemistry 1 (3) Biochemistry 2 (3) Cell Biology (3) Introduction of Plant Quarantine (3) Plant Virology (3) Plant Pathology Lab. (1) Phytobacteriology (3) Clinical Plant Pathology (3) Molecular Plant Pathology (3) Plant Molecular Physiology (3)

- Plant Functional Genomics Lab
- Insect Molecular Phylogenetics and Ecology Lab
- Insect Chitin Biotheonology Lab
- Plant Virology Lab

Plant Molecular Genetics (3) Plant Molecular Biotechnology (3) Plant Physiology 1 (3) Plant Physiology 2 (3) Plant Biotechnology (3) Plant Genetic Engineering (3) Undergraduate research in plant doctor (3) Phytopathogenic fungal pathology (3) Botany (3) Insect Pest Experiment (1) Plant Environmental Physiology (3) Trends in RNAi-based pest control (3) Genetics (3) General Microbiology (3) Resource Entomology (3) Crop production and management (3) Medical Vector Biology (3) Insect Control (3) Introduction of Plant-Microbe Interactions (3)

#### Teaching Profession Courses

Biology Education (3)A Research of Biology Teaching Materials & Teaching Method (3)A Course on Biology Logic and Essay Writing (2)

#### Minor Courses

Insect Pests of Plants (3) Plant Pathology (3) Laboratory and Field Practice for Applied biology (3)

#### Minor Electives

12 credits must be chosen

## Careers

Students become experts in agricultural industries. They find work as educators or researchers in government laboratories or private institutions. Other employment opportunities exist in seed and seedling companies, agro-chemical companies, agricultural cooperatives, and plant quarantine organizations. University positions such as assistantships in the areas of teaching and/or conducting are open to graduate students.

## Department of Forestry Resources

\_\_*Contact Information* Phone: +82-62-530-2080 Fax: +82-62-530-2089 JRL: http://forestry.jnu.ac.kr

## What is Forest Resources?

Forests occupy 65% of the land area in Korea. The mission of the Major in Forestry is to educate and engage the next generation of scholars, practitioners, and users of the forests, to conduct distinctive problem-solving and fundamental research on nature and use of forests and related resources, and to share discoveries and knowledge with others.

#### Major in Forest Resources

The Major in Forestry is dedicated to the understanding, effective management, and sustainable use of forests to support the national economy and public welfare, and to conserve the wider forest ecosystem.

#### Professors

- Ki-Wan An, Ph.D.
   [Professor, Forest Policy, kiwan@jnu.ac.kr, 062-530-2085]
- Kye-Han Lee, Ph.D. [Professor, Forest Ecology, khl@jnu.ac.kr, 062-530-2087]
- Young-Sang Ahn, Ph.D. [Associate professor, Forest Environment]

#### Degree Requirements

ysahn@jnu.ac.kr, 062-530-2081]
Mi-Young Noh, Ph.D. [Assistant professor, Forest Protection, annemi@jnu.ac.kr, 062-530-2083]
Hyun-Jun Kim, Ph.D. [Assistant professor, Silviculture,

hjkim0837@jnu.ac.kr, 062-530-2082]

Conservation Engineering,

Students are required to earn 130 credits with a minimum grade point average of 1.75 (out of a scale of 4.5). Students must also enroll for 4 years and pass a comprehensive exam.

#### What Do You Study?

#### Core Courses

Introduction to Forestry (2) Dendrology (3) Silviculture 1 and Practice (3) Dendrology Practice (2) Forest Management (3) Forest Protection (3)

#### Electives

Seminar in Elementary Forestry (1) Surveying and Practice (3) Principles and Practices for Farming Settlements 1 (3) Principles and Practices for Farming Settlements 2 (3) Economic Plants in Forests (3) Practice in Forest Entomology (1) Forest Entomology (3) Forest Measurement and Practice (3) Forest Recreation Resource Management (3) Forest Hydrology & Practice (3) Mushroom Cultivation and Practice (3) Forest Breeding and Tree Improvement (3) Field Trip to College Forest (Silviculture) (1) Silviculture 2 and Practice (3) Nature Interpretation and Practice (3) Forest Management Practice (2) Forest Ecology and Practice (3) Forest Soil Science (3) Range and Wildlife Management (3) Forest Machinery and Practice (3) Forest Civil Engineering and Practice (3) Engineering of Forest Environment Conservation and Practice (3) Forest Policy and Practice (3) Proposal Construction for Farming Settlements (1) Forest Pathology (3) Urban Forestry (3) Forest Resources Capstone Design 1 (3) Forest Resources Capstone Design 2 (3) Forest Resources Field Practice 1 (2) Forest Resources Field Practice 2 (2) Practice in Forest Entomology (1) Tree Physiology (3) Forest CAD (3) Geographic Information System in Forests (3) Forest Laws and Practice (3) Forest Recreation Research Methods and Practice (3) Field Practice 2 (18)

#### Careers

Graduates may find work in the Korean Forestry Service, Korea National Arboretum, or National Plant Quarantine Service. They can also work in many other public organizations such as the Korea Highway Corporation, Korea National Park Service, the National Forestry Cooperatives Federation, and mushroom production companies.

Graduates who earn certificates in forest management or forest seeding may work in private nurseries and work as private forestry technicians. Wood Science and Engineering \_\_*Contact Information* Phone: +82-62-530-2090 Fax: +82-62-530-2099 JRL: http://wood.jnu.ac.kr

# Major in Wood Science and Engineering

After the UN Rio Environmental Summit in 1992, international interest in woody biomass-produced forests has grown due to their important roles in environmental conservation and bioenergy. The undergraduate program in Wood Science and Engineering is dedicated to extending wood resources to meet the growing needs of society through research on manufacturing and processing of wood-based materials which are indispensable to enhancing the quality of human life.

The program offers a wide variety of challenging career tracks: wood anatomy, wood physics, wood processing, wood improvement for design and construction of wood-framing structures, bioenergy, wood biotechnology, and wood chemistry. More specific wood chemical/biological processing programs also address the question of harnessing the environment for fiber and energy production in the near future.

## Professors

- Woo-Yang Chung, Ph.D. [Wood Furniture and Musical Instruments Engineering, wychung@jnu.ac.kr]
- Hyoung-Woo Lee, Ph.D.
   [Wood Processing and Machineries, hwlee@jnu.ac.kr]
- Gi-Young Jeong, Ph.D [Wood Engineering, gjeong1@jnu.ac.kr]
  Jongsik Kim , Ph.D [Wood Anatomy and Preservation jongsik.kim@jnu.ac.kr]

 Jae-Won Lee, Ph.D.
 [Wood Chemistry, Bioenergy, ljw43376@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 8 semesters, in accordance with university regulations.

# What Do You Study?

Core Courses	Furniture Manufacturing and Lab. (3)
Introduction to Wood Science & Engineering (2)	Practice of Wooden Furniture Design and Drafting (3)
	Wood Physics & Lab (3)
Electives	Wood Mechanics (3)
Wood Anatomy & Lab. (2)	Wood Chemistry and Lab. (3)
Applied Mathematics in Forest Products (3)	

Pulp & Paper Technology (2) Bioenergy (3) Materials for Ecological Building Construction (3) Theory of Engineering Wood (2) Plant Biopolymer (3) Wood Preservation and Lab. (3) Extractives in Wood (3) Drying Technology in Forest Products Industry (3) Unit Operations in Forest Products Industry (3) Lignocellulosic biorefinery (3) Wood Improving and Lab. (3) Operations Management in Forest Products Industry (3) Climate Change and Living Environment (2) Machinery in Forest Products Industry (3) Design of Wood Frame Construction & Buildings (3) Subject of wood science & engineering (2) Data writing in wood science area (3) Logging Operations (3) Instrumental Analysis of Lignocellulose (3) Forest Products (3) Wood based composite analysis (3) Capstone design(3) Plant and Wood Biotechnology (3) Field experience in wood science area (3) Forest Microbiology and Lab. (3) Renewable wood materials and wood construction (3)

#### Careers

Students may pursue various careers in wood- processing industries including lumbering, plywood, and furniture manufacturing and production.

Other industries include particle boards and fiber boards, pulp and paper, and the bio-fuel production industry.

Landscape Architecture *Contact Information* Phone: +82-62-530-2100 Fax: +82-62-530-2109 E-mail: a4723@jnu.ac.kr URL: http://inula.jnu.ac.kr/

#### What is Landscape Architecture?

Landscape architecture is the art and science of arranging the spaces and objects upon land for the benefits of natural environment and human society. It involves the analysis, planning, design, construction, management, and stewardship of the natural and built environments. It includes the systematic study of large land areas based upon the ecological concern and visual quality. It deals with the location of buildings and the organization of the spaces between them. Projects cover parks and recreation, resorts, campuses, gardens, green roofs, interior landscapes, streetscapes, public spaces, urban design, and restoration of streams and wetlands.

# Department of Landscape Architecture

The Department of Landscape Architecture offers three degree programs; Bachelor, Master and Doctor of Philosophy in Landscape Architecture. It emphasizes the art and techniques of creating landscapes with a concern for ecology, natural resources, and social services. The faculty specializes in design, planning, construction, management, representation, technology, history and theory. Students will have skills to investigate characteristics of the site, identify solutions and its usage. Our programs guide students to have ability to restore disturbed landscapes, create sustainable ecosystems, and develop suitable and comunities. They are introduced to the various scales of practice from small scaled spaces such as gardens, small parks, and green streets to large scaled ones such as communal parks, resorts, stream corridors, wetlands, cities, and regional watersheds. The program also includes visual and digital media based on programs such as computer aided design, Photoshop, and geographic information system.

#### Professors

- Tong-Buhm Cho, Ph.D.
   [Professor, Landscape Design, tobcho@jnu.ac.kr]
- Eun-Il Kim, Ph.D. [Professor, Environmental Design, eikim@jnu.ac.kr]

 Ki-Yeol Lee, Ph.D.
 [Professor, Landscape Engineering, kylee@jnu.ac.kr]

#### Degree Requirements (Bachelor)

Students are required to earn 130 credits, normally over a period of 8 semesters, in accordance with university regulations.

## What Do You Study in undergraduate?

Core Courses

Basic Landscape Design (3) Practice and Field Trip for Landscape Plants (3) Garden Design (3) Graduation Design Studio (Capstone Design) (3)

#### Electives

Landscape Surveying and Practice (3) Principles of Landscape Planning (3) Perspective Techniques (3) Landscape Architectural Construction Materials (3) History and Field Trip of western Landscape Architecture (3) GIS and Environmental Planning (3) Computer-Aided Landscape Planning and Design (3) Landscape interior Practice (3) Computer Graphics in Landscape Architecture (3) Landscape Engineering and Practice (3) Landscape Planning Design and Practice (3) Park Planning and Design Studio (3) Environmental Open Space Design (3) Tourism and Recreation Planning (3) Site Planning and Practice (3) Landscape Design Media Studio (3) Landscape Maintenance (3)

Urban Woodlands Planning (3) History and Field Trip of Oriental Landscape Architecture (3) Urban Landscape Design (3) Ecological Engineering and Ecosystem Restoration (3) Cost Estimates in Landscape Architecture (3) Indoor Landscapes and Practice (3) Urban Planning and Urban Ecosystem (3) Landscape Planning (3) Landscape Esthetics & Landscape Design (3) Landscape Assessment (3) Cultural Property and Practice (3) Field Practice (2) Landscape Architecture Construction (3) Understanding of Landscape Architectural Profession (3) Landscape Architecture Seminar on Industrial Topics (1) Integrated Environmental Design(Capston Design)

#### Teaching Profession Courses

Research of Educational Text and Teaching (3) Method of Plant Resources and Landscape Architecture (3) Educational Theories in Plant Resources and Landscape Architecture (3)

#### Careers

Graduates may seek employment in the Ministry of Construction and Transportation, Ministry of Environment, Ministry of Government Administration and Home Affairs, local governments, Korea National Housing Corporation, Korea Land Corporation, Urban Development Corporation, Korea Highway Corporation, and private enterprises for landscape planning, design, construction, and management. Agricultural and Biological Chemistry *Contact Information* Phone: +82-62-530-2130 Fax: +82-62-530-2139 E-mail: mindzero@jnu.ac.kr URL: http://agrochem.jnu.ac.kr/

## What is Agricultural and Biological Chemistry?

Agricultural and Biological chemistry covers the understanding and application of biology and chemistry to agricultural systems for the purpose of benefitting agricultural production.

The main objective of Agricultural and biological chemistry is to provide students with the combined knowledge of plant nutrition and physiology, biochemistry, molecular biology, natural chemistry, soil science, microbiology, and environmental pesticide science for pursuing studies and careers related to agricultural environment and life sciences.

Agricultural and Biological chemistry contains as its main subjects fertilizer science, plant nutritional science, biochemistry, physical chemistry, molecular biology, analytical chemistry, natural chemistry, organic chemistry, soil science, soil microbiology, pesticide science, general chemistry, biology, environ- mental chemistry, and their related laboratories and practical experiments.

#### Professors

- Kil-Yong Kim, Ph.D. [Professor, Soil Microbiology, kimkil@jnu.ac.kr]
- In Seon Kim, Ph.D.
   [Professor, Environmental Pesticide Science, mindzero@jnu.ac.kr]
- Hyang Burm Lee, Ph.D. [Professor, Environmental Microbiology, hblee@jnu.ac.kr]
- Woo Jin Jung , Ph.D. [Professor, Plant Resources Science, woojung@jnu.ac.kr
  Jin-Cheol Kim, Ph.D.
- [Associate Professor, Plant Growth Regulators Science, kjinc@jnu.ac.kr]
- YeonJong Koo, Ph.D. [Assistant Professor, Biofertilizer, yeonjong@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits including 27 credits from core courses.

# What Do You Study?

## Core Courses

General Chemistry I (3) General Chemistry II (3) General Biology I (3) General Biology II (3) Quantitative Analysis (3) Organic Chemistry (3) Soil Science (3) Pesticide Science (3) Biochemistry 2 (3)

# Electives

Introduction to Biotechnology (3) Physical Chemistry (3) Principles and Practice for Farming Settlement 1 (3) General Microbiology (3) Introduction to environmentally-friendly agriculture(3) Environmental Ecology (3) Crop Science (3) Biochemistry 1 (3) Principles and Practice for Farming Settlement 2 (3) Organic Chemistry 2 (3) Eukaryotic Microorganism (3) Bioenergy Science (3) Fertilizers (3) Biological Control Science (3) Soil Microbiology (3) Biological and Environmental Chemistry (3) Plant Nutrition (3) Plant Resources Science (3) Principles of Crop Production (3) Chemistry of Natural Products (3)

Agricultural Radio Chemistry (3) Insect Pests of Plant (3) Proposal Construction for farming Settlement (1) Crop Science (3) Environmental Assessment Theory (3) Introduction in Instrumental Analysis (3) Agriculture Inspection Science (3) Environmental Chemistry for Agriculture (3) Plant Pathology (3) Environmental Toxicology (3) Lab Work of Fundamental Chemistry (2) Lab Work of Life Chemistry (2) Exercise in Agricultural Chemistry (3) Agro-Environmental Chemistry and Toxicology (3) Bioremediation (3)

## Careers

Graduates are able to find meaningful employment in agricultural companies related to pesticides and fertilizers, academic schools and institutes related to environmental and biological research, national institutes related to agricultural areas, industrial companies related to pharmaceutical areas, and national institutes related to analytical and toxicological areas.

Food Science and Technology <u>Contact Information</u> Phone: +82-62-530-2140 Fax: +82-62-530-2149 E-mail: a0184@jnu.ac.kr URL: http://foodsci.jnu.ac.kr/

# What is Food Science and Technology?

Food Science and Technology emphasizes food technological issues related to human health and the food industry. The program trains students as food scientists or technologists armed with chemical, microbiological, biological fundamentals as well as engineering methodology for a comprehensive understanding of the physicochemical properties of food, processing and preservation of food materials and other biotechnological applications.

#### Professors

- Jong-Bang Eun, Ph.D.
   [Professor, Food Processing and Preservation, jbeun@jnu.ac.kr]
- Jae-Hak Moon, Ph.D.
   [Professor, Nutrition and Functional Chemistry, nutrmoon@jnu.ac.kr]
- Du-Woon Kim, Ph.D.
   [Professor, Food Microbiology and Food Biochemistry, dwkim@jnu.ac.kr]
- Young-Min Kim, Ph.D. [Associate Professor, Food Engineering and Enzyme Engineering, u9897854@jnu.ac.kr]
- Jeong-Yong Cho, Ph.D.
   [Assistant Professor, Food and Natural Product Chemistry, jyongcho17@jnu.ac.kr]
- Soo-Jung Kim, Ph.D. [Assistant Professor, Food System Engineering, bioksj@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits including 17 credits from core courses.

## What Do You Study?

Core Courses	Introduction to Agricultural Food & Biotechnology
Food Analysis and Lab 1 (1)	(3)
Food Analysis and Lab 2 (1)	Introduction to Food Science (3)
Food Chemistry (3)	General Microbiology (3)
Food Engineering (3)	English for Food Technology (3)
Nutrition Chemistry (3)	Food Biochemistry 1 (3)
Food Microbiology Lab (1)	Organic Chemistry 1 (3)
Food Precessing and Lab(1)	Food Microbiology (3)
Food Biochemistry 1 (3)	Food Biochemistry 2 (3)
Electives	Statistics for food science (3)
	Food Enzyme Technology (3)

Organic Chemistry 2 (3) Food Processing (3) Natural Products Utilization (3) Food Hygiene (3) Food Fermentation Engineering and Lab (3) Food Packaging (3) Food Quality Control (3) Marine Food Processing (3) Food Technology Research 1 (1) Sensory Evaluation of Foods (3) Food Design Engineering (3) Capstone Design Practice (1) Food Technology Research 2 (1) Seminar for Food Professional Development (1) Food Instrumental Analysis (3) Food Oils and Fats (3)

## Teaching Profession Courses

Theories of Agricultural Education(3) Research of Agriculture Teaching Materials & Teaching Method(3) Logic and Essay Writing in Agricultural

Minor Courses

24 credits must be chosen.

# Careers

Graduates of the Food Science and Technology Department become food scientists at food companies, the FDA, RDA, Agricultural Research & Extension Service, and the Research Institute related with Food and Biotechnology. They also become government officers related with hygienists, and processors (R&D, Quality Control, Production, Marketing)

Molecular Biotechnology *Contact Information* Phone: +82-62-530-2160 Fax: +82-62-530-2169 E-mail: westlife-jeong@jnu.ac.kr URL: http://mimb.inu.ac.kr/

## What is Molecular Biotechnology?

A broad term of biotechnology is generally used to describe the use of biology in industrial processes such as agriculture, brewing, and drug development. The term also refers to the production of genetically modified organisms(GMOs) or the manufacture of products from genetically modified organisms. It involves the use of plants, animals, and micro-organisms to create products or processes. Traditional applications include animal breeding, brewing beer with yeast, and cheese making with bacteria. Recent developments include the use of enzymes or bacteria in a wide range of applications, including waste management, industrial production, food production and remediation of contaminated land. Modern biotechnology, molecular biotechnology, also includes the use of gene technology, which allows us to move genetic material from one species to another. Biotechnology combines disciplines like genetics, molecular biology, biochemistry, embryology, and cell biology.

## Major in Molecular Biotechnology

Molecular Biotechnology focuses on the study of regulation and function of genes at the levels of DNA, RNA, and protein in living organisms.

Biotechnology aims to expand its usefulness by identifying and cloning new genes and traits, developing new diagnostic tests, and continuing to use these tools to better understand plants, animals, and microorganisms that make up the world.

## Professors

• Oksoo Han, Ph.D.	sukwhan@jnu.ac.kr]
[Professor, Biochemistry,	• Jun Ho Lee, ph.D.
oshan@jnu.ac.kr]	[Associate Professor, Neuro Biotechnology,
· Kyoungwhan Back, Ph.D.	leejunho@jnu.ac.kr]
[Professor, Plant Genetic Engineering,	• Don-Kyu Kim, ph.D.
kback@jnu.ac.kr]	[Associate Professor, Molecular Endocrinology,
Jeong-Il Kim, Ph.D.	dkkim2@jnu.ac.kr]
[Professor, Protein Biochemistry,	• Hyunkyu Sang, Ph.D.
kimji@jnu.ac.kr]	[Assistant Professor, Molecular Microbiology,
• Suk-Whan Hong, Ph.D.	hksang@jnu.ac.kr]

#### Degree Requirements

[Professor, Molecular Genetics and Breeding,

Students are required to earn 130 credits including 12 credits from core courses.

# What Do You Study?

#### Core Courses

Molecular Biology 1 Biochemistry 2 Animal Genetic Engineering Plant Genetic Engineering

#### Electives

Genetic Engineering and Human Life Organic Chemistry 1 Organic Chemistry 2 Molecular Biology 2 Biochemistry 1 Biochemistry 3 Cell Biology 1 Cell Biology 2 Biostatistics Animal Physiology Analytical Chemistry Analytical Chemistry Lab General Microbiology Genetics Molecular Genetics Developmental Biology Molecular Cell Biology Plant Physiology Biotechnology Lab Molecular Breeding Crop Physiology Animal Cell Culture and Lab Immunology Virology Enzymology Recombinant DNA Lab Plant Tissue Culture Protein Engineering

## Careers

Graduates of the Molecular Biotechnology Department obtain jobs at government research institutes (Korea Research Institute of Bioscience & Biotechnology, KIST, Korea Research Institute of Chemical Technology), National Research Institute, Rural Development Administration, Korea Food Research Institute, companies related to biotechnology, pharmaceutical companies, Bio-venture companies, and at the School of Dentistry/Medicine/Pharmacy, patent attorneys, government officials (Korea Food & Drug Administration, local extension workers, researchers), Graduate school, Studying abroad.

# Animal Science

\_\_*Contact Information* Phone: 82-62-530-2120 Fax: 82-62-530-2129 E-mail: A0049@jnu.ac.kr URL: http://animalscience.jnu.ac.kr

# What is Animal Science?

The division of Animal Science (DAS) was founded in 1995 by merging the Department of Animal Science (founded in 1969) and the Department of Dairy Science (founded in 1973). Our division has made major contributions to research and supporting farmers in the meat, dairy, and feed industries.

## Department of Animal Science

#### Our educational goals:

- 1) To provide high quality education and training for undergraduate and graduate students to serve internationally competitive and sustainable animal agriculture;
- To provide new knowledge through basic and applied research in selected areas to improve efficiency in the production and quality of animal products.

The Department operates two research units (pet and special animals and small-to-large sized animals) and three information centers (119, SOS, and Sustainable Animal Research Center) to support research and teaching. This major offers various options so that students can select numerous areas to help them pursue a variety of employment opportunities.

#### Professors

- Moon, Seung-Ju, Ph.D. [Animal Reproduction, sjmoon@chonnam.ac.kr]
- Sun, Sang-Soo, Ph.D. [Animal Physiology, sssun@chonnam.ac.kr]
- Kim, Tae-Hwan, Ph.D. [Forage Physiology & Biochemistry, grassl@chonnam.ac.kr]
- Kang, Man-Jong, Ph.D. [Transgenic Animals, mjkang@chonnam.ac.kr]
- Chin, Koo-Bok, Ph.D. [Meat Science,

kbchin@chonnam.ac.kr]

- Oh, Se-Jong, Ph.D.
   [Animal Microbial Technology, soh@chonnam.ac.kr]
- Lee, Ji-Woong, Ph.D.
   [Animal Breeding and Genetics, jwlee@jnu.ac.kr]
- Jeon, Tea-Il, Ph.D.
   [Animal Metabolomics, tjeon@jnu.ac.kr]
- Kim, Sung-hak, Ph.D.
   [Molecular biochemistry, sunghakkim@jnu.ac.kr]
- Kim, Min-seok, Ph.D. [Animal Nutritions, mkim2276@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits to graduate.

# What Do You Study?

Livestock Farm Practice (1) Animal Life Science (3) Pet Animal Science (3) Animal Cell Biology (3) Animal Feeding & Lab (2) Utilization of Animal Resources (3) Animal Physiology & Lab (3) Principles and Practices for Farming Settlements 1 (3) Principles and Practices for Farming Settlements 2 (3) Forage Production and Utilization & Lab (3) Monogastric Animal Production (3) Reproductive Physiology & Lab (3) Gene Manipulation & Lab (3) Animal Nutrition & Lab (3) Germ Cell Biotechnology in Animals & Lab (3) Animal Molecular Biochemistry Lab (3) Meat Science & Lab (3) Grassland Science (3) The Ruminant Animal (3) Dairy Food Processing (3)

Meat Processing and Lab (3) Transgenic Animals & Lab (3) Poultry Production & Lab (3) Growth & Developmental Biology (3) Animal Molecular Genetics (3) Feed Science (3) Proposal Construction for Farming Settlements (3) Laboratory Animals (3) Recycling of Animal Wastes (3) Special Animals (3) Animal Breeding (3) Theories of Animal Science Education (3) Studies of Animal Science Textbook and Teaching Methods (3) Educational Theory of Animal Science Essay (2) Introduction to Animal Resources Science (3) Quantitative Animal Genetics (3) Microbial Engineering & Lab (3) Quality Control of Dairy Foods and Lab (3) Animal Metabolomics (3) Stress and Immunity (3)

Department of Rura and Biosystems Engineering *Contact Information* Phone: +82-62-530-2150 Pax: +82-62-530-2159 C-mail: rbe-2150@jnu.ac.kr JRL: http://rbe.jnu.ac.kr

## What is Rural and Biosystems Engineering?

Rural and biosystems engineers apply integrated knowledge of physics, chemistry, biology, mathematics, engineering, and social science to rural and <u>biosystems</u> in order to contribute to the advancement of rural society, agricultural production and processing technologies, biological living systems, and environmental management policies. The Department of Rural and <u>Biosystems</u> Engineering graduates are very competitive in a wide variety of employment markets, not only in agricultural sectors, but also in non-agricultural areas. Recent graduates have found job positions in government agencies, state-invested firms, environmental consulting firms, construction companies, agricultural machinery companies, agricultural facility and plant companies, mechatronics companies, electronics companies, food and biomaterial processing companies, etc. Graduates contribute to meeting the needs of national and local society, such as developing agricultural machines, automating agricultural production systems, improving food quality and safety, improving rural amenities and environmental quality, and enhancing the quality of life for rural people.

#### Department of Rural and Biosystems Engineering

The Department of Rural and Biosystems Engineering pursues global competitiveness in agriculture and the sustainable development of rural communities through the application of integrated knowledge on engineering, natural science, and humanities and social sciences to agricultural and rural systems. The principal contents of research and education of the department are rural amenities, soil and water management, construction and management of infrastructure for rural systems majors, agricultural machinery, automation of agricultural production systems, precision and information agriculture, agricultural robotics, biomaterial processing, bionanotechnology, and food processing systems for biosystems majors. Through research and education, the Department serves industries and societies and achieves its reputation as a leader in the rural and biosystems engineering sector.

The Department develops graduates who can pursue engineering careers in industry, academia, consulting, or government. The curriculum is designed to educate the students to:

- possess engineering knowledge and skills on rural amenities and planning, environmental management, water resource conservation, soil remediation and management, and construction and management of rural infrastructure;
- possess engineering knowledge and skills on agricultural farm power and machinery, automation of agricultural production systems, precision and information agriculture, food and biomaterial processing, postharvest technology, and bio-robotics;
- · be able to become successfully employed in engineering jobs in industry, government, or academia;
- · produce graduates who continue to be engaged in professional development.

Students learn to apply fundamental knowledge of biological and physical sciences, mathematics, and engineering principles to formulate and solve engineering problems. Engineering design is integrated throughout the curriculum, along with opportunities to develop communication, learning, and teamwork skills, culminating in a capstone design experience. Electives in the curriculum allow students to specialize in:

Rural Planning and Construction: Overall design, planning, and construction of rural systems for conservation and development of rural environments and communities.

Environmental and Natural Resources Engineering: Development of water and soil resources management technologies for sustainable development of rural and agricultural systems.

Agricultural Machinery Development and Automation: Development and automation of agricultural machines for crop planting, harvesting, and processing.

Biological Engineering and Bionanotechnology: Development of innovative bio-platforms for improving life of living systems.

Students select courses with the assistance of faculty advisors on an individual basis. Faculty members also assist with professional development and job placement for students.

#### Professors

- **Rural System Engineering Major**
- Kwang-Sik Yoon, Ph.D. [Professor, Rural Environmental Water, ksyoon@jnu.ac.kr]
- Woo-Jung Choi, Ph.D.
   [Professor, Environmental Soil Science, wjchoi@jnu.ac.kr]
- Won-Jin Baek, Ph.D. [Professor, Rural Infrastructure Engineering, bwj215@jnu.ac.kr]
- Seung-Hwan Yoo, Ph.D. [Assistant Professor, Rural Water Resources Engineering, yoosh15@jnu.ac.kr]
- Se-Woon Hong, Ph.D.
   [Assistant Professor; Ag. Facilities and Environment, hsewoon@jnu.ac.kr]

- Biosystems Engineering Major
- Soo-Nam Yoo, Ph.D. [Professor, Farm Machinery, snyoo@jnu.ac.kr]
  Young-Soo Choi, Ph.D.
- [Professor, Biosystems Machine Control, y-choi@jnu.ac.kr]
- Kyeong-Hwan Lee, Ph.D.
- [Associate Professor, Sensors and Intelligent Biosystems, khlee@jnu.ac.kr]
- Hyoung Il Son, Ph.D. [Associate Professor, Human-Centered Robotics and Automation, hison@jnu.ac.kr]
  Jangho Kim, Ph.D.
- [Associate Professor, Nanoengineered Biomaterial Systems, rain2000@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, with 15 credits from core courses.

# What Do You Study?

#### Rural Systems Engineering Major Courses Core Courses Spatial Information Analysis and Practice (3) Mechanics of Structures (3)

Irrigation & Drainage Engineering (3) Agricultural Environment and Ecology (3) Soil Mechanics and Practice II (3)

#### Electives

CAD(3)Engineering Mathematics (3) Fluid Mechanics (3) Applied Analytical Chemistry (3) Applied Calculus (3) Statics (3) Rural System Seminar on Industrial Topics (3) Surveying and Practice (3) Construction Materials (3) Hydraulics (3) Applied Surveying and Practice (3) Mechanics of Materials (3) English for Rural Systems Engineer (3) Environmental Soil Science (3) Reinforced Concrete 1 (3) Soil Mechanics and Practice 1 (3) Green Engineering Hydrology (3) Environmental Pollution Analysis Lab (3) Construction Methods and Equipments (3)

#### Biosystems Engineering Major Courses Core Courses

Electronic Circuit for Biosystems and Practice (3) Field Machinery and Practice (3) Biomechanics and Tissue Engineering and Practice (3)

#### Electives

CAD (3)
Engineering Mathematics (3)
Biology for Biosystems Engineering (3)
Fundamental Science for Biosystems (3)
Applied Calculus (3)
Statics (3)
Computer Programming (3)
Manufacturing Processes (3)
Dynamics (3)
Biosystems Engineering Lab (3)
Biosystem Mechatronics and Practice (3)
Fluid Mechanics for Biosystems (3)

Rural Land Use Planning (3) Rural Environmental Engineering (3) Onsite Water Treatment Engineering (3) Reinforced Concrete 2 (3) Land Remediation and Reclamation (3) Foundation Engineering (3) Statistical analysis of Climate-Smart Information (3)Rural Planning (3) Rural Tourism (3) Rural Infrastructure Design (3) Capstone Design for Rural System Engineers 1 (3) Climate-Smart Disasters Prevention Engineering (3) Farm Structures (3) Rural Road Engineering (3) Rural Settlement Planning (3) Capstone Design for Rural System Engineers 2 (3)

Biosystems Robotics (3) Environment Control in Biosystems Structures (3)

Mechanics of Materials for Biological Applications (3) Biosystems Modeling and Practice (3) Bio-Industrial Machine Design (3) Mechanics of Bio-Industrial Machine (3) Thermodynamics (3) Fluid Machinery (3) Precision Agricultural Engineering(3) Tractor Engineering and Practice (3) Design of Biosystems Engineering (3) Field Practice in Biosystems Engineering 1 (2) Introduction to computer engineering (3) Computer Aided Engineering Design (3) Biosystem Measurements (3) Field Practice in Biosystems Engineering 2 (2) Seminar on Industrial Topics 1 (1) Biosystems Automation (3) Capstone Design of Biosystems I (3) Environmental Control in Agricultural Structures (3) Bio-Resource Process Engineering (3)
Nanobioengineering (3)
Seminar on Industrial Topics 2 (1)
Capstone Design of Biosytstems 2 (3)
Sensors for Bio-industry (3)
Hydraulics System Engineering (3)

## Careers

Graduates who obtain a broad engineering background through the Department's program are sought after by a wide variety of employers. The following is a list of current employers:

- : Government Agencies
- : Korea Rural Community Corporation
- : Korea Water Resources Corporation
- : Rural Research Institute
- : Korea Electric Corporation
- : Korea National Housing Corporation
- : Korea Highway Corporation
- : Korea Railroad
- : Construction Companies
- : Agricultural Machinery Manufacturers
- : Agricultural Machinery Research Institute
- : Korea Hydro and Nuclear Power Corporation
- : Korea Gas Corporation
- : Mechanical and Electrical Engineering-related Companies
- : Food Production Companies
- : Crop Storage and Handling Companies
- : Agricultural Production Consultant Companies
- : Korean Army and Police

Department of Bioenergy Science and Technology *Contact Information* Phone: +82-62-530-2043 Fax: +82-62-530-2047 E-mail: A4705@jnu.ac.kr URL: http://bioenergy.jnu.ac.kr/

# What is Bioenergy Science and Technology?

Global demand for energy has tremendously increased due to the accelerated growth of the human population and the improvement of human life. Although natural gas and atomic energy have been utilized to supply a portion of the energy demand, petroleum resources will become depleted within this century. In addition, the increased consumption of fossil fuels will steadily increase emissions of carbon dioxide, augmenting greenhouse gases in the atmosphere. Thus, energy and the environment are inextricably linked. Reducing dependence on fossil fuels and imported oil is a challenge of vital importance to national security, the economy, and the environment. Bioenergy, based on biomass, has drawn attention as a sustainable energy source that may help cope with the rising prices of fossil fuels, and address environmental concerns about greenhouse gas emissions. Bioenergy science and technology is about basic biological and biochemical science on plant biomass and enabling technology, not only for the improvement of the yield and quality of cellulosic biofuels and biodiesels, but also for the production of biofuels.

## Department of Bioenergy Science and Technology

The Department of Bioenergy Science and Technology was newly established in 2010 and selected as part of the World Class University (WCU) system by the Ministry of Education, Science and Technology. We will establish a pioneering education system for expanding learning opportunities from various academic backgrounds, such as plant biology, molecular biology, chemistry, biochemistry, biotechnology, biochemical engineering, and bioprocess engineering. This innovative education system is intended to accelerate basic research in the development of sustainable bioenergy, including cellulosic ethanol and other biofuels. The final aim of this new department is to provide experts with scientific and technological knowledge that will afford economic and social benefits to agriculture and the environment and, thus, improve the quality of life.

#### Professors

- Kim, Jungmook, Ph.D.
   [Plant Molecular Cell Biology, jungmkim@jnu.ac.kr]
- Bae, Hyeun-Jong, Ph.D.
  [Bioenergy & Biotechnology, baehj@jnu.ac.kr]
- Ahn, Sungju, Ph.D. [Energy Crop Physiology,

asjsuse@jnu.ac.kr]
Lee, Won-Heong, Ph.D. [Microbial Engineering, wonhlee@jnu.ac.kr]
Cho, Chul-Woong, Ph.D. [Environmental Chemical Engineering, choicejoe@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

## What Do You Study?

#### General Courses

General Biology 1 (3 credits) Mathematics 1 (3) General Chemistry 1 (3) Career Plan and Self Understanding (2) General Chemistry 2 (3) General Biology 2 (3)

#### ■ Core Courses

Biochemistry 1 (3) Bioenergy (3) Plant Physiology 1 (3) Industrial Microbiology (3)

#### Electives

Introduction to Bioenergy Science and Technology (3) General Plant Biology & Lab (3) Campus Life and Career Roadmap (2) Molecular Biology 1 (3) Cell Biology1 (3) Organic Chemistry 1 (3) Molecular Biology 2 (3) Biochemistry 2 (3) Physical Chemistry (3) Organic Chemistry 2 (3) Genetics (3) Cell Biology 2 (3) Plant Ecology and Environment (3) Bio-Nano Technology (3) **Bioinfomatics** (3) Biochemical Engineering (3) Principles and Methods of Gene Manipulation (3) Plant Molecular Biology (3) Bioenergy Engineering Capstone Design 1 (3) **Biostatistics** (3) **BIOPROCESS ENGINEERING (3)** Quantitative Analysis (3) Microbial Engineering (3) Enzymology (3) Plant Physiology 2 (3) Plant Ecology and Environment (3) Bioenergy Engineering Capstone Design 2 (3) Current Biomass Science (3) Plant Seed Science (3) What are Bioactive materials (3) Fermentation Technology (3) Metabolic Regulation Engineering (3) Crop physiology (3)

#### Careers

Bioenergy Science and Technology job opportunities include: biofuel or bioengineering or energy-related corporations, professors or researchers in plant biology, biology, or bioengineering, rural development administration staff, National Institute of Agricultural Biotechnology, Korea Research Institute of Bioscience and Biotechnology, agricultural research and extension services staff, Ministry of Agricultural Technology staff, National Plant Quarantine staff, Agricultural Cooperative Association staff, Agricultural Technology Center staff, the private sector (biotechnology and bioengineering or related) staff, and the Graduate School of Medicine and Dentistry.

Agricultural Economics *Contact Information* Phone: +82-62-530-2170 Fax: +82-62-530-2179 E-mail: scsa13@jnu.ac.kr URL: http://ae.jnu.ac.kr/

# What is Agricultural Economics?

The purpose of the Agricultural Economics (AE) major is to enable students to think like economists in solving problems related to the agricultural sector. Thinking like an economist involves using chains of deductive reasoning to help understand phenomena as well as problem-solving and creative skills in the agricultural sector.

Our goals are to increase understanding of economic behavior and improve students' ability to understand and predict agricultural economic phenomena.

The main subjects of the Department of Agricultural Economics are agricultural economics, farm management, agricultural product price analysis, farm statistics, and resource and environmental economics.

#### Professors

- Suhk-Hyun Kim, Ph.D.
   [Professor, Resource Economics, Risk management shane@jnu.ac.kr]
- Gue-Dae Cho, Ph.D.
   [Professor, Agricultural Policy, Agricultural Product Trade gcho6011@jnu.ac.kr]
- Hye-Jung Kang, Ph.D. [Professor, Farm Management, Production Economics,

Food Consumption Economics hjkang@jnu.ac.kr]
In-Seck Kim, Ph.D. [Associate Professor, Agricultural Marketing and Agribusiness i.kim@jnu.ac.kr]
Yoon-Hyung Kim, Ph.D. [Associate Professor, Benefit-cost Analysis, Agricultural Development yonhk@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters). Students must also demonstrate proficiency in English and in using computers.

## What Do You Study?

#### Core Courses

Agricultural Economics (3) Farm Management (3) Mathematics for Agricultural Economics (3) Agricultural Prices Theory (3) Agricultural Policy (3) Resources and Environmental Economics (3)

#### Electives

Agricultural Prices Theory (3) Resources and Environmental Economics (3) Rural Sociology (3) Micro-analysis of Agricultural Economics (3) Agricultural Accounting (3) Regional Agricultural Economics (3) Statistics for Agricultural Economist (3) Agricultural Production Economics (3) Study of Korean Economy (3) Agricultural Extension Service (3) Korean Agricultural History (3) Agricultural Math Economics (3) Agricultural Project Appraisal (3) Agricultural Product Trade (3) Agricultural Econometrics (3) Agricultural Systems Analysis (3) Farm Finance (3) Rural Survey (3) Cooperatives (3) Farm Management Analysis (3) Agricultural Development (3) Practice in Economics (3) Agricultural Marketing (3) Agricultural Information (3) Macro-analysis of Agricultural Economics (3) Globalization and Food Security (3)

#### Careers

Possible careers extend to a multitude of organizations including the Rural Development Administration, Agricultural Research and Extension Services, government public institutions, research center, Agricultural Cooperative Association, Agricultural Technology Center, and other private sector firms. It is also possible to enter graduate school or study abroad.

# College of Culture and Social Sciences

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# Division of International Studies

- English Studies
- · Japanese Studies
- · Chinese Studies

# Division of Business and Commerce

- International Trade and Commerce
- · Logistics and Transportation

# Division of Culture Contents

- · Department of Multimedia
- · Department of Electronic Commerce
- Division of Global Studies

# Affiliated Research Centers

- · Yi Sunshin Marine Culture Research Center
- · Information Technology Research Institute
- · Center for Transportation Logistics
- · East Asia Institute
- · Marine Leisure Sports Laboratory

Division of International Studies *Contact Information* Tel: +82-61-659-7510 Fax: +82-61-654-3512 E-mail: A0331@jnu.ac.kr URL: http://inter.jnu.ac.kr

## What is International Studies?

The Division of International Studies provides a solid background in regional studies and an understanding of foreign languages for students who aspire to be international experts of the 21st century.

# Division of International Studies at Chonnam National University

The Division of International Studies offers comprehensive interdisciplinary courses related to global concerns in English, Chinese, and Japanese. With a remarkable combination of faculty, staff, programs, and state-of-the-art facilities, the division provides the best education possible for motivated students who aspire to be international leaders of the 21st century.

Considering these educational objectives, the division offers a variety of programs ranging from overseas language study and internships to special lectures for employment.

#### Professors

- Young-Soon Cho, Ph.D.
   [Professor, Department of English ysncho@chonnam.ac.kr]
- Sung-Kap Yang, Ph.D.
   [Professor, Department of English yangtop@chonnam.ac.kr]
- Kwan-Young Oh, Ph.D.
   [Professor, Department of English okyoung@chonnam.ac.kr]
- Han-Nae Yu, Ph.D.
   [Professor, Department of English ambrosia@gmail.com]
- Yong-Ki Kang, Ph.D.
   [Professor, Department of English greening@chonnam.ac.kr]
- Ji-hyun Kang, Ph.D.
   [Professor, Department of Japanese Studies, jihyun@chonnam.ac.kr]
- Ji-yeon Won, Ph.D. [Professor, Department of Japanese Studies, jywon@chonnam.ac.kr]

- Byeong-hoon Lee, Ph.D. [Professor, Department of Japanese Studies, leebh@chonnam.ac.kr]
- Ki-ryong Chung, Ph.D. [Professor, Department of Japanese Studies, nhk5317@chonnam.ac.kr]
- Kyung-kuk Kim, Ph.D.
   [Professor. Department of Chinese Studies, kmkyk@chonnam.ac.kr]
- Seung-hyun Choi, Ph.D.
   [Professor, Department of Chinese Studies, cchx5278@chonnam.ac.kr]
- Won-il Cho, Ph.D.
   [Professor, Department of Chinese Studies, mengzi@chonnam.ac.kr]
- Young-uk Um, Ph.D. [Professor, Department of Chinese Studies, uyu123@chonnam.ac.kr]
- Jin-hee Song, Ph.D.
   [Professor, Department of Chinese Studies, fu286599@chonnam.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits. Students may normally earn 18 credits per semester (up to 21 credits in exceptional cases). Students are also required to pass a graduation exam and demonstrate proficiency with computers and in a foreign language.

## What Do You Study?

#### **English Studies Major Courses**

Understanding English & Americans (3) World Englishes (3) Survey on British Literary Works (3) English Grammar (3) Tour Guide English (3) Media English (3) Practical English (3) English Sentence Structure (3) English Pronunciation 1 (3) Introductory English Linguistics (3) English Conversation 1 (3) British & American Drama (3) English Listening Comprehension (3) English Vocabulary (3) English Conversation 2 (3) Survey on American Literature (3) Culture of American Society (3) Understanding of British and American Poetry (3) Cultural Background of the English Language (3) English Semantics (3) English Conversation 3 (3) English Composition (3) Literature and Film (3) Business English 1 (3) Understanding British and American Novels (3) English Discourses (3) English to Korean Translation (3) History of English (3) Business English 2 (3) Essay Writing in English (3) Presentation English (3) Reading English Prose (3) English Syntax (3) Environmental Writings (3) Current English (3) Practice of Practical English (3)

Topics in English Linguistics (3) Interview English (3)

#### **Chinese Studies Major Courses**

Reading Comprehension on Ancient Chinese Words (3) Global Communication English: GCE (3) Chinese for Beginning (3) History of Exchange in east and west culture(3) East Asian Regional Study (3) Study of tea culture in East-Asian countries (3) Understanding of Oriental Philosophy (3) Adage Chinese (3) Chinese Learned via Film(3) Exposition of Chinese classics(3) Appreciation of Chinese Classical Prose (3) Appreciation of Chinese Classical Poetry (3) China and Overseas Chinese (3) Trip to Chinese Literature (3) Special Course in Chinese Literature (3) Understanding of Chinese Culture (3) Reading Chinese Newspaper (3) Advanced Chinese Conversation (3) Chinese education theory (3) "Chinese Textbook Research and Teaching Method"(3) "Chinese Reasoning and Essay Education"(2) Chinese Reading Comprehension(3) Chinese Grammar (3) Chinese Interview Practice (3) Chinese composition1 (3) Chinese composition2 (3) Intermediate level Chinese conversation (3) Intermediate Chinese Conversation 2 (3) Basic Chinese conversation (3) Basic Chinese Conversation 2 (3) Practice on debate related to China (3) Chinese Translation and Interpretation (3) Special Course in Chinese Language Study (3)

Exploration to Chinese Local Culture (3) Strolling through Chinese History (3) China Immigration study (3) Chinese Politics and Diplomacy (3) Special Course in Chinese Regional Study (3) Intermediate level HSK (3) Beginning level HSK (3) Practical Trade Business Chinese (3) History of Exchange in Korean and Chinese Culture (3) HSK Listening (3)

#### Japanese Studies Major Courses

Beginner for japanese conversation (3) Multimedia Japanese 1 (3) Multimedia Japanese 2 (3) Japanese Grammar 1 (3) Japanese Conversation 1 (3) Understanding of Japanese History (3) Japanese Culture Reading (3) Understanding of Japanese Society (3) Japanese Grammar 2 (3) Japanese Composition1 (3) Japanese Conversation2 (3) Introduction to Japan Study (3)

Understanding of Japanese Economy (3) Understanding of Japanese Literary (3) Japanese Composition 2 (3) Understanding of Japanese Study (3) Japanese Conversation 3 (3) Contemporary Japan's Situation (3) Business Japanese (3) Practical Japanese (3) Japanese Document Preparation (3) Japanese Composition 3 (3) Japanese Conversation 4 (3) Understanding of Japanese Politics (3) Tourism Japanese Exercise (3) Japanese of Current Topics (3) Japanese Corporate Management (3) Understanding of Japanese Literary (3) Japanese Speech (3) Studies on Japanese Syntax (3) Expert in Japanese. Translation Exercise (3) Theory on Korea-Japan Relations (3) Japanese Education Theory (3) Japanese materials research, and a method of guidance(3) Japanese Department logical and essays Trainin(2)

#### Careers

Students who have successfully completed the Division programs have worked for leading companies such as GS Caltex, Yeocheon NCC, Kumho PandG, LG Petrochemical Plant, Honam Oil Company, BASF, Kwangyang LST, Suncheon Carf, Lotte Hotel, Doobee Trade Company, Cam Zone Trade Company, J&D International, Incheon International Airport, and POSCO. Many graduates have worked as school teachers, public officers, interpreters, tour guides, and professional translators.

Division of Logistics and International Trade *Contact Information* Fel: +82-61-659-7340 Fax: +82-61-659-7359 E-mail: mihoe@jnu.ac.kr JRL: http://logtr.inu.ac.kr

#### What is Logistics and International Trade?

International Trade and Commerce is an area of study which has an internationally-oriented, and practical nature. The International Trade and Commerce major, as an educational goal, aims to adapt to a rapidly changing domestic and overseas environment, lead new changes, and thus cultivate specialized commercial experts who are capable of contributing to property of korean economy in the world market.

Logistics and Transportation is an area of study is highlighted as a leading field of the 21st century. Performance of businesses concerned with national competitive power is related to logistics and transportation. We aim to strengthen international competitiveness by optimizing logistics systems in both public and private sectors, and by improving transportation problems over the country.

Many companies occupying the Gwangyang container terminal, the free economic zone in the Gwangyang Bay, the Yeosu National Industrial Complex, and the Yulchon Regional Industrial Complex provide employment opportunities for graduates.

#### Division of Logistics and International Trade at Chonnam National University

The Division of Business and Commerce consists of 3 major fields of study: Business Administration, International Trade and Commerce, and Logistics and Transportation. However Business Administration has not enrolled new students since 2015. The division takes charge of education related to corporations, trade, logistics, and transportation in Yeosu, the largest city in the free economic zone in the Gwangyang Bay area. Many opportunities and challenges in the free economic zone, including many businesses and financial institutions in Yeosu, are available.

The Business and Commerce program is based on the vision to pursue excellence in education with an aim to produce leaders in management and economic activities.

Graduates are equipped with profound knowledge, both in theory and in practice. They are capable of applying such knowledge to growing their problem-solving skills in the real world and contributing innovatively to society or organizations for which they work.

#### Professors

- Cheol Lee, Ph.D. [Professor, International Economics, clee1@chonnam.ac.kr]
- Bok-jae Park, Ph.D.
   [Professor, International Commerce, bjpark73@chonnam.ac.kr]
- Gil-sung Kim, Ph.D.

[Professor, International Business, kikis@chonnam.ac.kr]

- Young-moon Kang, Ph.D.
   [Professor, International Commerce, wto3@chonnam.ac.kr]
- Seok-gang Park, Ph.D. [Professor, Strategic Management,

parksg1214@chonnam.ac.kr]

- Byung-in Park, Ph.D.
   [Professor, Business Logistics, bipark@chonnam.ac.kr]
- Sang-gu Kim, Ph.D.
   [Professor, Traffic Operations, kim-sg@chonnam.ac.kr]
- Jong-wook Bae, Ph.D.
   [Professor, Logistics System, jwbae@chonnam.ac.kr]

# Degree Requirements

 Chang-hyun Kim, Ph.D.
 [Professor, Logistics Information Systems, chkim@chonnam.ac.kr]

Chang-ho Choi, Ph.D. [Professor, Freight Transportation, jc1214@chonnam.ac.kr]
Seung-sik Shin, Ph.D. [Professor, Logistics Policy & Environment Logistics,

shin2han@chonnam.ac.kr]

Students are required to take a total of 130 credits to graduate: 22 credits from cultural studies courses, 8 credits from compulsory cultural studies courses, 21 credits from core major courses, and more than 39 credits from elective major courses. Students are also required to submit a thesis (or pass a graduation exam) and demonstrate proficiency in a foreign language.

# What Do You Study?

#### Division of Logistics and International Trade Case Studies of Global Companies (3) International Trade Seminar with CEOs (Capstone Introduction to International Trade (3) design) (3) Business Statistics (3) Principles of Accounting (3) Principles of Enterprise Management (3) International Marketing Strategy (3) Introduction of Logistics (3) International Commerce (3) International Finance (3) International Trade and Commerce Financial Marketing (3) **Major Courses** International Finance (3) Chinese for Beginners (3) International Investment Management (3) Trade English (3) Risk Management for Financial Institutions (3) Principles Of Marketing (3) Big Data Analysis for Finance (3) International Trade Practice (3) International Mergers & Acquisitions (3) International Business (3) Macroeconomics (3) Business Communication (3) Microeconomics (3) Distribution and Inauguration of Trading Companies (3) International Economics (3) Practical Letter of Credit (3) International Tourism Economics (3) Electronic Commerce (3) English Conversation for International Commerce 2 (3) Internatioal Logistics and Exhibition Convention (3) English Conversation for International Commerce 1 (3) International Business Strategy (3) English Conversation for International Commerce 3 (3) International Negotiation and Business Contract (3) English Conversation for International Commerce 4 (3) Asian Culture and business (3) International Manner and Overseas Area Studies (3) Logistics and Transportation Electronic Trade Simulation (3) **Major Courses** Online Expert Marketing (3)

Global Communication English: GCE (3) Persuasion and Communication (3) Disciplined Inquiry (3) Chinese Classic in Korean (3) Field Practice (3) Introduction to Transportation (3) Inland Transport Management (3) Logistics Accounting (3) Business English (3) Management Science (3) Logistics Management/Supply Chain Management (3) Marketing Management (3) Logistics Data Processing (3) Statistics applied in Transportation and Logistics Urban Logistics (3) Transportation Planning (3) Distribution Management (3) Understanding of Economics (3) Database Application to Logistics (3) Warehousing and Material Handling Management (3) Logistics Laws (3) Practice of Logistics (3)

Transportation Demand Analysis (3) Global Supply Chain Management (3) Logistics and e-Business (3) Research Methodology (3) International Transport of goods (3) Logistics Cost Analysis (3) Logistics Facility Planning (3) Economic Decision Analysis (3) Port Operations and Management (3) Purchasing and Supply Management (3) Traffic Operation (3) Introduction to Logistics Information System (3) International Transportation (3) Seminar on Logistics Trend (3) Traffic safety (3) Integrated Logistics Systems Management (3) Industrial Location Theory (3) Service Management (3) Supply Chain Management (3) Seminar in Logistics Innovation (3) Green Logistics (3)

#### Careers

As the division is related to commerce, graduates can find jobs in diverse fields.

In terms of the major of Business Administration, it is possible to become a certified public accountant, licensed tax accountant, patent attorney, customs expert, and certified public labor attorney through a licensing exam. It is also possible to enter numerous academic fields and research institutes related to commerce by attending graduate school. In addition, many graduates work in fields related to accounting, planning, finance, and marketing in ordinary companies, including the financial industry, such as banks, securities companies, insurance companies, and investment and trust management companies.

The major of International Trade and Commerce cultivates experts in international trade, distribution management, cyber trading, foreign exchange management, and e-commerce management. The graduates work mainly in the field of international trade-related business in various companies, and financial institutions. Moreover, they can work as public servants in local and central government related to trade and commerce.

Graduates of the department of logistics and transportation can mainly enter not only the logistics sector but also the transportation sector. At the logistics sector, they can go into logistics-related organizations such as international shipping companies, forwarders, couriers, port authorities, terminal operating companies as well as general companies as logistics officers after obtaining the certifications such as "Certified Professional Logistician" and "International Certified Professional Logistician". In the transportation sector, they can advance transport-specialized officials, traffic-related authorities and corporations as well as engineering companies after acquiring professional qualifications such as "Engineer Transportation" and "Industrial Engineer Transportation". Division of Culture Contents *Contact Information* Fel: +82-61-659-7440 Fax: +82-61-659-7449 E-mail: ymkang@jnu.ac.kr JRL: http://ccd.jnu.ac.kr

# What is Culture Contents?

The Division of Cultural Contents refers to the diverse range of culture based arts being stored, distributed and enjoyed in the form of visual and digital media in the genre of games, animation, music, characters, broadcasting, and e-books.

## Division of Culture Contents at Chonnam National University

The Departments of Multimedia and Electronic Commerce were merged into the school of Culture Contents in 2006. The Division of Culture Contents is now training undergraduate students to compete with world professionals in the field of digital contents for culture industry, and IT infrastructure for a ubiquitous society. The school aims to train students to be leading specialists in all fields of the culture industry, including creation of digital contents, mobile software, and electronic commerce. The school's students can obtain excellent qualifications in Gaming Graphics, Multimedia Content Authorship, Network Expertise, Web Page Expertise, Web Mastery, DB (OCA, OCP, OCM), Java Programming (SCJP, SCJD, WCD) and CPM.

## Professors

- Hyug-Hyun Cho, Ph.D.
   [Professor, Database and Security, hhcho@jnu.ac.kr]
- Soon-Hee Han, Ph.D.
   [Professor, Compiler and Mobile Systems, shhan@jnu.ac.kr]
- Young-Man Kang, Ph.D.
   [Professor, Computer Network and Digital Broadcasting Systems, ymkang@jnu.ac.kr]
- Hee-Teak Ceong, Ph.D.
   [Professor, Distributed Systems and Multimedia, htceong@jnu.ac.kr]
- Min-Suk Yoon, Ph.D. [Professor, MS and IS, msyoon@jnu.ac.kr]
- Yong-Min Kim, Ph.D.

[Professor, Information Security and Electronic Commerce Systems, ymkim@jnu.ac.kr]

- Jun-Seok Lee, Ph.D.
   [Professor, Logistic Information and Computer Games, iexpert@jnu.ac.kr]
- Jeong-Seon Park, Ph.D.
   [Professor, Multimedia Programming and Pattern Recognition, jpark@jnu.ac.kr]
- Seung-Bong Park, Ph.D.
   [Professor, e-Business Models and e-Business Strategy, parks@jnu.ac.kr]
- Byung-il Moon, Ph.D. [Professor, Physical, m20011002@jnu.ac.kr]

# Degree Requirements

- · Major Requirements: At least 18 credits
- Major Electives: 30 credits or more
- · General Education Requirement: 8 credits or more
- · General Education Electives: 22 credits or more
- · General Electives: 31 credits or more
- · Graduation Credits: At least 130 credits or more

## What Do You Study?

Division of Culture Contents Major Requirement (6) Introduction to Electronic Commerce (3) Introduction of Multimedia and Practice (3)

■ General Education Requirement (3) Introduction To Logic (3)

Major Courses
 Computational Thinking (3)
 Web Production and Practice (3)

#### **Department of Multimedia**

Major Requirements (12) Multimedia Data Structure (3) Practice of Multimedia Authoring (3) Programming Language and Laboratory (3) Web-Server Implementation and Practice II (3)

#### Major Courses

Animation Project (3) Contents Design Practice (3) Contents Management (3) Creative Engineering Design1(Capstone design) (3) Creative Engineering Design2(Capstone design) (3) Culture Contents Design (3) Field Practice1(Multimedia) (2) Field Practice2(Multimedia) (2) Fundamentals of Animation (3) Fundamentals of Digital Design (3) Game Graphics (3) Game Planning and Analysis (3) Image Processing Practice (3) Intelligent App Application and Practice (3) Introduction to Artificial Intelligence and Practice (3) Introduction to Mobile System (3) Mobile Application and Practice (3) Multimedia Big Data Processing (3) Multimedia Convergency Practice (3) Multimedia Data Processing and Practice (3) Multimedia Database (3) Multimedia Image Planning (3) Multimedia Information Communication (3) Multimedia Programming and Practice (3) Multimedia System (3) Multimedia System Analysis and Design (3) Operation System Practice (3) Production of Portfolio (3) Production Theory of Game and Practice (3) Project Practice (3) Research on Network game (3) Understanding Digital Broadcasting Contents (3) Web Client Producing and Practice (3) Web-Server Implementation and Practice I (3) Windows Programming Practice (3)

#### **Department of Electronic Commerce**

 Major Requirements (12)
 e-Research & Methodology (3)
 Introduction to Information Technology (3)
 Electronic Commerce Web Programming and Practice (3)
 Electronic Commerce Design 1(Capstone design) (3)

■ Major Courses Basic Operating System (3) Business Start-up & Technology Management(3) Computer Networks (3) Computerized Accounting (3) Customer Relationship Management (3) Data Science (3) Data Structure Application and Practice (3) Database System (3) Decision Making (3) Digital Contents Business (3) e-Business Strategy(3) Electronic Commerce Design2(Capstone design) (3) Electronic Commerce Platform and Practice (3) Electronic Commerce System Analysis And Design (3) Electronic Commerce System Implementation (3) Field Practice1 (2) Field Practice2 (2)

Financial Analysis (3) Internet Marketing (3) Introduction to Information Security (3) Logistics & Distribution (3) Management Information System (3) Mobile Business (3) Mobile Commerce Application and Practice (3) Mobile Introduction (3) Mobile Programming Practice (3) Mobile Web programming (3) Principles of e-Management (3) Programming Data Structure (3) Project Management (3) Security for Electronic Transaction (3) System Information Security (3) Web Information Retrieval (3)

## Careers

After graduation, students are expected to be engaged in all aspects of the IT-related industry such as multimedia, mobile, or game programming to name but a few.

In addition, graduates have become high-level civil servants or academics. Many of our graduates can be found playing important roles in the IT-related industry.

Division of Global Studies *Contact Information* Fel: +82-61-659-7630 Fax: +82-61-659-7639 E-mail: yunjungie@jnu.ac.kr JRL: http://dogt.jnu.ac.kr

## What is Global Studies?

The Division of Global Studies wants to cultivate talented people who can study Korean language and its culture and history, current Korea, and future directionality of Korea and share it with cosmopolitans. The Division is an open study of Korea as a growing society in a close relationship with the world. Our purpose is to educate students to become professionals producing knowledge of 21st century of Korea by providing an opportunity to study convergence of Korea with global perspective.

#### Division of Global Studies at Chonnam National University

In every perspective, the world is getting smaller. There are unprecedented experience in Korea; for example, our country is receiving attention from the world in recent economic growth, democracy, Hallyu, Inter-Korea relations. Also, Korea has interacted with many countries on earth. The reality is that the school desperately needs people who can see Korea from a historical and global perspective, who are concerned about how Korea should live in peace with other countries in the world, and who have the ability to put it into their actions. Therefore, we established the Division of Global Studies to lead the production and education of knowledge about Korea that the world demands. The Division of Global Studies wants to cultivate talented people who can study Korean language and its culture and history, current Korea, and future directionality of Korea and share it with cosmopolitans. The Division of Global Studies is an open study of Korea as a growing society in a close relationship with the world. Lectures in the division of Global Studies are mainly in English. Global Studies aims to educate students to become professionals producing knowledge of 21st century of Korea by providing an opportunity to study convergence of Korea with global perspective.

Students combine social anthropological method and data scientific method in studying the various perspective of Korea, such as arts, society, culture, language, economy, history, technology and development etc. Therefore, they also will experience liberal arts education: reading, writing, analyzing, theorizing and criticizing etc, as well as advanced education related to big data analysis, information mining and digital humanities etc. Due to the learning of convergence, lectures will be mainly concentrated on understanding their own problems and their ability to solve problems on their own, rather than focusing on delivering knowledge to students. Thus, students will be fostered as future oriented talents who can express their opinion freely.

#### Professors

 Seok-gang Park, Ph.D [Professor, Strategic Management, parksg1214@chonnam.ac.kr]  In-hye Lee, Ph.D.
 [Professor, Korean Studies & Korean Language Education, heyday0817@naver.com]

# College of Education

<u>Contact Information</u> Phone: +82-62-530-2305, 2306 Fax: +82-62-530-2302 URL:http://education.inu.ac.kr

- Department of Education
- Early Childhood Education
- History Education
- Geography Education
- Ethics Education
- Korean Language Education
- English Language Education
- Mathematics Education
- Physics Education
- Chemistry Education
- Biology Education
- Earth Science Education
- Home Economics Education
- Music Education
- Physical Education
- Division of Special Education

Department of Education \_\_Contact Information Phone: +82-62-530-2340 Pax: +82-62-530-2359 URL: http://educate.jnu.ac.kr

# Overview

The Department of Education at the heart of Chonnam National University aims to educate students to be 1) qualified secondary school teachers, 2) competitive researchers and practitioners of secondary education, higher education, industrial education and lifelong education, and 3) highly competent researchers of educational research institutes. To achieve these ends, the department teaches students foundational knowledge and theories to understand and improve educational practices, as well as professional methods to study, design and develop the alternatives. The department puts emphasis especially on enhancing students' ability to logically and scientifically analyze and solve the problems which occur in schools, colleges, companies and lifelong education settings. The department offers students core courses and electives in the areas of educational philosophy, educational history, educational sociology, curriculum development, educational psychology, school psychology, counseling psychology, pedagogy, educational technology, educational evaluation, educational administration, etc. In addition, the department tries to help students adapt to school life, achieve their educational goals, and learn social leadership through various extra-curricular activities such as mentoring programs, learning and career counseling, supervisory programs, voluntary services for communities, and so on.

Undergraduate students can get a teacher's certificate of Educational Study, a high school elective subject after completing all the requirements of the department. Students also can choose other areas of study as their minor or double major in order to get another teacher certificate. In addition, when taking all the required courses in the field of lifelong education, students can earn a certificate of lifelong education. Many graduates of the Department of Education are employed as secondary teachers, central or local government officers, college professors, researchers, educational administrators, counselors, instructional designers, etc. Some graduates advance their education by pursuing a master's and/or a doctoral degree in the department.

#### Professors

- Hoisoo Kim, Ph.D.
   [Professor, Educational Technology, kimh@jnu.ac.kr]
- Sichang Yum, Ph.D. [Professor, Educational Evaluation, sichang@jnu.ac.kr]
- Hyeonsook Shin, Ph.D.
   [Professor, School Psychology, shinphd@jnu.ac.kr]
- Min-ho Yeom, Ph.D.

[Professor, Educational Administration, minho@jnu.ac.kr]

- Jeeheon Ryu, Ph.D.
   [Professor, Educational Technology, jeeheon@jnu.ac.kr]
- Sung-Hyun Cha, Ph.D.
   [Associate Professor, Educational Finance, shcha@jnu.ac.kr]
- Ju Ri Joeng, Ph.D.
   [Associate Professor, Counseling Psychology,

jjoeng@jnu.ac.kr]

- Jumi Lee, Ph.D.
   [Associate Professor, Educational Psychology, jlee@jnu.ac.kr]
- Eun-young Hong, Ph.D. [Associate Professor, Philosophy of Education,

## Degree Requirements

Students are required to earn 140 credits to graduate. In addition, students should pass a comprehensive examination.

# What Do You Study?

#### Core Courses

Educational Psychology (3) Sociology of Education (3) Philosophy of Education (3) Educational Administration (3) Curriculum Theories and Practices (3) History of Education (3) School Counseling (3) Instructional Technology (3) Measurement and Assessment in Education (3) Logical Thinking and Essay Writing in Education (2) Practical Affairs for the Teaching Profession (2) Teaching Children with Learning Disabilities (2) Education Volunteer Service (2) Student Teaching Internship (2) School Violence Prevention and Understanding of Students (2)
Instructional Theory of Education (3)
Design and Development of Instructional Materials for Educational Studies (3)
Understanding Education (3)
English for Global Communication 2 (3)
Writing for Self-reflection and Communication (3)
Multimedia and Education (3)
Career Plan and Self Understanding (2)

#### Electives

Total: 81 credits

#### Minor Courses

38 credits should be taken.

aporia@jnu.ac.kr]
Haram Jeon, Ph.D.
[Assistant Professor, Sociology of Education, haraming@jnu.ac.kr] Early Childhood Education <u>Contact Information</u> Phone: +82-62-530-2360 Fax: +82-62-530-2639 JRL: http://ecedu.jnu.ac.kr/

# What is Early Childhood Education?

Early childhood education is defined as educational programs offered for young children under the age of six. Certified early childhood teachers work with young children and their families in kindergartens or child-care centers. The teachers are individuals who are trained and prepared for childhood development, early childhood curricula, parent education, and other content areas related to the education of young children.

#### Department of Early Childhood Education

Established in 1983, the Department has been committed to educating and preparing undergraduate students for teaching careers with professional knowledge, skills, and field experiences needed to become highly effective teachers for young children.

## Professors

- Young-Ok Kim, Ed.D.
   [Professor, Early Childhood Curriculum and Instruction, yokim@jnu.ac.kr]
- Mi-Sook Choi, Ed.D.
   [Professor, Child Development and Evaluation, mschoi@jnu.ac.kr]
- Kyung-Sook Kim, Ph.D. [Professor, Early Childhood Inclusive Education,

kim2366@jnu.ac.kr]
Kyee-Yum Kwon, Ed.D.
[Associate Professor, Early Childhood Teacher Education, kwon0301@jnu.ac.kr]
Hyo-Jin Kim, Ed.D.
[Assistant Professor, Early Childhood Curriculum and social emotional learning kimhyoj@jnu.ac.kr]

## Degree Requirements

Students are required to earn 150 credits to graduate.

## What Do You Study?

Required Courses (minimum 45 credits)	Educational Assessment (2)
Curriculum (2)	Introduction to Education (2)
Teaching Method and Technology (2)	Educational Administration and Management (2)
Educational Sociology (2)	Introduction to Early Childhood Education (3)
Educational Psychology (2)	Logic and Essay Writing in Early Childhood
Philosophy and History of Education (2)	Education (2)

Teaching Children with Learning Disabilities (2) Multimedia and Instructional Materials for Young Children (3) Play & Play Therapy (3) Curriculum in Early Childhood Education (3) Education Volunteer Service (2) Practical Affairs for the Teaching Profession (2) Method of studying and Teaching Subject (3) Instructional Practice in Early Childhood Education (3) Student Teaching Internship (2) Parent Education (3)

- Electives (minimum 27 credits)
- Minor Courses (minimum 14 credits)

#### Careers

Students who complete degree requirements may earn certificates for kindergarten teaching as well as child-care teaching. Most graduates work at kindergartens or child-care centers.

# History Education

*Contact Information* Phone: +82-62-530-2370 Fax: +82-62-530-2379 E-mail: hisedu@jnu.ac.kr URL: http://hisedu.jnu.ac.kr/

## What is History Education?

This program offers the subjects of history and history teaching methods to educate students to become history teachers or professional historians.

# Major in History Education

The goal of this program is to provide students with various kinds of history courses, including those on Korean history, Asian history, and European history to help them become competent history teachers or professional historians.

## Professors

- Young-Hyo Lee Ph.D. [Professor, Western History/ History Education, leeyh678@hanmail.net]
- Young-Ok Lee Ph.D. in History [Professor, Ming & Qing China, youngok@jnu.ac.kr]

• Kyong-Tae Kim Ph.D. in History [Assistant Professor, History of Chosun Dynasty, kimkt@jnu.ac.kr]

## Degree Requirements

Students are required to earn 150 credits to graduate, including 48 credits from core courses, 24 credits from electives, and 30 credits from liberal arts courses.

Students must also pass a graduation qualifying test and demonstrate proficiency in a foreign language. Students will be issued a teacher's license when all requirements are satisfied.

## What Do You Study?

Core Courses	Student Teaching Internship
Introduction to Education	Education Volunteer Service
Educational Assessment	Teaching Children with Learning Disabilities
Educational Sociology	Theory and Practice of School Violence Prevention
Educational Administration and Management	Introductory Theory of History Education
Philosophy and History of Education	Teaching of Readings in Western History
Curriculum	A Course on History Logic and Essay Writing
Educational Psychology	Teaching of Readings in Asian History
Teaching Methods and Technology	Research of Education Text and Teaching Method
Practical Affairs for the Teaching Profession	of History

Readings in Historical Sources Introduction to Korean History Introduction to History of East Asia Introduction to Western History

### Electives

Study of Korean History Texts Seminar in Korean History Education Topics in Korean History Education Topics in Asian History Education Topics in Western History Education Pre-Modern History of Korea Pre-Modern History of Europe Diplomatic History of Korea Ancient History of East Asia Modern History of Europe Ancient History of Korea Medieval History of Korea Socio-Economic History of Korea Contemporary History of Europe Contemporary History of Korea Current Research Trends and Issues on Korean History Modern History of East Asia History of Historiography Modern History of Korea Interpretation of Korean Historical Documents Cultural History of Korea Intellectual and Cultural History of Korea Contemporary History of East Asia

# Careers

Graduates may become teachers in middle and high schools, as well as historians, curators, and journalists.

Geography Education <u>Contact Information</u> Phone: +82-62-530-2380 Fax: +82-62-530-2389 E-mail: A0141@chonnam.ac.kr URL: http://geoedu.inu.ac.kr/

# What is Geography Education?

The principal purpose of geography education is to train educators in geography. The department especially focuses on teaching students to comprehend living space on the earth through basic concepts and theories, and to embody knowledge and behaviors desirable for secondary school education. Students who will be future teachers in geography are trained with geographical knowledge about places and locations, regions and spatial interactions, and relationships between human and natural environments. Democratic and patriotic citizenship is also encouraged through a balanced geography education - objective rather than subjective.

# Major in Geography Education

Students become educated in geographical contents, research, and teaching methods proper for the geography education for secondary schools, and have opportunities and abilities to advance to upper echelons of educational institutions and graduate schools.

Students pursue theoretical matters and other practical phenomena skills as well, usually with field experience that is offered twice a year.

### Professors

- Kyung-Sook Jeon, D.Sc.
   [Professor, Urban Geography, ksjeon@chonnam.ac.kr]
- Cheol-Wong Park, Ph.D. in Geography [Professor, Geography Education and Geomorphology, cwpark@chonnam.ac.kr]
- Kyong-Hwan Park, Ph.D. [Professor, Social and Economic Geography, kpark3@gmail.com]

- Yong-Gyun Lee, Ph.D. [Associate Professor, Regional and Economic Geography, Geography of Development yonggyunlee@hanmail.net]
  Jin Kwan Kim, Ph.D.
- [Associate Professor, Physical Geography, Geomorphology, jinkwankim77@gmail.com]

## Degree Requirements

Students are required to earn 150 credits, with 45 from core courses, 27 from electives, and 24 from liberal arts courses.

Students are required to write a bachelor's thesis and to demonstrate computer and foreign language proficiency. Students will be issued a teacher's license when all but the computer proficiency requirement are satisfied.

# What Do You Study?

### Core Courses

Introduction to Education Philosophy and History of Education Geography Education in Contemporary Society Understanding of Physical Geographic Environment Educational Sociology Educational Psychology Teaching Children with Learning Disabilities Education of Geomorphology Educational Assessment Educational Administration and Management Curriculum Education of Economic Geography Education of Urban Geography Theory of Geography Education Teaching Method and Technology Education Volunteer Service Thinking and Writing in Geography Education Practical Affairs for the Teaching Profession Research Method and Techniques in Geography Student Teaching Internship Theory and Practice of School Violence Prevention

### Electives

Education of World Regional Geography Education of Regional Geography of Korea Education in Geographic Fieldwork: Level 1 Education in Geographic Fieldwork: Level 2 Education of Tourism Geography Education of Rural Settlement Geography Education in Geographic Fieldwork: Level 3 Social Geography Education Education of Climatology Education of Cultural Geography Education of Industrial Location Theories Education of Regional Geography of America Education of Historical Geography Education of Population and Resource Geography Teaching Practicum of Human Geography Practices in Physical Geographic Education International Development and Politics Education of GIS and Cartography Evaluation in Geographic Education Education in Geographic Fieldwork: Level 4 Education in Geographic Fieldwork: Level 5 Education in Geographic Fieldwork: Level 6 Critiques in Geography Education History of Geography Thought Education Development Geography Community-making Education Environmental Geography Education Education of Geographic Information Systems (GIS) Essays Education of Human Geography Essays Education of Physical Geography Geographical Education and Geographical thought World Geomorphology Method of Geographical Research Climatic geomorphology Travel Geography Research of Geographical Instructional Materials and Media Political Geography Education Education on Cities in the World Education of Regional Geography of Europe-Africa Education of Regional Geography of Asia-Oceania

# Careers

All students are able to obtain the qualifications for the secondary school teachers with graduation. Students can choose from many kinds of jobs related to geography education: second school teachers, administrators, research instructors, GIS specialists, and academic professors.

# Ethics Education

*Contact Information* Phone: +82-62-530-2400 Pax: +82-62-530-2409 URL: http://ethicsedu.jnu.ac.kr

# What is Ethics Education?

The Department of Ethics Education currently offers programs intended for students to become qualified ethics teachers in secondary schools. The purpose of the Department is to study Western ethics, Korean & Eastern ethics, Sociology and teaching methods in moral education, and to cultivate talented teachers with desirable teaching skills in the rapidly changing contemporary society. Graduates work in various fields such as secondary schools, research institutes, government affairs, journalism, and business.

## Department of Ethics Education

This Department offers courses in pedagogy, ethics, philosophy, and politics for the purpose of cultivating good moral teachers. Other fields such as philosophical anthropology, religion, and sociology are the interdisciplinary basis for ethics education.

The intellectual mission of this Department can be classified into three parts:

- I. Foundations of Ethics, which encompasses the history of ethics and core concepts in the philosophical study of ethics;
- I. Ethics in Action, which relates theory to practice in key domains of social life, including bioethics, business and political ethics, and ethics in the public sphere;
- II. Ethics in Education, which lets students prepare for careers as teachers.

Prospective teachers of ethics education must be trained in the subject matter, practiced in the arts of pedagogy, attuned to the needs of students, and astute to the interplay of theory and practice.

The courses include such issues as the integration of moral values education and civics within the academic curriculum, as well as appropriate and effective methods of classroom management and student discipline compatible with students' moral growth. The main focuses of the courses are teaching methods, students' moral development, moral autonomy, and the assessment of social and moral development.

# Professors

- Kee-Hyeon Kim, Ph.D.
   [Professor, East Asian Ethics, 47korea@hanmail.net]
- Young-Ran Roh, Ph.D. [Professor, Western Ethics, yrroh@hanmail.net]

# What Do You Study?

Core Courses

- Tak-Joon Jung, Ph.D. [Professor, Moral Education, jungtj1@hanmail.net]
  Gu-Sup Kang, Ph.D.
- [Associate Professor, Unification Education, gusupkang@gmail.com]
- Curriculum (2)

- Teaching Method and Technology (2)
- Educational Sociology (2)
- Educational Psychology (2)
- Philosophy and History of Education (2)
- Educational Assessment (2)
- Introduction to Education (2)
- Educational Administration and Management (2)
- Introduction to Ethics (3)
- Ethical Thoughts in East Asia (3)
- Teaching children with Learning Disabilities (2)
- Democracy and Positive-sum Morals (3)
- Western Ethics and Thoughts (3)
- School Violence Prevention and Understanding of Students (2)
- Practical Affairs for the Teaching Profession (2)
- Education Volunteer Service (2)
- Ethical Thoughts in Korea (3)
- Student Teaching Internship (2)
- Theory of Ethics Education (3)
- Research Method And Techniques in Ethics Education (3)
- Studies on Unification Education (3)

Total Credits: 50

### Electives (3)

- Contemporary Moral Issues and Traditional Ethics in Korea
- · Communitarianism and ethics
- International relations and ethics
- Modern Ethical Thoughts
- Study of multi-cultural education
- Logics and Ethics Education
- Lao-Zhuang's Ethics Education
- Understanding of moral education
- Teaching-Learning Methodology & Assessment in Moral-Ethical Subjects
- · Curriculum and method of moral education
- The purpose of moral education
- A Course on Logic and Essay Writing in Ethics Education
- · Moral Psychology and Moral Philosophy
- · Readings of the Classics in East Asian Ethics

- Understanding of North Korean society
- Buddhistic Ethics Education
- · Classics of the Social thoughts
- Social Ethics
- Social Justice and ethics
- Ethical Thoughts of Sung-Ming Period
- Theories of Citizenship Education
- Reading of the Classics in Ethics
- · Applied Ethics
- Anthropology
- Studies on Education of Traditional Ethics in Korean
- · Political Philosophy and ethics
- · Philosophy and Ethics Education
- · Studies in Moral Psychology
- Introduction to moral education
- Issues of Contemporary Ethics
- The present state and future of Moral subject education

Total Credits: 96

### Liberal Arts Courses

- Writing (3)
- Logic (3)
- English for Global Communication2 (3)
- Career Plan and Self Understanding (2)

Total Credits: 11

- Minor Courses
- Theory of Moral Education (3)
- A Course on Logic and Essay Writing in Ethics Education (3)
- Democracy and Positive-sum Morals (3)
- Analysis of Curriculum and Textbook of Moral •Ethical Course (3)
- Western Ethics (3)
- Textual Studies in Korean Ethics (3)

Total Credits: 18

- Pedagogy Courses
- Theory of Moral Education (3)
- A Course on Logic and Essay Writing in Ethics Education (3)
- Research Methods and Techniques in Ethics Education (3)

Total Credits: 9

Korean Language Education *Contact Information* Phone: +82-62-530-2410 Fax: +82-62-530-2419 E-mail: koreaedu2410@hanmail.ne URL: http://koredu.jnu.ac.kr

# What is Korean Language Education?

The Department of Korean Language Education was established in 1978. Since that time, students have accumulated their elite knowledge of Korean language and literature, polishing their teaching and leadership skills.

Along with undergraduate courses, there are graduate courses in the Graduate School of Education, as well as Ph.D. programs in Korean Language Education. These courses are organized to link the process of studies and to run concurrently.

Faculty members in the Department of Korean Language Education believe that Korean language and Korean culture represent the root of Korea as a nation, and strengthening the field of Korean education will enable the country to better participate in globalization.

To this end, the Department conducts various activities such as direct investigations, folk custom excursions, academic exhibitions, and literary investigations and seminars. These activities are meant to connect studies with practical experiences in the field.

## Department of Korean Language Education

The goal of the Department of Korean Language Education is to cultivate teachers who understand and are able to teach the correct usage of the Korean language in secondary schools and in society at large. The Department accomplishes this by enabling its students to analyze linguistic phenomena and appreciate literary works. The whole range of Korean language and culture is covered in the academic curriculum.

Many types of courses are available in the Department to allow for the study of specific subjects within such majors as Korean Linguistics, Korean Language Education for International students, Korean Classical Literature Education and Korean Modern Literature Education, Korean Folklore and Culture Education, Korean Creative Writing Education, and Korean Listening, Speaking, Reading, and Writing Skills Education.

Educational Objectives

- to offer students greater opportunities to acquire general knowledge in the area of Korean language and literature and enhance scholastic teaching ability in the educational field by practicing refined Korean language from a teacher's perspective;
- 2) to contribute to the scholarship and education of Korean language and culture for the purpose of meeting the challenges of globalization in the 21st century.

## Professors

Kyung-Soo Na, Ph.D. ksna@jnu.ac.kr]
 [Professor, Classic Korean Literature, Folklore, Jin-Han Song, Ph.D.

[Professor, Classic Korean Literature, Chinese Characters and Classics Education, jhsong@jnu.ac.kr]

Chil-Seong Im, Ph.D.
 [Professor, Korean Language Education, csim@jnu.ac.kr]

 Cheol No, Ph.D.
 [Professor, Modern Korean Poetry Education, nochul@chonnam.ac.kr]

## Degree Requirements

- Credit transfer: 150
- Graduation Qualification
- 1. Pass final exams
- 2. Pass English for Global Communication
- 3. Exploration for Literature and Language studies (twice).

## What Do You Study?

### Core Courses

Korean Teaching Material Research & Guidance Introduction to Education Educational Assessment Educational Sociology Educational Administration and Management Philosophy and History of Education Curriculum Educational Psychology Teaching Method and Technology Practical Affairs for the Teaching Profession Prevention and Countermeasures of School Violence Student Teaching Internship Education Volunteer Service Teaching Children with Learning Disabilities Theories of Teaching Korean Language Education of Literature Educational Theory of Fiction Theories in Teaching Korean Poetry A Course on Korean Logic and Essay Writing Korean Grammar Language in Life Korean Literature History

• Young-Hee Yang, Ph.D. [Professor, Middle Korean, Grammar chamnamu@jnu.ac.kr]

- Keun-Ho Kim, Ph.D. [Associate Professor, Modern Korean Novel Education, critik7@jnu.ac.kr]
- Jin-Su Jo, Ph.D.
   [Assistant Professor, Korean Modern Linguistics, Grammar Education, jojinsul@jnu.ac.kr]

### Electives

Theories of Teaching Media Language Educational Theory of Understanding Educational Theory of Korean Essays Theory of Classical Korean Poetry Instruction Educational Theory of Representation Educational Theory of Ancient Korean Novels Educational Theory of Oral Poetry Practice in Teaching Literature Education of Korean Grammar Educational Theory of Oral Narrative Theories of Teaching Dramatic Literature Practice in Teaching Korean Grammar Introduction to Korean Linguistics Korean Phonology Introduction to Korean Literature Readings in Middle Korean Korean Semantics Understanding in Sino-Korean Literature Dialectology Theory in Creative Writing History of Korean Language Studies in Literary Criticism

Education of Speech Communication

Studies in Comparative Literature Reading Korean Literary Works Studies in Hyang-Ga & Poetry in Koryo Dynasty Readings in Modern Korean Theory of Korean Writers

# **Careers**

Graduates receive a secondary degree teaching certificate in Korean Language Education. Students have a broad range of career options, from education to journalism: secondary school teachers, journalists, administrators, public servants, research instructors, junior supervisors, academic professors, attorneys, and Korean language education specialists.

# English Education

\_\_Contact Information Phone: +82-62-530-2430 Fax: +82-62-530-2449 JRL: http://engedu.jnu.ac.kr

## What is English Education?

The Department of English Education strives to develop our students' language competences and teaching skills in keeping with the professional demands of this information-rich era of globalization. We develop our students' communication skills through English while fostering the critical perspective that is essential for a professional EFL teacher in the field of contemporary English Education.

The courses in the program are focused on the studies of English Language and Literature and English Education, which are diverged into three channels of introductory British and American literature courses, the basic theories of English language, and English education. The curriculum of the department is structured to enable students to acquire an in-depth theoretical foundation of knowledge, and to further understand how this knowledge becomes applied pedagogy through practical courses including English Teaching Methods, English Teaching Practice, EFL Teaching Materials Development, and English language evaluation. Language skills courses such as English Conversation, English Writing, and English Grammar are complemented by the broader perspective offered in courses focused on English Literature and Understanding wider English (Anglophonic) and British Culture.

### Department of English Education

Since 1972, the Department of English Education has produced leaders and experts in the field of English education who play key roles in the future development of English education by equipping them with a profound knowledge in their field and fostering their capabilities to apply that acquired knowledge to the sites where they work. The students study the nature and structure of the English language while exploring a wide variety of English literary works, as well as achieving a comprehensive grounding in linguistics.

It also helps students to better understand the history of British and American literature. Additionally, it develops methods and methodology of teaching English in regard to curricula, teaching materials, and the theory of testing, among others.

As a result, students become more qualified with both commanding and capable teaching skills while also keeping pace with developments in information and globalization. These in-depth studies foster professional English teachers of secondary schools, as well as help graduate students study English philology, literature, and education.

## Professors

• Byung Kyoo Ahn, Ph.D. [Professor, English Education, ahnbk@jnu.ac.kr] • Chul Joo Uhm, Ph.D. [Professor, English Education, cjuhm@jnu.ac.kr]

- 551 -

- Hui Sok Yoo, Ph.D.
   [Professor, 19th Century American Novels, voohuisok@vahoo.com]
- Jee Hyun Ma, Ph. D. [Professor, English Education, jeehyun@jnu.ac.kr]
- Mun-Hong Choe, Ph.D.
   [Associate Professor, English Education, munhong@jnu.ac.kr]
- Seung-a Ji, Ph.D.
  [Associate Professor, English Drama, shange@jnu.ac.kr]
  Sean Walker, M.A.
- [Invited Professor, Applied Linguistics(TESOL), mrseanwalker@gmail.com]

## Degree Requirements

Students are required to earn 150 credits, with 45 credits from core courses, 48 credits from electives, 30 credits from liberal arts courses, and 27 credits from general electives.

•Liberal Arts Credits: 30

•General Electives Credits: 27

# What Do You Study?

### Core Courses

Introduction to Education (2) Educational Assessment (2) Educational Sociology (2) Educational Administration and Management (2) Philosophy and History of Education (2) Curriculum (2)Educational Psychology (2) Teaching Method and Technology (2) Practical Affairs for the Teaching Profession (2) Student Teaching Internship (2) Education Volunteer Service (2) Teaching Children with Learning Disabilities (2) School Violence Prevention and Understanding of Students (2) Teaching Grammar in EFL (3) Principles of English Language Teaching (3) Teaching Critical Writing in English (2) EFL Teaching Materials Development (3) Intermediate English Writing (3) English Phonetics & Phonology (3) Survey on British Literary Works (3) Survey on American Literature (3)

Total Credits: 49

### Electives

Teaching English Literature (3) Visual Text and English Education (3) Teaching British and American Culture (3) Teaching English as a Foreign Language (3) Multimedia for English Language Teaching (3) English Speech (3) Classroom English Practice (2) English Teaching Practice (3) English Education Curriculum Development (3) Seminar in English Language Teaching (3) English Evaluation (3) Basic English Reading (3) Beginning English Conversation (3) Teaching Reading in EFL (3) Teaching Writing in EFL (3) Introduction to English Linguistics (3) Educational Drama (3) Intermediate English Conversation (3) Media English Reading (3) History of English Culture (3) History of American Culture (3) Understanding of English Novels (3) Practical English Writing (3) Understanding English Poetry (3)

Advanced English Reading (3) English Language Acquisition (3) History of English Language (3) Modern English Grammar (3) Understanding English Classics (3) Advanced English Writing (3) Seminar on English Literature (3) Applied English Phonetics (3) Understanding English Drama (3) Teaching Speaking in EFL (3) Reading English Prose (3) Total Credits: 104

### Minor Required

Teaching Grammar in EFL (3) Principles of English Language Teaching (3) Teaching Critical Writing in English (2) EFL Teaching Materials Development (3) English Phonetics & Phonology (3) Survey on British Literary Works (3)

Total Credits: 17

Minor Electives

21 credits should be chosen.

### Careers

A large number of graduates work at middle and high schools or English education-related institutes, government-sponsored organizations as teachers, consultants, professors, or administrators. Others become graduate students or go abroad to work or study.

We expect that the program will deepen the students' insights into not only their own experience but also the collective experience of the society to which they belong and thus help students find a way to further study in medical science, dentistry, psychology, business, or education as well as in English. The graduates of English Education department play a key role as teachers, leaders, educational administrators, consultants, journalists, professors, or public officers at middle and high schools or English-related institutes, as well as government-sponsored organizations who actively participate in the field of English education. Those who have enthusiasm for pursuing their intellectual goals as professionals can apply for graduate courses at home and abroad and further their academic career in the areas of English language, literature, and education as researchers in these fields. Mathematics Education *Contact Information* Phone: +82-62-530-2470 Fax: +82-62-530-2479 E-mail : A0088@jnu.ac.kr URL : http://mathedu.jnu.ac.kr

# What is Mathematics Education?

Mathematics education is a field of study focusing on teaching and learning, curriculum, psychology, philosophy, technology, history, and gender issues based on mathematical content, coupled with general theories of education and mathematics education.

### Department of Mathematics Education

The mission of the Department of Mathematics Education is to educate students as secondary school teachers so that they may someday take a central role as excellent mathematics teachers. The curriculum for the Department of Mathematics Education consists of basic and intensive levels of modern mathematics, including various theories of mathematics education in order to prepare our students for this field. The Department of Mathematics Education provides a well-designed student teaching program for Chonnam National University, along with College of Education affiliated middle school and high schools. This opportunity provides our students with first-hand experience, applying what they learn in their undergraduate program to real situations. Furthermore, the Department of Mathematics Education has exclusive use of computer laboratories, rooms with materials, and classrooms equipped with modern technology.

All of this is provided to accommodate the demands of living in an information age and is needed for various teaching and learning methods in Mathematics education.

The Department of Mathematics Education holds "The Yongbong Conference of Mathematics Education" every year for the development of Mathematics education.

Since the start of the College of Education in 1972, there have been about 1,500 graduates, and most of them are now teaching at middle and high schools all over the country. Approximately 50 other graduates are teaching at universities or other professional institutes as full-time research professors. We at the Department of Mathematics Education do our best to contribute to the development of the field of mathematics education as well as to educate future mathematics teachers who will take a central role in the community of mathematics education.

### Professors

- Soonja Kang, Ph.D., [Professor, Analysis, kangsj@jnu.ac.kr]
- Chunyoung Oh, Ph.D., [Professor, Mathematical biology and complex analysis, cyoh@jnu.ac.kr]
- Sik Lee, Ph.D., [Professor, Topology,

slee@jnu.ac.kr]

- Bomi Shin, Ph.D., [Professor, Mathematics Education, bomi0210@jnu.ac.kr]
- Sungmo Kang, Ph.D. [Associate Professor, Geometry and Topology, skang4450@jnu.ac.kr]
- Yeansu Kim, Ph.D.,

[Assistant Professor, Algebra and Number theory, ykim@jnu.ac.kr]

• Injo Hur, Ph.D.,

## Degree Requirements

Mathematics education students are required to take 150 credit hours. In detail, 93 credits are within the major, 30 credits in liberal arts, and 27 credits in common electives.

## What Do You Study?

### Core Courses

Curriculum (2) Teaching Methods and Technology (2) Educational Sociology (2) Educational Psychology (2) Philosophy and History of Education (2) Educational Assessment (2) Introduction to Education (2) Educational Administration and Management (2) Advanced Calculus 1 & Practice (3) Mathematical Statistics (3) Teaching Children with Learning Disabilities (2) Theory of Mathematical Education (3) Complex Analysis 1 and Practice (3) Teaching for Secondary School Mathematics (3) A Course on Mathematics Logic and Essay Writing (2) Topology 1 & Practice (3) Abstract Algebra 1 and Practice (3) Education Volunteer Service (2) Practical Affairs for the Teaching Profession (2) Student Teaching Internship (2)

### Electives

Set Theory and Laboratory (3) Linear Algebra 1 and Laboratory (3) Linear Algebra 2 (3) Discrete Mathematics 1 and Practice (3) Discrete Mathematics 2 (3) Introduction to Mathematics Education (3) Differential Equations and Laboratory (3) Theory of Numbers (3) Mathematics Education and coding (3) Advanced Calculus 2 (3) Mathematical modeling for teachers (3) Psychology of Mathematics Education (3) Computer Based School Mathematics (3) Abstract Algebra 2 (3) Differential Geometry 1 (3) Numerical Analysis (3) Topology 2 (3) Complex Variables 2 (3) Assessment of Teaching & Learning in Mathematics (3) Differential Geometry 2 (3) History of Mathematics (3) Real Analysis (3) Topics in Abstract Algebra (3) Geometry and School Mathematics (3) Algebra and School Mathematics (3) Analysis and School Mathematics (3) Problem Solving Education Theory (3) Probability Theory (3)

[Assistant Professor, Analysis,

injohur@jnu.ac.kr]

### Minor Courses

Advanced Calculus 1 and Practice (3) Theory of Mathematical Education (3) Teaching for Secondary School Mathematics (3) A Course on Mathematics Logic and Essay Writing (2) Topology 1 and Practice (3) Abstract Algebra 1 and Practice (3)

# **Careers**

Most of the graduates are teaching mathematics at the public and private secondary schools. Some are also working as professional administrators at the Office of Education and teach mathematics or mathematics education at university after they finish their post-graduate degrees. We at the Department of Mathematics Education are especially proud to have the nation's highest passing percentage of the National Teacher Employment Exam administered every year. Many of those who pass are currently mathematics teachers in Gwangju, Jeonnam Province and the Seoul-Gyeonggi metropolitan area.

# Physics Education

\_*Contact Information* hone: +82-62-530-2480 ax: +82-62-530-2489 /RL: http://physicsedu.jnu.ac.kn

## What is Physics Education?

The main themes of Physics Education are (1) to define the nature of physics and physics education based on philosophy, history, and psychology of physics and theory of education; (2) to identify and understand students' cognitive processes when they learn physics concepts, conduct scientific inquiry and solve physics problems; (3) to establish relationships between students' physics learning and their everyday life, interests and creative attitudes; (4) to develop and implement various effective teaching strategies using concept maps, epistemological V, demonstration, cognitive conflict, analogy, computers, discussion, and argumentation; and finally (5) to formulate the theory of physics learning, theory of physics curriculum development, and theory of assessment of physics learning.

# Department of Physics Education

Physics is the study of a natural phenomenon as pure science. It is the natural basis of all technology disciplines and applied science. Since the significance of physics is increasing, it is important to educate students who will become competent scientists and highly motivated secondary school teachers in the near future.

At the Department of Physics Education, students' education is based on scientific theory and various experimental activities for them to become competent secondary school teachers.

The Department is open to all the subjects of physics such as Mechanics, Electricity and Magnetism, Quantum Physics, Electronic Physics, Physics Education, and Physics Teaching Materials and Teaching Methods.

## Professors

- In Taek Lim, Ph.D.
   [Professor, Nuclear and Particle Physics, itlim@jnu.ac.kr]
- Jongwon Park, Ed.D.
   [Professor, Physics Education, jwpark24@jnu.ac.kr]
- Won-Young Hwang, Ph.D. [Professor, Quantum Optics, wyhwang@jnu.ac.kr]

- Jaehyeok Choi, Ed.D.
   [Professor, Physics Education, choi@jnu.ac.kr]
- Yung Ho Kahng, Ph.D.
   [Professor, Emerging Materails Devices, yhkahng@jnu.ac.kr]
- Jeongwoon Hwang, Ph.D.
   [Assistant Professor, Condensed Matter theory, phyjhwang@jnu.ac.kr]

### Degree Requirements

Students are required to earn 150 credits, with 45 credits from core courses, 27 credits from electives, 30 credits from liberal arts courses (more than 3 of 4 areas of core liberal arts courses), 21 credits from enhancement courses, and 27 credits from electives.

# What Do You Study?

## Core Courses

Introduction to Education (2) Philosophy and History of Education (2) Educational Psychology and Counseling (2) Educational Sociology and Lifelong Education (2) Practical Affairs for the Teaching Profession (2) Mechanics Education 1 (3) Physics Education (3) Electricity and Magnetism Education 1 (3) Curriculum and Evaluation (2) Educational Administration and Management (2) Research of Physics Teaching Materials and Teaching Methods (3) Thermal Statistical Physics Education 1 (3) Teaching Methods and Technology (2) A Course on Physics Logic and Essay Writing (2) Education Volunteer Service (2) Quantum Physics Education 1 (3) Wave and Optics Education (3) Student Teaching Internship (2) Teaching Children with Learning Disabilities (2)

Total Credits: 45

### Electives

General Biology Inquiry Laboratory 1 (1) General Chemistry Inquiry Laboratory 1 (1) Earth Science Inquiry Laboratory 1 (1) General Physics Inquiry Laboratory 2 (1) General Chemistry Inquiry Laboratory 2 (1) Earth Science Inquiry Laboratory 2 (1) General Physics Inquiry Laboratory 2 (1) Problem Solving for Physics 1 (2) Problem Solving for Physics 2 (2) Physics Education Exp. 1 (1) Philosophy of Science and Science Education (2) Physics Curriculum and Teaching Practice (3) Evaluation in Physics Learning (2) Practice of Mechanics Education (2) Practice of Mechanics Education 2 (2) Mathematics for Physics 1 (3) Practice of Mathematics for Physics (2) Computers in Physics and Practice (3) Modern Physics Education 1 (3) Mechanics Education 2 (3) Physics Education Exp. 2 (1) Practice of Electricity and Magnetism Education (2) Physics Educations and Multimedia (3) Mathematics for Physics 2 (3) Modern Physics Education 2 (3) Electricity and Magnetism Education 2 (3) Physics Education Exp. 3 (1) Practice of Thermal and Statistical Physics Education (2) Electronic Physics (3) Physics Education Exp. 4 (1) Thermal Statistical Physics Education 2 (3) Experiment Data Analysis (3) Practice of Quantum Physics Education (2) Practice of Wave and Optics Education (2) Practice of Electricity and Magnetism Education 2(2)Practice of Electronic Physics (3) Development Materials in Physics Learning (3) Physics Education Exp. 5 (1) Quantum Physics Education 2 (3) Fluid Physics (3) Condensed Matter Physics (3) Theory of Teaching Physics Inquiry (3) Seminar on Physics Education (3) Physics Education Exp. 6 (1)

Topics in Condensed Matter Physic (3) Nuclear and Particle Physics for Science Teachers (3) Gifted Education in Physics 1 (2) Gifted Education in Physics 2 (2) Total Credits: 107

Minor Courses Mechanics Education 1 (3) Physics Education (3) Electricity and Magnetism Education 1 (3) Research of Physics Teaching Materials and Teaching Method (3) Quantum Physics Education 1 (3) A Course on Physics Logic and Essay Writing (2)

Total Credits: 17

# Careers

Graduates earn teaching certificates, qualifying them to become physics teachers in public schools. Other careers available to graduates include those in academia and research institutes. Some graduates opt to pursue graduate studies in Korea and abroad.

Chemistry Education *Contact Information* Phone: +82-62-530-2490 Fax: +82-62-530-2499 E-mail: A0166@jnu.ac.kr URL: http://chemedu.jnu.ac.kr/

## What is Chemistry Education?

The undergraduate program in Chemistry Education was established to meet the needs of creative secondary school teachers who have professional knowledge of chemistry, and teaching skills relating to educational processes in chemistry.

## Professors

- Jong Baik Ree, Ph.D.
   [Professor, Physical Chemistry, jbree@jnu.ac.kr]
- Sang Kwon Lee, Ph.D.
   [Professor, Chemistry Education, lsk1213@jnu.ac.kr]
- Soon Hyung Kang, Ph.D.
   [Professor, Analytical Chemistry, skang@jnu.ac.kr]
- Si Kyung Yang, Ph.D. [Associate Professor, Organic Chemistry, sky223@jnu.ac.kr]
  Kyoung Chul Ko, Ph.D. [Assistant Professor, Physical Chemistry,
- kcko1982@jnu.ac.kr]

### Degree Requirements

Students are required to earn 150 credits (45 credits from core courses, 27 credits from electives, 30 credits from liberal arts courses, 21 credits from enhancement courses, and 27 credits from general electives).

# What Do You Study?

Core Courses	Education Volunteer Service (2)
Introduction to Education (2)	Teaching Children with Learning Disabilities (2)
Educational Assessment (2)	School Violence Prevention and Understanding of
Educational Sociology (2)	Students (2)
Educational Administration and	Career Plan and Self Understanding (2)
Management (2)	History of Chemistry and Chemistry
Philosophy and History of Education (2)	Education (3)
Curriculum (2)	A Course on Chemistry Logic and Essay writing (2)
Educational Psychology (2)	A Chemistry Education (3)
Teaching Method and Technology (2)	Research of Chemical Teaching
Practical Affairs for the Teaching Profession (2)	Materials and Teaching Methods (3)
Student Teaching Internship (2)	Physical Chemistry Education 1 (3)

Analytical Chemistry Education 1 (3) Organic Chemistry Education 1 (3) Inorganic Chemistry Education 1 (3)

Total Credits: 51

### Electives

General Biology Inquiry Laboratory 1 (1) General Chemistry Inquiry Laboratory 1 (1) Earth Science Inquiry Laboratory 1 (1) General Physics Inquiry Laboratory 1 (1) General Biology Inquiry Laboratory 2 (1) General Chemistry Inquiry Laboratory 2 (1) Earth Science Inquiry Laboratory 2 (1) General Physics Inquiry Laboratory 2 (1) Philosophy of Science and Science Education (2) Physical Chemistry Inquiry Laboratory 1 (2) Physical Chemistry Education 2 (3) Physical Chemistry Education Exercises 1 (1) Physical Chemistry Inquiry Laboratory 2 (2) Analytical Chemistry Education 2 (3) Analytical Chemistry Inquiry Laboratory 1(2) Analytical Chemistry Inquiry Laboratory 2 (2) Theory of Teaching Chemistry Inquiry (3) Physical Chemistry Education 3 (3) Physical Chemistry Education Exercises 2 (1)

Organic Chemistry Education 2 (3) Organic Chemistry Research Laboratory 1 (2) Chemistry Curriculum and Evaluation (2) Quantum Chemistry Education (3) Organic Chemistry Education 3 (3) Organic Chemistry Research Laboratory 2 (2) Advanced Organic Chemistry Education (3) Instrumental Analysis Education (3) Inorganic Chemistry Education 2 (3) Inorganic Chemistry Inquiry Laboratory (2) Advanced Physical Chemistry Education (3) Advanced Analytical Chemistry Education (3) Coordination Chemistry Education (3)

Total Credits: 67

#### Minor Courses

Physical Chemistry Education 1 (3) Organic Chemistry Education 1 (3) Chemistry Logic and Essay Writing (2) Chemistry Education (3) Inorganic Chemistry Education 1 (3) Research of Chemical Teaching Materials and Teaching Methods (3)

Total Credits: 17

## Careers

Most graduates are employed as teachers in secondary schools, professors, educational administrators, or researchers in the field of chemistry and education.

# Biology Education

*Contact Information* Phone: +82-62-530-2500 Pax: +82-62-530-2509 JRL: http://bioedu.jnu.ac.kr

# Major in Biology Education

The Department of Biology Education aims to educate students to become science and biology teachers at middle and high schools, and experts in biology or biology education. For this purpose, We strives to develop our students' understanding of life science and teaching skills in keeping with the professional demands of the knowledge based society of information.

The curriculum of the department is structured to enable students to acquire an in-depth theoretical foundation of life science, and to further understand how this knowledge becomes applied pedagogy through practical courses. The courses such as Genetics, Cytology, Taxonomy, Embryology, Physiology, And Biology Field Practice are to help students go get in-depth knowledge of life science. And the courses such as Biology Education and Research of Biology Teaching Materials & Teaching Method are offered to prepare students to become the competent secondary school biology teachers.

## Professors

- Hyung-Bin Yoo, Ph.D.
   [Professor, Environmental Biology, hbyoo@jnu.ac.kr]
- Dong-Woog Choi, Ph.D. [Professor, Plant Molecular Genetics, dwchoi63@jnu.ac.kr]
- Eunyoung Jeong, Ph.D. [Professor, Biology Education, jey@jnu.ac.kr]
- Kyung-Bon Lee, Ph.D. [Associate Professor, Developmental Biology, kblee@jnu.ac.kr]
  Jung-Hyun Lee, Ph.D. [Assistant Professor, Plant Taxonomy/

Conservation Genetics, quercus@jnu.ac.kr]

## Degree Requirements

Students are required to earn 150 credits, with 45 credits from core courses, 32 credits from liberal arts courses, 25 credits from general courses, 27 credits from electives, and 21 credits from enhancement courses.

Students are also required to pass a comprehensive exam and demonstrate proficiency with computers and in a foreign language.

## What Do You Study?

Core Courses	Educational Sociology (2)
Introduction to Pedagogy (2)	Educational Administration and Management (2)
Educational Assessment (2)	Philosophy and History of Education (2)

Curriculum (2) Educational Psychology (2) Teaching Method and Technology (2) Cytology (3) Genetics (3) Animal Taxonomy (3) Animal Physiology (3) Introduction to Ecology (3) Practical Affairs for the Teaching Profession (2) Teaching Children with Learning Disabilities (2) Theory and Practice of School Violence Prevention (2) Education Volunteer Service (2) Student Teaching Internship (2) Biology Education (3) Research of Biology Teaching Materials & Teaching Method (3) A Course on Biology Logic and Essay Writing (2)

### Electives

General Biology Inquiry Lab 1 (1) General Biology Inquiry Lab 2 (1) General Physics Inquiry Lab 1 (1) General Physics Inquiry Lab 2 (1) General Chemistry Inquiry Lab 1 (1) General Chemistry Inquiry Lab 2 (1) Earth Science Inquiry Lab 1 (1) Earth Science Inquiry Lab 2 (1) Biology Field Practice (1) Plant Morphology Lab (1) Plant Taxonomy Lab (1) Intertidal Zone Biota Inquiry (1) Biological Chemistry (3) Cytology Lab (1) Animal Taxonomy Lab (1) Plant Morphology (3) Plant Taxonomy (3) Genetics Lab (1) Plant Embryology (3)

Plant Embryology Lab (1) Vertebrate Anatomy (3) Biology Inquiry Practice (3) Evaluation in Science Learning (3) Genetic Engineering (3) Microbiology (3) Ecology Lab (1) Microbial Physiology (3) Diversity and Change of Life (3) Molecular Biology (3) Plant Physiology (3) Philosophy of Science and Science Education (2) Microbiology Lab (1) Principles of Biology Inquiry (3) Phycology (3) Phycology Lab (1) Biology in the Human Context (3) Entomology (3) Entomology Lab (1) Animal Physiology Lab (1) Immunology (3) Historical Approach for Biology Learning (3) Animal Embryology (3) Animal Embryology Lab (1) Biostatistics (3) Environmental Biology (3) Mycology (3) Genomics (3)

### Minor Courses

Cytology (3) Animal Taxonomy (3) Genetics (3) Biology Education (3) A Course on Biology Logic and Essay Writing (2) Research of Biology Teaching Materials and Teaching Methods (3) Total Credits: 17

### Careers

The graduates of our department can get the certificate of secondary school science teacher. Most graduates work for secondary schools as science and biology teachers. Some of them keep researching in postgraduate programs and then become experts in biology or biology education. Earth Science Education *Contact Information* Phone: +82-62-530-2510 Fax: +82-62-530-2519 URL: http://earthedu.jnu.ac.kr/

# What is Earth Science Education?

The Department of Earth science education aims to train science and earth science teachers at middle and high schools. The goal is to train qualified earth science teachers with general understanding of earth science - geology, astronomy, atmospheric science, and oceanography - and the overall field of science, effective teaching methods, and morality to positively influence students.

# Major in Earth Science Education

The Department of Earth Science Education is committed to training and developing exceptionally well informed, enthusiastic, dedicated and highly-skilled earth science educators and practitioners for middle and high schools, higher education, and research and development. All of our programs are devoted to fostering critical thinking and a spirit of innovation.

The educational program has many highly developed general and specialized courses, including geology, astronomy, atmospheric science, oceanography, and earth science education, as well as presenting an opportunity for hands-on experience through experiments in laboratory settings. In addition, we have recently been developing programs that address environmental problems and space science. Teaching certificates are awarded upon completion of terms and the required courses.

### Professors

 Yeong-Koo Koh, Ph.D.
 [Professor, Geology, ykkoh@jnu.ac.kr]

- Jong-Hee Kim, Ph.D.
   [Professor, Earth Science Education, earthedu@jnu.ac.kr]
- Suyeon Oh, Ph.D. [Professor, Space Science, suyeonoh@jnu.ac.kr]
  Tae-Won Park, Ph.D. [Associate Professor, Atmospheric Science,

## Degree Requirements

Students are required to earn 150 credits, with 45 credits from core courses, 27 credits from electives, 21 credits from other (enhancement) courses, 32 credits from liberal arts courses, and 25 credits from general electives.

# What Do You Study?

Core Courses Astronomy 1 (3) Atmospheric Science 1 (3) Introduction to Education (2)

park2760@jnu.ac.kr]

Educational Assessment (2) Educational Sociology (2) Educational Administration and Management (2) Philosophy and History of Education (2) Curriculum (2) Educational Psychology (2) Teaching Method and Technology (2) Practical affairs for the Teaching Profession (2) Theory and Practice of School Violence Prevention (2) Student Teaching Internship (2) Educational Volunteer Service (2) Teaching Children with Learning Disabilities (2) Earth History and Practice (3) Earth Science Education (3) A Course on Earth Science Logic and Essay Writing (2) Material Evaluation and Teaching Method in Earth Science (3) Geology 1 (3) Oceanography (3)

### Major Electives

Astronomy 2 (3) Astronomical Information and Data Analysis (3) Position Astronomy (3) Stellar Astronomy and Practice (3) Galaxy and Universe (3) Astrophysics and Practice (3) Meteorological Observation and Analysis (3) Atmospheric Science 2 (3) Dynamic Meteorology (3) Synoptic Meteorology (3) Atmospheric Physics (3) General Biology Inquiry Laboratory 1 (1) General Chemistry Inquiry Laboratory 2 (1)

# Philosophy of Science and Science Education (2) Evaluation in Earth Science Learning (2) Education for Earth Science Gifted (2) Guidance method of Earth Science (3) Earth Science Inquiry Laboratory 1 (1) Earth Science Inquiry Laboratory 2 (1) History of Earth Science and Earth Science Education (3) Education of Igneous Petrology and Lab (3) Earth Science Inquiry Instruction and Practice (3) Education of Metamorphic Petrology and Lab (3) Guidance of Earth Science History (3) Inquiry of Microfossils (3) General Physics Inquiry Laboratory 1 (1) General Physics Inquiry Laboratory 2 (1) Climatology (3) Environmental Science of the Earth (3) Geology 2 (3) Sedimentary Rocks and Stratigraphy and Lab (3) Geochemistry Education (3) Field Geology and Practice (3) Geophysics (3) Geology of Korea and Practice (3) Resources Geology and Practice (3)

Natural Disasters and Energy Resources (3) Inquiry of fuel Geology (3)

Inquiry of Physical Oceanography (3)

# Minor Courses

Astronomy 1 (3) Atmospheric Science 1 (3) Geology 1 (3) Earth Science Education (3) A Course on Earth Science Logic and Essay Writing (2) Material Evaluation and Teaching Method in Earth Science (3)

## Careers

The majority of our graduates go on to teach science in the national education system at middle or high schools and contribute greatly to educational development in real teaching contexts. A significant minority develop their careers in other areas such as research institutes, universities, government departments, and related companies. Home Economics Education \_\_*Contact Information* Phone: +82-62-530-2520 Fax: +82-62-530-2529 JRL: http://homeedu.jnu.ac.kr/

# What is Home Economics Education?

The Department of Home Economics education aims to train Home Economics teachers at middle and high schools. The goal is to train qualified Home Economics teachers with general understanding of Home Economics dietary life, clothing, housing, household management, and family life and Home Economics education philosophy, effective teaching methods, and morality to positively influence students

## Department of Home Economics Education

Home Economics Education fosters home economics teachers with practical and critical characteristics by providing subject related theories and practices in home economics education, dietary life, clothing, housing, household management and family life to cultivate decision-making problem-solving, communication, and creativity, which are necessary for modern and future societies.

After graduation, some graduates play important roles in the secondary school education as middle or high school teachers, vice-commissioners, administrators, vice principals, and principals. In addition, graduates can also engage in educational and home economics-related businesses and government agencies. Others enter graduate school and advance into diverse fields, such as universities and research institutes, enterprises, and adult educational institutions.

### Professors

Hyo-Shick Shin, Ph.D.
 [Professor, Family Relationships, hsshin@jnu.ac.kr]

 Lan-Hee Jung, Ph.D.
 [Professor, Applied Food Science, lhjung@jnu.ac.kr] Eun-Hah Wee, Ph.D. [Professor, Fashion Design, weh@jnu.ac.kr]
Nan-Sook Yu, Ph.D. [Associate Professor, Home Economics Education, nansooksb@gmail.com]

## Degree Requirements

Students are required to earn 150 credits, with 45 credits from core courses, 27 credits from electives, 21 credits from other (enhancement) courses, 30 credits from liberal arts courses, and 27 credits from general electives.

## What Do You Study?

Core Courses Applied Food Science (3) Apparel Design (3) Philosophy and History of Education (2) Educational Administration and Management (2) Educational Sociology (2) Child Development (3) Teaching Method and Technology (2) Home Management (3) Educational Assessment (2) Educational Psychology (2) Introduction to Education (2) Curriculum (2) Practical Affairs for the Teaching Profession (2) Student Teaching Internship (2) Research & Teaching of Home Economical Materials (3) Theory of Home Economics Education (3) A Course on Home Economics Logic and Essay Writing Education Volunteer Service (2) Teaching Children with Learning Disabilities (2) School Violence Prevention and Understanding of Students (2) Housing (3) Electives

Colouring and Design (3) Apparel Care and Experimental Lab. (3) Apparel Materials and Experimental Lab. (3) Fashion Coordination Guidance (3) Fashion Education Media Production (3) Fashion Style Drawing (3) Textile Finishing and New Materials (3) Culture of Costume (3) Coaching in Handicrafts (3) Psychology of Dress (3) Current Issues in Home Economics Education (3) Laboratory of Korean Cooking Education (3) Education of Enabling and Empowering Families (3) Theory & Practice in Apparel Making (3) Laboratory of Foreign Cooking Education (3) Theory & Practice in Traditional Costume (3)

Seminar of Home Economics Education (2) Multimedia in Home Economics Education (2) Family Life Education (3) Meal Management Education (3) Nutrition Teaching Education (3) Introduction to Food Science (3) Food Hygiene (3) Nutrition (3) Nutrition in Life Cycle (3) Experiment of Food Nutrition (3) Experiment of Dietary Life Education (3) Experiment of Nutrition education (3) Diet Therapy (3) Meal Culture (3) Food Preservation (3) The Family (3) Household Equipment & Lab (2) Household Economics (3) Parent Education (3) Interior Design (3) Adolescence Development (3) Consumer Education (3) Family Life and Welfare (3) 27 credits should be chosen.

### Minor Courses

Apparel Design (3) Applied Food Science (3) Theory of Home Economics Education (3) Home Management (3) Research and Teaching of Home Economical Materials (3) Home Economics Logic and Essay Writing (2)

### Minor Courses

21 credits should be chosen.

### Careers

Graduates may pursue careers as secondary school teachers. They may also work for research institutes and private companies.

# Music Education

\_\_*Contact Information* Fel: +82-62-530-2530 Fax: +82-62-530-2539 E-mail: klarminji@jnu.ac.kr JRL: http://musicedu.jnu.ac.kr

# What is Music Education?

Consider for a moment the power of music. Music is everywhere. To take it one step further, music is in the songs of birds, in the crashing of waves, and in the beating of the heart. Music is inescapable. Once we acknowledge this fact, we must learn to appreciate and understand the need for music.

Music strengthens the mind, stimulates brain cells, and encourages creative thoughts and imagination. The need for music education, then, is clear. Children who understand music do better in life.

### Department of Music Education

The Department of Music Education is committed to training future teachers, who are also musicians, involved in both music and teaching at the highest professional level.

The objectives of the course series is to learn the role of music in their lives, to develop theories of musical learning development, and to practice methods and approaches for teaching music (Orff, Kodaly, Dalcroze).

Through a sequence of courses and pre-service teaching experiences, students who successfully complete the program fulfill the requirements for Certification in Secondary Music Education.

Students study various practical techniques of the major, including Solfege, Harmony, Counterpoint, History of Western Music, Orchestration, Chorus, Orchestra, Theory of Music Education, Teaching Material and Pedagogy of Music, Traditional Korean Music, Computer Music, Keyboard Harmony, and Techniques of Digital Piano, among others.

### Professors

- Ji-Hyang Oh, Ed.D. [Associate Professor, Music Education, ojh212@jnu.ac.kr]
- Mi-Kyung Lee, Ph.D. [Associate Professor, Musicology, mklee3@jnu.ac.kr]
- Dae-Jin Bang, Diplom Superior [Assistant Professor, Voice, bang.daejin@gmail.com]

## Degree Requirements

Students are required to earn 150 credits, with 44 credits from core courses, 28 credits from electives, 30 credits from liberal arts courses, 27 credits from general courses.

Students minoring in Music Education are required to earn 38 credits, with 14 credits from minor courses, and 24 credits from minor courses.

- Liberal Arts Credits: 30
- General Electives Credits: 27

## What Do You Study?

### Core Courses

Instrument Major 2 Educational Psychology Introduction to Education Practice of Korean Tradition Instrumental Music 2 Practice of Korean Tradition Vocal Music 2 Composition & Theory of Korean Tradition Music 2 Voice Major 2 Composition Major 2 Piano Major 2 Instrument Major 3 Philosophy and History of Education Practice of Korean Tradition Instrumental Music 3 Practice of Korean Tradition Vocal Music 3 Composition & Theory of Korean Tradition Music 3 Voice Major 3 Theory of Music Education Composition Major 3 Piano Major 3 Instrument Major 4 Teaching Method and Technology Educational Sociology Practice of Korean Tradition Instrumental Music 4 Practice of Korean Tradition Vocal Music 4 Composition & Theory of Korean Tradition Music 4 Voice Major 4 Composition Major 4 Teaching children with Learning Disabilities Piano Major 4 Education Volunteer Service Instrument Major 5 Curriculum Educational Administration and Management Practice of Korean Tradition Instrumental Music 5 Practice of Korean Tradition Vocal Music 5 Composition & Theory of Korean Tradition Music 5 Voice Major 5 Composition Major 5 Piano Major 5 Instrument Major 6 Educational Assessment Practical Affairs for the Teaching Profession

Practice of Korean Tradition Instrumental Music 6 Practice of Korean Tradition Vocal Music 6 Composition & Theory of Korean Tradition Music 6 Voice Major 6 Composition Major 6 Piano Major 6 Theory and Practice of School Violence Prevention Instrument Major 7 Practice of Korean Tradition Instrumental Music 7 Practice of Korean Tradition Vocal Music 7 Composition & Theory of Korean Tradition Music 7 Voice Major 7 Teaching Material and Pedagogy of Music Composition Major 7 Piano Major 7 Student Teaching Internship Instrument Major 8 Practice of Korean Tradition Instrumental Music 8 Practice of Korean Tradition Vocal Music 8 Composition & Theory of Korean Tradition Music 8 Voice Major 8 Teaching Logic and Essay Writing in Music Education Composition Major 8 Piano Major 8

Total Credits: 132

### Electives

Teaching Methods of Vocal Music 1 Instrument Major 1 Practice of Korean Tradition Instrumental Music 1 Practice of Korean Tradition Vocal Music 1 Composition & Theory of Korean Tradition Music 1 Popular Guitar Wind Instrument Class Techniques Band & Ensemble Voice Major 1 Sight Singing & Ear Training 1 Music Theory Composition Major 1 Piano Major 1 Chorus 1 Teaching Methods of Vocal Music 2 Teaching Methods of Music Appreciation Music History 1 String Class Techniques Sight Singing & Ear Training 2 Collaborative Piano 1 Chorus 2 Music History 2 Collaborative Piano 2 Chorus 3 Harmony 1 An Introduction to Korean Traditional Music 1 Music History 3 Music Pedagogy Collaborative Piano 3 Piano Accompanying Techniques 4 Chorus 4 Harmony 2 An Introduction to Korean Traditional Music 2 Curriculum and Evaluation in Music Education Teaching Methods of Choral and Conducting Chorus 5 Korean Traditional Wind Instrument 1 History of Korean Music Chorus 6 Korean Traditional Wind Instrument 2 Sight Singing & Ear Training 3 Sight Singing & Ear Training 4 Total Credits: 86

### Minor Courses

Instrument Major 2 Practice of Korean Tradition Instrumental Music 2 Practice of Korean Tradition Vocal Music 2 Composition & Theory of Korean Tradition Music 2 Voice Major 2 Composition Major 2 Piano Major 2 Instrument Major 3 Practice of Korean Tradition Instrumental Music 3 Practice of Korean Tradition Vocal Music 3 Composition & Theory of Korean Tradition Music 3 Voice Major 3 Theory of Music Education Composition Major 3 Piano Major 3 Instrument Major 4 Practice of Korean Tradition Instrumental Music 4 Practice of Korean Tradition Vocal Music 4 Composition & Theory of Korean Tradition Music 4 Voice Major 4 Composition Major 4 Piano Major 4 Teaching Material and Pedagogy of Music Teaching Logic and Essay Writing in Music Education

Total Credits: 50

#### Minor Electives

24 credits should be chosen among Major Electives.

# Careers

A large number of graduates work at middle and high schools. Others go on to graduate school to pursue more advanced careers.

# Physical Education

\_*Contact Information* hone: +82-62-530-2550 fax: +82-62-530-2569 JRL: http://physicaledu.jnu.ac.ku

# What is Physical Education?

The Department of Physical Education was established to develop physical education teachers in March 1973. In the years since that time, the department has produced over 1,000 physical education teachers. This department has seven faculty members in various branches of learning. Currently, there are 100 students enrolled in this department.

## Department of Physical Education

Physical education is a subject in which students seek to improve quality of life, to develop physical strength, and promote health, steadiness of emotion, and socialization. The department seeks a successful development of physical education and sports culture at the same time.

Students of this department also participate in improving physical strength and motor skills, mastering knowledge about exercising and health, and learning desirable attitudes and socially valuable rules in various sports to accomplish this purpose.

The Department offers all students the curriculum to master knowledge about sports philosophy and history, sports psychology, exercise physiology, sports biomechanics, sports sociology, health and hygiene, and training courses to master ball sports, physical strength, gymnastics exercise, individual and collective exercises, dancing, and swimming.

This Department produces graduates who become teachers in middle and high schools, as coaches and instructors in elite sports and health centers, and as researchers in sports institutes.

# Professors

• In-Sook Kim, Ph.D.	<ul> <li>Young-Kwan Kim, Ph.D.</li> </ul>
[Professor, Sports Management and Dance,	[Associate Professor, Motor Mechanics,
kimis@jnu.ac.kr]	ykkim01@jnu.ac.kr]
• Hyun-Woo Park, Ph.D.	• Jun Kim, Ph.D.
[Professor, Sports Philosophy,	[Associate Professor, Sports Sociology
hwpark@jnu.ac.kr]	aquaspo@jnu.ac.kr]
• Jong-Soo Baek, Ph.D.	• Dae-yeol Kim, Ph.D.
[Professor, Sports Pedagogy,	[Assistant Professor, Sports Physiology,
bjs0508@jnu.ac.kr]	kimdaeyeol@jnu.ac.kr]

# Degree Requirements

Students are required to earn 150 credits, with 117 credits from core and related courses, and 33 credits from general courses. Students must also demonstrate proficiency with computers and in a foreign language.

## What Do You Study?

### Core Courses

Curriculum (2) Teaching Method and Technology (2) Educational Sociology (2) Educational Psychology (2) Philosophy and History of Education (2) Educational Assessment (2) Introduction to Education (2) Educational Administration and Management (2) Teaching children with Learning Disabilities (2)

#### Electives

Rhythmic Aerobic 1 (2) swim 1(2)Sport Socialogy (3) Athletic 1 (2)History of Physical Education (3) Gymnastic 1 (2) Table tennis 1 (2) Teakwondo (2) Winter sports 1 (2) Rhythmic Aerobic 2 (2) Swim 2 (2)Sport philosophy and ethics (3) Athletic 2 (2)Human Anatomy and Computer Practice (3) Gymnastic 2 (2) Table tennis 2 (2) Educational dance 1 (2) basketball 1 (2) New sports 1 (2) Vollyball 1 (2) Psychology of Sports and Motor Learning (3) nutrition Science Of sports (3) The Curriculum of Physical Education (3) Soccer 1 (2)Tennis 1 (2) Health Education (3) Education Dance 2 (2) Basketball 2 (2) New sports 2 (2)

Theory and Practice of School Violence Prevention (2) Education Volunteer Service (2) Practical Affairs for the Teaching Profession (2) Student Teaching Internship (2) Global Communication English (3) Chinese Classic in Korean (3) Physical Education Logic and Essay Writing (2) Teaching Physical education (3)

Winter Sports 2 (2) Vollyball 2 (2) The Seashore Training (2) Test And Measyrement In Physical Education (3) Soccer 2 (2) Tennis 2 (2) Basketball 3 (2) Dance Sports 1 (2) Vollyball 3 (2) Badminton 1 (2) Sports Medical and Treatment of Injury (3) Korea Dance (2) Physiology Of Exercise (3) Biomechanics of Sports sport (3) Soccer 3 (2) Golf 2 (2) Dance sports 2 (2) Badminton 2 (2) Experimental Approach of Sport Sciences (2) Baseball (2) Camping 1 (2) Motor control (3) Golf 1 (2) Introduction to Sports for All (3) Swim 3(2)Sports Technology and Biomechnics (3) Camping 2(2)Motor Development (3) Athletic 3(2)

Gymnastic 3 (2) Recreation (2) Sports Training and Exercise Prescription (3) Administration of Physical Education (3)

# **Careers**

A large number of graduates work at middle and high schools. Others go on to graduate schools to pursue more advanced careers. Division of Special Education \_\_Contact Information Phone: +82-62-530-5400 Fax: +82-62-530-5409 JRL: http://spededu.jnu.ac.kr/

## What is Special Education?

Special education means providing specially designed instruction, at no cost to the parent, to meet the unique needs of a child with a disability, including instruction conducted in the classroom, home, hospital, institution and in other settings, and instruction in physical education.

# The Division of Special Education

The division of special education offers undergraduate and graduate programs in special education. We have produced professionals in special education including outstanding teachers, superintendents, school administrators, consultants, and researchers. Our program is designed to prepare prospective educators to teach students with mild to moderate disabilities, as well as those with severe and multiple disabilities in a variety of educational settings. We also focus on transition and post-school employment for persons with disabilities. In addition, we provide research opportunities related to students with disabilities.

The division of special education consists of three departments: Early childhood special education, elementary special education, and secondary special education.

### Early Childhood Special Education

The department of early childhood special education trains prospective educators to acquire professional knowledge and skills to teach kindergarteners with disabilities. The program focuses on practical experiences working with young children with special needs and families in the field.

### **Elementary Special Education**

The department of elementary special education trains prospective educators to acquire professional knowledge and skills to teach elementary school students with disabilities. The program focuses on practical experiences working with children (Grades 1-6) with special needs, school-related professionals, and families in the field.

### **Secondary Special Education**

The department of secondary special education trains prospective educators in the professional knowledge and skills needed to teach secondary school students with disabilities. The program focuses on practical experiences working with middle and high school students with special needs, their families, and professionals in a special education area.

## Professors

 Hyun-Jong Song, Ph.D.
 [Educational Psychology and Counseling Psychology, hjsong@jnu.ac.kr] • Doohyoo Lee, Ph.D. [Educational Policy, doohlee@jnu.ac.kr]

- Ju-Suk Kwon, Ph.D.
   [Education of Children with intellectual disability, jskwon@jnu.ac.kr]
- Hongjoong Cho, Ph.D.
   [Education of Children with Physical Disabilities, chohj@jnu.ac.kr]
- Soon-Ja Lee, Ph.D. [Methodology of Early Childhood Education, jelmana@jnu.ac.kr]
- Eun Ko, Ph.D. [Education of Language Auditory Children with Language and Auditory Impairments, eunko@jnu.ac.kr]

## Degree Requirements

Students are required to earn 150 credits to graduate.

### **Core Courses**

#### General Studies

Global Communication English: GCE (3)
Chinese Classic in Korean (3)
Career Plan and Self Understanding (2)
Childhood Development and Education (3)
Teaching children with Learning Disabilities (2)
Educational Psychology (2)
Theoretical Foundations of Special Education (3)

# **Early Childhood Special Education**

Educational Sociology (2)

Introduction to Early Childhood Education (3) Introduction to Early Childhood Special Education (3) Curriculum in early childhood education (3) Social Studies in Early Childhood Special Education (3) Assensement and Evaluation of Early Childhood with Specail Needs (3) Education for Early Childhood with intellectual disability (3) Curriculum (2)

Subject Education to Early Childhood Special Education (3)

Language Education for Children with Disabilities (3)

Hyeseung Choi, Ph.D. [Autism Spectrum Disorder, Emotional and Behavioral Disorders, hchoi2004@jnu.ac.kr]
Sook-Hyun Oh, Ph.D. [Curriculum for Early Childhood Education, shoh04@jnu.ac.kr]
Tay Sr. Lee Bh D

• Tae-Su Lee, Ph.D. [Learning Disabilities, Subject Education, taesu811@jnu.ac.kr]

 Woori Kim, Ph.D.
 [Mild Disabilities, Teaching and Learning Methods in Special Education, rnell777@jnu.ac.kr]

Inclusion for Young Children with Disabilities and Individualized Family Support (3)

Education for Early Childhood with Emotional and Behavioral Disorders (3)

Education for Early Childhood with Multiple and Physical Disabilities (3)

Curriculum in School for the Handicapped (3)

Education for Early Childhood with Visual Impairment (3)

Early Childhood Special Education Profession (3) Early Childhood Special Education Law and Policy (3) Art Education for Young Children with Disabilities (3) Behavior Modification for Young Children with

Education for Early Childhood with Hearing Impairments (3)

Disabilities (3)

Education for Young Children with Learning Disabilities (3)

Material Analysis and Teaching Techniques for Early Childhood Special Education (3)

Administration and Management in Early Childhood SpecialEducation Centers (3)

Education for Early Children with Communication Disorders (3)

Education for children with autism spectrum disorder (3) Natural Sciences Education for the Early Childhood with Special Needs (3) Parents Education for Young Children with Education for Disabilities (3) Arithmetic Education for the Early Childhood with Special Needs (3) Teaching Method and Technology (2) Education Volunteer Service (2) A Course on Logic and Essay writing (2) Technology of Early Childhood Special Education (3) Music in Special Early Childhood Education (3) Theory and Practice of School Violence Prevention (2) Student Teaching Internship (2) Philosophy and History of Education (2) Educational Assessment (2) Educational Administration and Management (2) Practical Affairs for the Teaching Profession (2) Health and Safety Education for Children with Disabilities (3) Play Development and Movement Intervention for Early Childhood with Special Needs (3) Elementary Special Education Educational Sociology (2) Education for Student with intellectual disability (3) Education for Student with Hearing Impairments (3) Natural Sciences Education for the Handicapped (3) Art Education for the Handicapped (3) Integrated Subject of Elementary school (3) Clinical Assessment and Evaluation for the Handicapped (3) Curriculum (2) Education for Student with Emotional and Behavioral Disorders (3) Education of the Multiple and Physical Disabilities (3) Language Education for the Handicapped (3) Music Education for the Handicapped (3) Theory of Mainstreaming for the Handicapped (3) Curriculum in School for the Handicapped (3) Education for Student with Visual Impairment (3) Social Sciences Education for the Handicapped (3) Practical Arts Education for the Handicapped (3) Curriculum in Elementary School (3) Education for Student with Learning Disabilities (3) Law & Policy in Special Education (3) Behavior Modification (3)

Disorders (3) Material Analysis and Teaching Techniques for Special Education (3) Arithmetic Education for the Handicapped (3) Physical Education for the Handicapped (3) Management of Classroom for the Handicapped (3) Education for the Handicapped's Parent (3) Counseling for Exceptional Children (3) Teaching Method and Technology (2) Education Volunteer Service (2) Theory of Transitional Education for the Handicapped (3) A Course on Logic and Essay writing (2) English Education in Elementary Special Education (3) Theory and Practice of School Violence Prevention (2) Student Teaching Internship (2) Philosophy and History of Education (2) Educational Assessment (2) Educational Administration and Management (2) Practical Affairs for the Teaching Profession (2) Special Subject Education (3) Professionals in Special Education (3) Technology of Special Education (3)

Student with Communication

### Secondary Special Education

Educational Sociology (2)

Education for Student with intellectual disability (3) Education for Student with Hearing Impairments (3) Law & Policy in Special Education (3)

Clinical Assessment and Evaluation for the Handicapped (3)

Curriculum (2)

Education for Student with Emotional and Behavioral Disorders (3)

Education of the Multiple and Physical Disabilities (3) Theory of Transitional Education for the Handicapped (3)

Curriculum in School for the Handicapped (3)

Education for Student with Visual Impairment (3)

Education for Student with Learning Disabilities (3)

Theory of Mainstreaming for the Handicapped (3) Behavior Modification (3)

Education for Student with Communication Disorders (3)

Material Analysis and Teaching Techniques for	Theory and Practice of School Violence Prevention (2)
Special Education (3)	Student Teaching Internship (2)
Management of Classroom for the Handicapped (3)	Philosophy and History of Education (2)
Counseling for Exceptional Children (3)	Educational Assessment (2)
Teaching Method and Technology (2)	Educational Administration and Management (2)
Education Volunteer Service (2)	Practical Affairs for the Teaching Profession (2)
Special Subject Education (3)	
A Course on Logic and Essay writing (2)	
Technology of Specail Education (3)	

## Careers

Students who graduate in this program will receive the special education teacher certification. The graduates work as special education teachers in schools or in disability rehabilitation centers; or alternatively as consultants, researchers in academic institutions, and as professors.

# College of Social Sciences

\_\_*Contact Information* Phone: +82-62-530-2605, 6~8 Fax: +82-62-530-2619 URL: http://socsci.jnu.ac.kr

# Departments

- · Department of Political Science and International Relations
- · Department of Sociology
- · Department of Psychology
- · Department of Library and Information Science
- · Department of Communication
- · Department of Geography
- · Department of Anthropology
- · Department of Public Administration

# Research Institutes

- · Institution for Public Affairs
- · Multi-cultural Society Center
- · The Social Sciences Research Institute
- · GIScience Research Center
- · Institute of Communication Research
- · Institute of Election and Politics
- · Research Institute to Knowledge Resources

Political Science and International Relations *Contact Information* Phone: +82-62-530-2620 Fax: +82-62-530-2639 E-mail: 5302620@naver.com URL: http://politics.inu.ac.kr

# What is Political and International Relations?

Political Science is a discipline that aims to find the best way to improve political systems in which human beings can manage their lives with happiness and freedom. In this sense, political science is a systematically and theoretically academic major.

# School of Political and International Relations

The Department of Political Science teaches theories and practices on domestic politics and international relations in general. The Department focuses on educating students who will actively work in various fields in the near future.

The Department aims at educating professionals in real politics as well as academic researchers on politics. To this end, the Department encourages students to learn research methodology and theories to understand political phenomena scientifically. To accomplish these purposes, both critical examination of existing theories and introduction to new theories are emphasized. The Department offers various undergraduate courses, of which the curriculum is divided into four general areas: Political Thoughts, Comparative Politics, International Relations, and Korean Politics.

# Professors

- Yong Cheol Kim, Ph.D. [Professor, Comparative Politics and Korean Politics, kimyc@chonnam.ac.kr]
- Sung-Suk Yoon, Ph.D. [Professor, International Political Economy, ssyoon@chonnam.ac.kr]
- Kyung-Taek Oh, Ph.D. [Professor, International Politics, ktoh@chonnam.ac.kr]
- Euikyung Park, Ph.D. [Professor, Gender Politics and Political Thoughts, pek2000@chonnam.ac.kr]
- Jung-Kwan Cho, Ph.D.

[Professor, Korean Politics, hr23@hanmail.net]

- Jae-Kwan Kim, Ph.D.
   [Associate Professor, Chinese Politics, jkkim543@chonnam.ac.kr]
- Jae-Gi Kim, Ph.D. [Associate Professor, Diaspora Politics, jgkimm@hanmail.net]
- Eunjung Choi, Ph.D. [Associate Professor, Comparative Politics, ejchoi76@jnu.ac.kr]
- Youngmi Choi, Ph.D.
- [Assistant professor, International Political Economy,ymchoi@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits and demonstrate proficiency in foreign language.

#### What Do You Study?

A History of Ancient & Medieval Political Thought (3)A History of Modern Political Thoughts (3) American Politics (3) Chinese Foreign Policy (3) Chinese Politics (3) Comparative Politics (3) Congressional Politics (3) Contemporary Political Thought (3) Diaspora and Politics of Integration (3) Elections and Parties (3) Foreign Policy (3) Global Politics of the Environment (3) History of International Relations (3) International Area Disputes (3) International Organizations and Non-Governmental Organizations (3) International Political Economy (3) International Relations (3) Internet and Political Process (3) Korea in International Politics (3) Korean Politics (3) Labor Politics (3)

Latin American Political Economy (3) Law and Politics (3) Media and Politics (3) Overseas Korean Networks (3) Political Behavior (3) Political Economy in East Asia (3) Political Leadership (3) Politics of North Korea (3) Relations of South-North Korea (3) Research Methods in Political Science (3) Russian Politics (3) Special Topics in Area Studies (3) United States Foreign Policy (3) Urban and Local Politics (3) Women and Politics (3)

Minor Courses39 credits should be chosen

Teaching Profession Courses Educational Theories of Social Studies (3) Research of Educational logic and Teaching Discussion of Social Studies (2) Research of Educational Text and Teaching Method of Social Studies (3)

#### Careers

Graduates of the Department take a variety of career paths. Among them are government positions, politics-related fields, law, education, and private business sector positions as well.

Public Administration *Contact Information* Phone: +82-62-530-2250 Fax: +82-62-530-2259 E-mail: hj-and-hj@hanmail.net URL: http://inupa.inu.ac.kr

# What is Public Administration?

Today, the world has been confronted by the age of globalization. The importance of localized information has increased. In light of these trends, the Department of Public Administration concentrates its efforts on educating future administrative professionals with comprehensive problem-solving capabilities and task performance abilities through theoretical and practical studies on administrative phenomena. The efforts would equip them with various knowledge and skills, including those in planning, policy making, research analysis, organization management, and office management necessary for administrating governments and solving social problems.

Additionally, many graduates work in government agencies after passing various kinds of civil service examinations. Furthermore, graduates with a comprehensive problem-solving capacity have broader opportunities to make advances as they are undertaking central roles as competent managers in their fields.

# Professors

- Moon-Soo Bok, Ph.D.
   [Professor, Financial Administration, msbok@chonnam.ac.kr]
- Yung-Chul Lee, Ph.D. [Professor, Administration Organization, yunglee@chonnam.ac.kr]
- Sung-Wook Choi, Ph.D. [Professor, Administration Organization culture, csw4pa@chonnam.ac.kr]
- Choong-Geun Song, Ph.D.
   [Professor, Public Policy analysis, solip@chonnam.ac.kr]
- Hou-Gyun Kim, Ph.D. [Professor, Public Administration]

Organization Theory, khg1427@chonnam.ac.kr]

- Joon-Kyo Seo, Ph.D.
   [Professor, Urban Policy, seo66386@chonnam.ac.kr]
- Mi-Seung Shim, Ph.D.
   [Professor, Welfare Administration, msshim@chonnam.ac.kr]
- Jung-Ah Bae, Ph.D. [Associate Professor, Financial Administration, jb07e@jun.ac.kr]
- Geun-Pil Ryu, Ph.D.
   [Assistant Professor, Public Personnel Administration, gpryu@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, with 39 from Department courses.

## What Do You Study

Community & Social Welfare

Readings in Public Administration

Administrative Organization	Local Public Finance
Macroeconomic Theory	General Theory of Administrative Law
Microeconomic Theory	Public Economics
Public Personnel Administration	Social Welfare Administration
Information communication Technology and	Regional Socioeconomic Development
public administration	Administration of Korean Government
Local Autonomy	Detailed Theory of Administrative Law
Community Welfare and Practice	Public Choice
Administrative Management	Public Enterprises
Social Research Method in Public Administration	Comparative Public Administration
Crisis Management	Government Organization and Civil Society
Financial Administration	Special Issue of Public Administration
Local Administration	Public Bureaucracy
Quantitative Analysis of Public Affairs	Digital Age and Government Innovation
Public Conflict Management	Social Welfare Policy
Global times and public administration	Government Regulation
Urban Administration	Policy Science Seminar
Study of Leadership	Philosophy of Public Administration
Public Policy Analysis Evaluation	Environmental Administration

# Careers

There are many career paths for graduates from the Department of Public Administration, such as becoming administrative bureaucrats. Graduates are also able to land positions in state-owned enterprises or public corporations. Furthermore, graduates can pave the way in private businesses, especially in the financial industry, such as with banks and security corporations.

Meanwhile, there are MPA and Ph.D. courses for students to pursue. Accordingly, the Department has a large number of graduate students enrolled, many of whom have continued their studies at many prominent international universities, becoming academic experts.

# Sociology

*Contact Information* Phone: +82-62-530-2640 Fax: +82-62-530-2649 E-mail: sociolog@jnu.ac.kr URL: http://sociology.jnu.ac.kr

# What is Sociology?

Sociology involves the study of the relationship between humans and human lifestyles and society. In other words, sociologists study the structual changes of human society as a conglomerate of people who interact with each other.

# Department of Sociology

Sociology is divided into several fields as contemporary society changes rapidly. The Department of Sociology plays an important role in nurturing experts in the field.

# Professors

- Min-Ho Kuk, Ph.D.
   [Professor, Comparative Sociology, Sociology of Development, mhkuk@jnu.ac.kr]
- Soo-Jong Yoon, Ph.D.
   [Professor, Organization, Rural Sociology, sjyoon@jnu.ac.kr]
- Jun-Woo Kim, Ph.D.
   [Professor, Urban Sociology, Social Statistics, junewoo@jnu.ac.kr]
- Jung-Gie Choi, Ph.D.
   [Professor, Deviance and Social Control, jgchoi@jnu.ac.kr]
- Julia Jiwon-Shin, Ph.D. [Assistant Professor, Industrial Sociology, juliashin@jnu.ac.kr]
- Jin-Yeon Kang, Ph.D.
   [Assistant Professor, Historical Sociology, Sociological Theory jinyeon@jnu.ac.kr]

# Degree Requirements

Students are required to earn 27 credits from electives and 36 credits from minor courses.

# What Do You Study?

Comparative Sociology Contemporary Society and Culture Contemporary Society and Human Rights Contemporary Sociological Theories Deviance and Social Control Economic Sociology Educational Theories of Social Studies Environmental Sociology Family and Sexuality History of Social Thought History of Sociology Industrial Sociology Introduction to Sociology Medical Sociology Methodology of Social Sciences Methods in Social Research Political Sociology Reading of Sociological Writings Religion and Society Research of Educational Text and Teaching Method of Social Studies Rural Sociology Seminar in Social Research Sexuality and Society Social Change Social History of Korea Social Movements Social Organization Theory Social Problems Social Psychology Social Statistics 1 Social Statistics 2 Social Stratification Sociology of Art Sociology of Leisure Sociology of Literature Special Lecture on Sociology Studies on the Asian Society Urban Sociology Visual Sociology Writing

# Careers

Graduates are able to obtain teaching certification and acquire positions as social research analysts.

Psychology

\_\_Contact Information Phone: +82-62-530-2650 Fax: +82-62-530-2659 JRL: http://psyche.jnu.ac.kr

# What is Psychology?

Psychology is the modern science of the mind. Psychologists pursue scientific understanding of how the mind and behavior work. Students are encouraged to develop critical thinking and learning competencies in order to build their knowledge base of psychology and reach their academic goals.

# Department of Psychology

The Department of Psychology was founded in 1978, and began to offer a master's degree program in 1984 and Ph.D. program in 1996. In 2013, there are 9 full-time faculty members and 9 part-time instructors, and over 70 graduate and 130 undergraduate students in the Psychology Department. As the only department that offers extensive psychology courses in the region of Gwangju and Jeonnam province, excellent education and research programs are offered in various areas of psychology including cognitive, developmental, biological/learning, social, clinical, counseling/personality, health, and industrial/ organizational psychology. The Department houses one of the best research facilities among all the social and humanities departments at CNU.

The department has several labs for psychological testing, cognitive, and clinical neuropsychology experiments (including EEG, EMG, SCR, and HR acquisition systems), behavioral observation and monitoring, and other various kinds of psychological experiments. The students and the faculty members in the Department have been working closely together to build a healthy research environment and to provide community services needed in the Gwangju and Jeonnam region.

# Professors

- Taejin Park, Ph.D.
   [Professor, Cognitive Psychology & Cognitive Neuropsychology, tpark@jnu.ac.kr]
- Gahyun Youn, Ph.D.
   [Professor, Lifespan Developmental Psychology, ghyoun@jnu.ac.kr]
- Munsoo Kim, Ph.D.
   [Professor, Physiological Psychology, mkim@jnu.ac.kr]
- Hyun Kyun Shin, Ph.D.
   [Professor, Clinical Psychology, shk2004@jnu.ac.kr]

- Young-Shin Kang, Ph.D.
   [Associate Professor, Counseling Psychology, lavieenrose@jnu.ac.kr]
- Hyejeen Lee, Ph.D.
   [Associate Professor, Clinical Psychology, hjl2013@jnu.ac.kr]
- Samuel Suk-hyun Hwang, Ph.D. [Associate Professor, Neuro Psychology, hwansana@jnu.ac.kr]
- Jieun Shin, Ph.D.
   [Assistant Professor, Social Psychology, jieunshin@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, normally over a period of 8 semesters. Students must also demonstrate proficiency with computers and in a foreign language.

## What Do You Study?

# Core Courses

General Psychology I (3) General Psychology II (3) Methodology of Psychological Research (3) Psychological Statistics (3)

#### Electives

Psychology of Rehabilitation (3) Psychology in English (3) Industrial Psychology (3) Counseling Psychology (3) Psychological Test & Practicum (3) Seminal in Psychology (3) Cognitive Psychology (3) Clinical Psychology (3) Group Counseling (3) Psychological Statistics (3) Physiological Psychology (3) Development Psychology (3) Psychological Measurement & Practicum (3) Abnormal Psychology (3) Psychology of Personality (3) Sensation & Perception (3)

Social Psychology (3) Psychology of Language & Thought (3) Positive Psychology (3) Cognitive Process & Practicum (3)

#### Teaching Profession Courses

Theory of Counseling Education (3) Counseling Teaching Material Study and Instructional Methods (3) Career Counseling (3) Criminal Psychology & Practicum (3) Research Methodology in Psychology (3) Psychology of Aging (3) Psychology of Emotion (3) History of Psychology (3) Cultural Psychology (3) Brain & Cognition with Practicum (3) Counseling for Exceptional Children (3) Psychology of Learning (3)

#### Electives

21 credits should be chosen

#### Careers

Every semester faculty members and students meet for career guidance and counseling. Students are encouraged to pursue professional certificates in psychology. Special lectures and colloquia are offered to aid career goals. Major field settings for professional careers include counseling centers in the community, mental hospitals, social welfare institutions, schools, social survey and research sectors, corporations for human resource development/management and organizational development, and the public sector (courts, police stations, rehabilitation centers, armies, etc.)

Library and Information Science \_\_*Contact Information* Phone: +82-62-530-2660 Fax: +82-62-530-2669 JRL: http://list.jnu.ac.kr/

# ■ What is Library and Information Science?

Library and information science is the study of issues related to libraries and the information fields. This study includes academic subjects concerning how library and information resources are used and how people interact with library and information systems. It also deals with ideas and methodologies about the relations and management of knowledge, information, and library issues.

Library and information science mostly consists of spreading knowledge for the efficient retrieval of relevant information. Basic topics include the acquisition, cataloging, classification, and the preservation of library and information materials. A contemporary branch of the discipline is information architecture,

# Department of Library and Information Science

The Department of Library and Information Science intends to educate students through full coursework that includes basic and upper training issues related to libraries and the information fields. The guidelines of the Department include educational purposes that are academic and practical subjects in information service and information utility. After graduating, a majority of students begin their graduate studies or join public libraries or academic libraries, national or local archives, or school libraries among other career choices. Graduates deal with ideas and methods about the relations and management of knowledge, information, and library issues that are studied from the Department of Library and Information Science.

The Department consists of several branch areas, but the most important goal of the department is the knowledge of efficient retrieval of relevant information. Basic topics include the acquisition, cataloging, classification, and preservation of library and information materials. In a more present-day view, a fervent outgrowth of LIS is information architecture.

# Professors

- Jun-Min Jeong, Ph.D.
   [Professor, Information Management, wizard@jnu.ac.kr]
- Hyun-Jin Hong, Ph.D. [Professor, Bibliometrics, hjhong@jnu.ac.kr]
- Jeong-Hyun Kim, Ph.D.
   [Professor, Knowledge Organization, jhgim@jnu.ac.kr]
- Myoung-Gyu Lee, Ph.D.
   [Professor, Information Material Organization, gyulee@jnu.ac.kr]
- Woo-Kwon Chang, Ph.D. [Professor, Knowledge Management, wk1961@jnu.ac.kr]
- Ji-Hyeon Kim, Ph.D.
   [Assistant Professor, Information Science, jihkim@jnu.ac.kr

# Degree Requirements

Students are required to earn 130 credits and demonstrate proficiency of foreign languages and computer skills.

# What Do You Study?

Internship Introduction to Library and Information Science Information and Society Cultural Review of Information Classification Information Management Reading Guidance Information Center Management Cataloging Understanding Information Science Studies in Publication and Media Introduction to Old Books in Korea Information Service Introduction to Bibliography Introduction to Archive Management Collection Development Reading Guidance Practice Web Publishing Special Media Information Retrieval Information Resources Materials and Methods of LIS Education of Library and Information Science

Studies in Archives and Manuscripts Content Development Introduction to Database Management Advances in Knowledge Organization Cataloging of Far Eastern Books Information Policies Public Libraries Information Resources of Natural Sciences and Technology Indexing and Abstracting School Libraries Information System Analysis and Design Administration of College and University Library Information Resources of Humanities and Social Science User Studies Studies in Local Information Research Methods in Library and Information Science Archival Practice Theory of Information Criticism Studies in Local Information Web Publishing Practice

#### Careers

Recently, certain areas of interest in Library and Information Science have extended into computerbased cataloging. Thus, the need for graduates in Library and Information Science is increasing.

Graduates can find careers in database cataloging or specialize in archive retrieval. Students also have the option to enter graduate school to further their studies and marketability.

# Communication

*Contact Information* Phone: +82-62-530-2670 Fax: +82-62-530-2679 E-mail: 5302670@naver.com URL: http://comm/jnu.ac.kr

# ■ What is communication?

The discipline of communication focuses on how people use messages to generate meanings within and across various contexts, cultures, channels, and media. The discipline promotes the effective and ethical practice of human communication. Communication is a diverse discipline which includes inquiry by social scientists, humanists, and critical and cultural studies scholars. A body of scholarship and theory about all forms of human communication is the basis for an ever-expanding understanding of how we all communicate.

# Department of Communication at Chonnam National University

The Department of Communication aims to prepare its students for careers in a variety of journalism and mass communication fields. It is expected that upon completion of the department's programs, students will be able to write, edit, and produce visuals and design for print and digital media.

The department offers both undergraduate and graduate curricula that mix academics with professional experience to ensure that students are well schooled in writing and editing and in analyzing the issues, conventions, and practices of journalism and mass communication. The departmental requirements give communication majors both guidance and flexibility in their selection of courses. Majors can pursue one of following tracks: journalism, advertising and PR, broadcasting, and cultural studies.

#### Professors

• Eui Jong Lee	Chungmin Joo
Human Communication, Media Effects,	New Media, Broadcasting, Media Policy
Research Methods	cmjoo@chonnam.ac.kr
ejlee@chonnam.ac.kr	• Oh Hyeon Lee
• Jong Won Yoo	Cultural Studies, Media Criticism
Press Philosophy and History,	leohhy@hanmail.net
Media Law, Media Ethics	• Kyun Soo Kim
jwyoo@chonnam.ac.kr	Journalism, New Media
Young Khee Kim	kimk@jnu.ac.kr
Critical Communication, International	• Jiyang Bae
Communication, Political Communication	PR
ykkim@chonnam.ac.kr	jiyang.bae@gmail.com

# **Degree Requirements**

Students are required to earn 130 credits, normally over a period of 8 semesters. Students must also demonstrate proficiency with in intensive major and a foreign language.

# What Do You Study?

#### First semester of freshman year

Understanding of Mass Media Communication & Society

#### Second semester of freshman year

Practice in News writing Understanding Journalism

#### First semester of sophomore

Korean Journalism History Introduction to Broadcasting Understanding Advertising Radio Production Human Communication Media Writing and Reporting

## Second semester of sophomore year

Introduction to Public Relation Mass Communication Theories Understanding of Mass Culture Visual Arts Production Digital Media and Society Critical Studies in Mass Communication

#### First semester of junior year

World Communication History Media Criticism Mass Communication English Internet Communication Advertising & Public Relations Production Photo Journalism

Speech Communication

#### Second semester of junior year

Media & Cultural Studies Media Planning Communication Philosophy Digital Journalism Research Methods in Mass Communication Understanding Local Medal Newspaper Editing

#### First semester of senior year

Communications Law and Ethics Media & Modern Politics Visual Communication Seminar in Mass Media Campaign Seminar

#### Second semester of senior year

Media Policy & Industry Seminar in Cultural Planning Seminar in Communication Studies Mobile Communication

# **Required General Courses**

Writing Career Plan and Self Understanding

#### **Teaching Profession Course** None

#### Careers

These job titles are not an exhaustive list, but rather, represent the types of positions most of our graduates enter:

Account Associate/Manager Advertising Manager Associate Producer Broadcaster Columnist Community Relations Copy Editor

Creative Director Editor Event Coordinator Film Editor Foreign Correspondent Investigative Reporter Journalist

- 590 -

Marketing PR Specialist	Reporter
Market Researcher	Sales Associate
Media Buyer	Scriptwriter
Media Planner	Sports Announcer
Media Relations Coordinator	Teacher
Media Researcher	Video Journalist
Newscaster	Website Designer
Newsletter Editor/Creator	Writer
News Reporter	Employment areas are in:
Press Secretary	Academia
Professor	Government
Program Coordinator	Private Corporations
Promotion Manager	Non-Profit Organizations
Public Information Specialist	Publicly Traded Corporations
Publishing Assistant/Manager	

source: http://www.careers.uiowa.edu/majors/kit/printmajor.cfm?mid=3

# Geography

\_\_*Contact Information* Phone: +82-62-530-2680 Fax: +82-62-530-2689 JRL: http://geo.jnu.ac.kr/

# What is Geography?

Geography is a discipline that studies human and natural phenomena in related with the world. Geography particularly looks at interaction within and between human- and nature-driven events and changes, and it deals with the "where" and "what pattern" with the concepts of space and location. In addition, it helps to figure out alternative plans of diverse spatial problems as they appear in reality. Therefore, geographers study nature, anthropogenic impacts, regions, and new technologies in spatial science.

# Department of Geography

The Department of Geography is divided into various fields of study. It is rapidly changing modern topics and technologies. The Department plays an important role in producing experts in the field.

# Professors

- Hyun-Wook Lee, Ph.D. [Professor, Urban Geography, Quantitative Analysis, holee@jnu.ac.kr]
- Jeong-Rock Lee, Ph.D.
   [Professor, Regional Development, Tourism Geography, jrlee@jnu.ac.kr]
- Young-Jin Ahn, Ph.D. [Professor, Social-Economic Geography, yiahn@jnu.ac.kr]
- Taesoo Lee, Ph.D.

[Associate Professor, Environmental Geography, taesoo@jnu.ac.kr]

- Hwa-hwan Kim, Ph.D. [Associate Professor, Geographic Information Systems, h2kim@jnu.ac.kr]
- Yena Song, Ph.D.
   [Associate Professor, Transportation Geography, Y.Song@jnu.ac.kr]
- Gwan-yong Jeong, Ph.D.
   [Assistant Professor, Soil Geography, gyjeong@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, with 39 credits from Department courses.

# What Do You Study?

Understanding Human Geography Geography of Korea Understanding Physical Geography Cartography Climatology Quantitative Geography Health Geography Population Geography Introduction to GIS and Lab Field Observation and Trip Geomorphology Economic Geography Cadastral Science Urban Geography Cadastral Survey and Practice I GIS Adaptation and Practice Transportation Geography Geography of Recreation and Tourism Marketing Geography Environment and Human Life Cultural and Historical Geography Regional Geography of South America Cadastral Survey and Practice II History of Geography

Urban and Land Financial Geography Geography of Regional Development Seminar in Cadastral Science The Nature Of Geography Geography Of America Cadastral computer science Soil Ecological Geography Geography of Africa Geography of Asia Introduction of Remote Sensing Hydrology and Water Quality Modeling Political and Social Geography Geographic Fieldwork I Geographic Fieldwork II Geographic Fieldwork Ⅲ

# Careers

Recently, as the area of interest in geography has expanded to Geographic Information Systems (GIS) and environment problems, the need for geography experts is increasing.

Geography major students can obtain various careers such as GIS analysts, travel agents, civic servants, or regional researchers. The market has transformed and there is a strong possibility to become a cartographer, surveyor, or GIS professional.

Cultural Anthropology and Archaeology *Contact Information* Phone: +82-62-530-2690 Pax: +82-62-530-2699 C-mail: anthropos@naver.com JRL: http://illvu.inu.ac.kr

## What is Anthropology?

Anthropology is a discipline which studies the nature of human beings, and is divided into sub-disciplines of cultural anthropology, archaeology, linguistic anthropology, and physical anthropology. Cultural anthropology contributes to understanding cultural diversity and finding ways to solve problems which the contemporary world faces. Archaeology studies the origin and development of cultures, focusing on the material culture of prehistory which lacks written records, and ancient history which has few written documents. Linguistic anthropology is an area of exploring the relationships between language and culture. Physical anthropology studies human evolution and current health issues.

# School of Cultural Anthropology and Archaeology at Chonnam National University

Cultural Anthropology and Archaeology, in contrast to other disciplines which tend to become specialized, offers students a broad range of means of understanding human beings and cultures.

Students majoring in anthropology can carry out a wide range of activities in various areas of society after they graduate.

# Professors

- Young-Jin Yim, Ph.D. [Professor, Archaeology, yjyim@chonnam.ac.kr]
- Kyung-Hak Kim, Ph.D.
   [Professor, Cultural Anthropology, khkim@chonnam.ac.kr]
- Sung-Heup Hong, Ph.D. [Professor, Cultural Anthropology, sibung@chonnam.ac.kr]
- Ki-Jung Lee, Ph.D. [Professor, Visual Anthropology, kjunglee@chonnam.ac.kr]
- Jin-Seon Jo, Ph.D.
   [Professor, Archaeology, jojinseon@hanmail.net]
- Minkoo Kim, Ph.D.
   [Associate Professor, Archaeology, minkoo@jnu.ac.kr]

# Degree Requirements

#### Students are required to complete the following mandatory courses:

Human Being and Culture in Global Era Human Evolution and Ancient Civilization Theory and Method in Archaeology History of Anthropological Studies Analysis of Archaeological Artifacts Research Methods and Practice in Anthropology Also Students are required to earn 21 credits from electives.

## What Do You Study?

Theory and Method in Archaeology (3) History of Anthropological Studies (3) Analysis of Archaeological Artifacts (3) Research Methods and Practice in Anthropology (3) Understanding Archaeology (3) Archaeological Investigation on Civilization (3) Study of Korea Culture (3) Culture and Gender (3) Understanding Cultural Heritage (3) Film and culture (3) Archaeology of East Asia (3) Culture and Personality (3) Origins of Human culture (3) Food and Culture Around the World (3) Prehistoric Archaeology of Korea (3) Marriage and Family (3) Understanding of Rural Cultures (3) Development of Tools and Technologies (3) Excavation and Exploration (3) Understanding World Heritage (3) Visual Anthropology (3)

Historical Archaeology of Korea (3) The Anthropology Tourism and Festival (3) Culture and Politics (3) Anthropology of Religion (3) Museums and Cultural Heritage (3) Migration and Cultural Diversity (3) Understanding Religious Cultural Heritage (3) Ancient States and Tombs (3) Ancient Agricultural and Environment (3) Culture and Economic Behavior (3) American and European Archaeology (3) Selected Area Studies (3) Study of Urban Cultures (3) Cultural Heritage Storytelling (3) Studies in Contemporary Society problems (3) Preservation and Utilization of Cultural Heritage (3) Special Topics in Anthropology (3) Globalization and Local Cultures (3) Human Being and Culture in Global Era (3) Human Evolution and Ancient Civilization (3)

#### Careers

Trained in cross-cultural perspectives, graduates can work as area specialists in various research institutes and international organizations, or play important roles in diplomatic relations and information production industries. They also have good opportunities to work in museums.

Museums look for people trained in anthropology who can systematically conduct surveys, analyses, exhibitions, and education on cultural resources and traditions being destroyed due to rapid industrialization. Anthropology is a discipline which studies the nature of human beings, and is divided into sub-disciplines of cultural anthropology, archaeology, linguistic anthropology, and physical anthropology. Cultural anthropology contributes to understanding cultural diversity and finding ways to solve problems which the contemporary world faces. Archaeology studies the origin and development of cultures, focusing on the material culture of prehistory which lacks written records, and ancient history which has few written documents. Linguistic anthropology is an area of exploring the relationships between language and culture. Physical anthropology studies human evolution and current health issues.

# School of Anthropology at Chonnam National University

Anthropology, in contrast to other disciplines which tend to become specialized, offers students a broad range of means of understanding human beings and cultures.

Students majoring in anthropology can carry out a wide range of activities in various areas of society after they graduate.

# Professors

- Kyung-Hak Kim, Ph.D.
   [Professor, Cultural Anthropology, khkim@chonnam.ac.kr]
- Myung-Hye Kim, Ph.D.
   [Professor, Cultural Anthropology, myunghk@chonnam.ac.kr]
- Minkoo Kim, Ph.D. [Associate Professor, Archaeology, minkoo@jnu.ac.kr]
- Ki-Jung Lee, Ph.D. [Professor, Visual Anthropology,

## Degree Requirements

# Students are required to complete the following mandatory courses:

Introduction to Cultural Anthropology Introduction to Archaeology Methodology of Archaeology

# What Do You Study?

Korean Folklore (3) Culture and Personality (3) Understanding Cultural Heritage (3) Prehistoric Archaeology of Korea (3) Theory and Method in Archaeology (3) History of Anthropological Studies (3) Archaeology of Ancient Korea (3) Marriage and Family (3) Field Methods in Archaeology (3) Intangible Cultural Assets and Festivals (3) Archaeology of East Asia (3) Museum Studies (3) Research Methods and Practice in Cultural Anthropology (3) Anthropology and Religion (3) Culture and Economic Behavior (3) History of Archaeology (3) Selected Area Studies (3) Study of Korea Culture (3) Special Topics in Cultural Anthropology (3) kjunglee@chonnam.ac.kr]

- Young-Jin Yim, Ph.D. [Professor, Archaeology, yjyim@chonnam.ac.kr]
- Jin-Seon Jo, Ph.D.
   [Professor, Archaeology, jojinseon@hanmail.net]
- Sung-Heup Hong, Ph.D.
   [Professor, Cultural Anthropology, sibung@chonnam.ac.kr]

Research Methods and Practice in Cultural Anthropology History of Anthropological Studies Archaeology in Modern Times Students are also required to earn 21 credits from electives.

Archaeology in Modern Times (3) Culture and Gender (3) Food and Culture Around the World (3) Visual Anthropology (3) Migration and Cultural Diversity (3) Reading in Prehistoric Archaeology (3) Analysis of Archaeological Artifacts (3) Reading in Historic Archaeology (3) Studies in Contemporary Society problems (3) Study of Urban Cultures (3) Seminar in Archaeology 1 (3) Globalization and Local Cultures (3) Seminar in Archaeology 2 (3) Understanding of Rural Cultures (3) Anthropology of Religion (3) Environment Archaeology (3) Culture and History (3) Analysis of Archaeological Artifacts (3) Introduction to Archaeology (3) Introduction to Cultural Anthropology (3)

Archaeological Investigation on Civilization (3) American and European Archaeology (3) Archaeology of Medieval and Modern Age (3) Archaeology and Cultural Heritage(3) Ethnoarchaeology (3) Writing (3) English for Global Communication (3)

# Careers

Trained in cross-cultural perspectives, graduates can work as area specialists in various research institutes and international organizations, or play important roles in diplomatic relations and information production industries. They also have good opportunities to work in museums.

Museums look for people trained in anthropology who can systematically conduct surveys, analyses, exhibitions, and education on cultural resources and traditions being destroyed due to rapid industrialization.

# College of Human Ecology

<u>Contact Information</u> Phone: +82-62-530-1300~7 Fax: +82-62-530-1310 URL: http://humanecology.inu.ac.l

# Departments

- · Department of Family Environment and Welfare
- · Division of Food and Nutrition
- · Department of Clothing and Textiles

# Affiliated Research Centers

- $\cdot\,$  Research Institute for Human Ecology
- · Fashion-cultural Commodities Design R&D Center
- · Center for Bio-resources and New Materials
- · CNU Social Service Research Application Center

Family Environment and Welfare *\_\_Contact Information* Tel: +82-62-530-1320, 1380 Fax: +82-62-530-1329 E-mail: A0250@jnu.ac.kr URL: http://welfare.jnu.ac.kr

# What is Family Environment and Welfare?

The goal of the Department of Family Environment and Welfare is to contribute to the development of family welfare and quality of life through the systematic studies of interaction between humans and family environment. To achieve this goal, the Department educates students on basic theories and practical courses related to family. Furthermore it also trains professionals who manage special tasks and social problems on family welfare.

#### School of Family Environment and Welfare at Chonnam National University

This Department was established in 1981 and changed its name from Home Management to Family Environment and Welfare in 2002. The Department has 242 students and 8 faculty members.

Major fields consist of: consumer economics & consumer sciences, planned housing and welfare, child development and counseling, family studies and social welfare.

#### Professors

- Duck-Soon Hwang, Ph.D.
   [Professor, Consumer Economics, hds420@jnu.ac.kr]
- Mi Hee Kim, Ph.D.
   [Professor, Housing Planning and Welfare, mhk@jnu.ac.kr]
- Sook Lee, Ph.D.
   [Professor, Child Care and Counseling, sooklee@jnu.ac.kr]
- Kyeong-Shin Kim, Ph.D. [Professor, Family Studies, kks@jnu.ac.kr]

- Eun-Sil Hong, Ph.D. [Professor, Consumer Sciences, esmail@jnu.ac.kr]
- Jeonghwa Lee, Ph.D.
   [Professor, Welfare for the Elderly, jhlee2@jnu.ac.kr]
- Joo-Yeon Lee, Ph.D.
   [Professor, Child Development & Child Care, idscot@jnu.ac.kr]
- Jeong-Ha Hwang, Ph.D. [Associate Professor, Social Welfare, jhwang@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits with 42 credits from electives.

# What Do You Study?

Electives	Child Day Care Curriculum
Childcare Practicum	Child Welfare

Childcare Teacher Education Community & Social Welfare Community Welfare Consumer Counseling & Practice Consumer Decision-Making Consumer Education and Information Consumer Policy Consumer Science Counseling and Case of Housing Welfare Counseling for Children Development and Assessment on Day Care Program Family Life Education Family Relationships Family Resources Decision-Making Family Therapy & Practice History Of Housing & Interior designs Home Economics Household Work & Time Management Housing Housing and Community Housing Management Human and Welfare Human Behavior & Social Environment Infant and Toddler Development Institutional Household Management Introduction to Healthy Families Introduction to Housing Welfare Introduction to Interior Design Introduction to Social Welfare Investment and Insurances Korean Family Living Culture Language Education for Young Children Management in Consumer Finance

Mental Hygiene Multi Family Housing Planning and Design Play and Play therapy Practice in Family Resource Management Research Methods for Social Welfare Safety Management for Children Science Education for Young Children Skills and Techniques for Social Work Practice Social Welfare Administration Social Welfare and Law Social Welfare for the Elderly Social Welfare Policy Social Work Practice Theories Social Work Practicum Social Work with Family Teaching Methods for Infants and Young Children Teaching of Art for Early Children The Family Theories and Studies on Child Day Care

#### Teaching Profession Courses

A Course on Home Economics Logic and Essay Writing Research and Teaching of Home Economics Materials Theory of Home Education

#### Minor Courses

Family Relationships Home Economics Infant And Toddler Development

21 credits should be chosen

#### Careers

Students can obtain national qualifications, such as for becoming nursery school teachers, home health experts, social workers or other qualifications, such as for being play therapy workers or in other spheres, such as a play therapy workers, consumer counselors or a residential environment experts.

Also, some students can get middle and high school teaching qualifications in home economics and can enrol in the Family Environment & Welfare or Home Economics major in the graduate school of education.

Graduates from our department work as professors, researchers in their major fields, instructors, public workers responsible for social welfare, and heads of kindergartens or social welfare organizations.

Division of Food & Nutrition

Contact Information

# What is Division of Food and Nutrition?

Food and Nutrition is the science to understand the roles of nutrients in human physiology and the characteristics of foods. The curriculum of the Division focuses on the basic and applied sciences related to food science, nutrition science, and foodservice management. The ultimate goal is to educate students to become professional leaders who are able to contribute to the promotion of health and welfare of humans and to execute research in the field of food and nutrition. The Division of Food and Nutrition consists of two majors: Food and Bioscience, and Nutrition and Life Science.

## Food and science Major

This major emphasizes a comprehensive understanding for food functions, including chemical, biological and physical properties. The aim of the major is to educate students as professionals in this field by providing a wide variety of lectures, experiments and practice courses covering cooking experiments, food processing, food preservation, food materials, foodservice management, and food hygiene. The major offers ready-to-work classes, including analysis of food components and human nutrition related to bioscience, flavors, pigment, and texture related to sensory science, fermented foods related to traditional food culture, and technologies necessary for food products.

#### Nutrition and Science Major

This major focuses on the understanding of nutrient metabolism and the relationship between human nutrition and health. The major's goal is to educate students as nutrition professionals who contribute to the prevention of nutrition- and aging-related diseases. To understand nutrition and life science, basic and advanced classes are provided. Also, the major offers ready-to-work classes (Practice in Personalized Nutrition Therapy, Nutrition Education and Counseling Practice, Diet Therapy Lab and Field Work for Dietitian) and specialized tracks for clinical nutritionist, public health professional, nutrition teacher in school, and development of nutraceuticals.

## Professors

- Deok-Young Jhon, Ph.D. [Professor, Food Microbiology, dyjhon@jnu.ac.kr, 062-530-1335]
- Malshick Shin, Ph.D. [Professor, Food Science, msshin@jnu.ac.kr, 062-530-1336]
- Chang-Bum Ahn, Ph.D. [Professor, Food Chemistry and Processing,

ahn321@jnu.ac.kr, 062-530-1351]

- Tai-Sun Shin, Ph.D. [Professor, Food Analysis, shints@jnu.ac.kr, 062-530-1352]
- Bok-Mi Jung, Ph.D. [Professor, Food Service, jbm@jnu.ac.kr, 062-530-1353] • Woojin Jun, Ph.D.

[Professor, Functional Food, wjjun@chonnam.ac.kr, 062-530-1337]

- Young-Ran Heo, Ph.D. [Professor, Nutrition, yrhuh@jnu.ac.kr, 062-530-1338]
- Hyun-Jung Chung, Ph.D.
   [Associate Professor, Food Chemistry, hchung@jnu.ac.kr, 062-530-1333]
- Young-Shick Hong, Ph.D. [Associate Professor, Nutritional Metabolomics,

# Degree Requirements

chtiger@jnu.ac.kr, 062-530-1331]
Jung-Mi Yun, Ph.D. [Associate Professor, Nutrition Education and Epigenetics, sosung75@jnu.ac.kr, 062-530-1332]
Yongjoo Park, Ph.D. [Assistant Professor, Clinical Nutrition

parkcy@jnu.ac.kr, 062-530-1354] • Ok-kyung Kim, Ph.D. [Assistant Professor, Nutritional Biochemistry, 20woskxm@jnu.ac.kr, 062-530-1334]

Students are required to earn 130 credits with 48 credits from major courses. Students must pass a comprehensive exam for a bachelor's degree and demonstrate proficiency in a foreign language.

# What Do You Study? (Course list)

Basic Nutrition Cultural Aspects of Food and Nutrition Food Microbiology Food Science Human Physiology Organic Chemistry Principles of Food Preparation

#### ■ Food and science Major

Applied Food Science and Practice Bakery and Confectionary Lab Clinical Nutrition Diet Therapy Experimental Design and Statistic Food Nutrient Analysis Food Hygiene Food Preservation Food Marketing & Services Food Pigment Functional Foods Lab Field Work for Dietitian Food Processing Food Enzymology Food Microbiology Lab Food Chemistry Food Chemistry Lab

Food Catering Flavor Science Food Patent and Inauguration Food Sensory Evaluation and Lab Food Rheology Food Fermentation and Lab Food Hygiene Related Laws HACCP, GMP and Lab Institutional Food Service Management Instrumental Analysis and Lab Laboratory for Analysis of Food Nutrients Management of Food Service Nutrition Chemistry Nutrition in Life Cycle Nutrition Education Nutritional Assessment Nutrition and Biochemistry Practice in Quantity Food Production Practice in International Food Preparation Practice in Development of Special Foods Science of Functional Food Science of Biofood Materials Study of Food Physiological Activities Understanding of Regional Bio-Industry

#### Nutrition and Science Major

Applied Food Science and Practice	Law in Food Hygiene
Aging and Nutrition	Management in Quantity Food Production
Advanced Nutrition	Molecular Nutrition
Biochemistry	Nutrition in Life Cycle
Biochemistry Lab	Nutrition and Biochemistry
Childhood Development & Nutrition	Nutritional Epidemiology
Clinical Nutrition	Nutrition and Cell Signaling
Community Nutrition	Nutritional Assessment & Laboratory
Current Topics in Nutrition	Nutrition Education and Counseling Practice
Diet Therapy Lab	Nutrition Lab
Diet Therapy	Nutrition during Pregnancy and Lactation
Food Chemistry	Nutritional Management in Institution
Food Hygiene	Nutritional Pathophysiology
Food service Management and Marketing Strategy	Public Health
Food Processing and Preservation	Practice in Personalized Nutrition Therapy
Field Work for Dietitian	Planning and Evaluation of Nutrition Program
Food Patent and Inauguration	Phytonutrient Metabolism
Human Resources Management	Practice in Development of Special Foods
Issues in International Nutrition and Policy	Statistics for Natural Scientists
Institutional Food Service Management	Sports Nutrition

# Careers

Graduates are qualified to apply for license certificate tests as follows

- Dietitian
- Sanitary Technician
- Nutrition Teacher

- Engineer Food Processing

- professors/Educators

Graduates have a wide variety of employment opportunities as follows:

- dieticians in hospitals, schools, and industries
- nutrition teachers at elementary, middle, and high schools
- nutrition researchesr in food industry, government research institute, healthcare organization, academic institution

# Clothing & Textiles

*Contact Information* Tel: +82-62-530-1340 Fax: +82-62-530-1349 E-mail: a0114@jnu.ac.kr URL: http://clothing.jnu.ac.kr

# What is Clothing and Textiles?

Clothing and Textiles is an academic discipline mainly concerned with textile materials, designing fashion products, and investigating consumption behavior. It acquires a broad and comprehensive understanding of textiles and apparel products based on the knowledge of natural science, technology, art and social science.

# Dept of Clothing & Textiles at Chonnam National University

The Department of Clothing and Textiles prepares students for careers in textiles, fashion design and production, textiles marketing and merchandising, fashion industry and business at national and international levels. The program educates students about the development and use of textile and apparel products. The Department has a textile and apparel laboratory equipped with modern instrumentation for material evaluation a controlled environmental CAD and DTP facilities.

# Professors

- Younsook Shin, Ph.D. [Professor, Textile Science, yshin@jnu.ac.kr]
- Soojeong Bae, Ph.D.
   [Professor, Fashion Design, sjbae@jnu.ac.kr]
- Misuk Lee, Ph.D. [Professor, Fashion Design, ms1347@jnu.ac.kr]
- Wolhee Do, Ph.D.
   [Professor, Clothing Engineering, whdo@jnu.ac.kr]

- Eunjung Kim, Ph.D. [Professor, Traditional Costume, kimej@jnu.ac.kr]
  Sookyoung Ahn, Ph.D.
- [Professor, Fashion marketing skahn@jnu.ac.kr]
- Seokho Cho, Ph.D.
   [Professor,Wearable Electronics jsh818@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, with 103 credits from Department courses and 27 credits from electives. Students must also demonstrate proficiency in a foreign language.

# What Do You Study?

Core Courses	Evaluations of Apparel Materials
Basic Fashion Design & Drawing	Fashion Color and Image Making

Human Body and Clothing Ergonomics Making Practice Basic for Korean Clothing Practice of Clothing Construction Social-Psychological Aspects of Clothing

#### Electives

Analysis of Fashion Information and Design (Capstone Design) Apparel Dyeing & Printing Lab Apparel Material Planning and Practice Apparel Materials & Management Apparel Pattern CAD (Capstone Design) Art to Wear Design & Field Study (Capstone Design) Clothing Construction and Technical Design Design and Construction of Creative Clothing Design and Making Practice for Korean Clothing (Capstone Design) Draping Fabric Design Workshop (Capstone Design) Fashion Brand Launching and Portfolio Production Fashion and Consumer Behavior Fashion Design CAD Fashion Design Workshop

Fashion Distribution Fashion Illustration Fashion Marketing Fashion Marketing Research Fashion Media Production Folk Costume Design Workshop Global Fashion Business History of Western Costume IT Fashion IT convergence programming Research & Teaching of Home Economical Material Sewing and Trimming Smart clothing technology Tailoring Textile CAD Textile Finishing and New Materials Theory of Fashion Design Traditional Clothing Works Textile-based wearable electronic devices Understanding of Korean Costume Culture

# Minor Courses Evaluations of Apparel Materials Basic Fashion Design & Drawing

#### Careers

After completing the required programs, graduates can seek diverse career opportunities in the textile and apparel business sector as textile designers, textile converters, fashion designers, hanbok designers, fashion illustrators, fashion colorists, accessory designers, fashion merchandisers, fashion retailers, fashion promoters, and models, among others.

# College of Fisheries and Ocean Sciences

*Contact Information* Phone: +82-61-659-7105~7108 Fax: +82-61-659-7109 URL: http://sea.inu.ac.kr

# School of Marine Technology

- · Power System Engineering Department
- · Department of Aqualife Science
- · Naval Architecture and Ocean Engineering
- · Marine Production Management
- · Environmental Oceanography

Power System Engineering *Contact Information* Tel: +82-61-659-7130 Fax: +82-61-659-7139 E-mail: engine@jnu.ac.kr URL: http://engineer.jnu.ac.kı

# What is Power System Engineering?

The Division of Power System Engineering is committed to educating future leaders in the field of engineering. The graduate program focuses on training experts in the marine system industry, a field which requires familiarity with state-of-the-art technology. It also nurtures skills in power generation, as well as in both the mechanical and electrical engineering fields.

## Division of Power System Engineering at Chonnam National University

Power System Engineering aims to educate students to meet the great demand for knowledge of theories and practices of power system engineers. The program aims to expose students to the basic skills and knowledge in the fields of mechanical and electrical engineering, electronics, and automatic control systems. It also delivers an all-encompassing education and fosters research through cooperation with both industry and other academic institutions. Furthermore the department is also involved with the supply of technical and research manpower to the machinery and maritime industries.

# Professors

- Dong-Jun Yeo, Ph.D.
   [Professor, Dynamics of Machines, djyeo@jnu.ac.kr]
- Kyong-Uk Yang, Ph.D.
   [Professor, Hydraulic-Pneumatic Control, yangku@jnu.ac.kr]
- Myung-Soo Choi, Ph.D. [Professor, Mechanical Vibration, engine@jnu.ac.kr]
  Woo-Gyeong Wang, Ph.D. [Professor, Internal Combustion Engine. wangwk@jnu.ac.kr]

# Degree Requirements

It will take 4 years for students of the faculty of Marine Technology to obtain a bachelor's degree. They are required to obtain 130 credits before graduation. On average, they will take 18 credits each semester.

# What Do You Study?

Thermodynamics & Exercises Fluid Mechanics & Exercises Strength of Materials & Exercises Internal Combustion Engine Engineering Mathematics Engineering Mechanics Engineering Materials Electrical Engineering Introduction to Naval Architecture Workshop Practice

- Auxiliary Machinery Fuel and Combustion Engineering Electronic Engineering Programming and Practice Machine Design And Exercises Mechanics of Machinery and Experiments Refrigeration-Air Conditioning & Practice External Combustion Engines Fluid Machinery Automatic Control Mechanical Engineering Practice Comprehensive training of marine engineering Engine English Internal Combustion Engine Practice Auxiliary Machinery Practice Sequence Control Practice External Combustion Engine Practice
- Electric Electronic Practice Maritime Law & International Entente Measurement Engineering Engine Management & Safety Embarkation Training Hydraulic Engineering-Pneumatic Marine Pollution Response Practice Leadership & Teamwork [ERM] Analysis of Dynamic System Noise & Vibration Engineering Heat Transfer Electric Machinery Propulsion Engineering Computer Aided Mechanical Design Practice 3D CAD & Practice Introduction to Engineering

#### Careers

Graduates may seek careers in naval architecture companies, heavy industry firms, shipping companies, maritime police organizations, automobile companies, mechatronics firms, the civil service, and various research institutes – both domestically and internationally.

Department of Aqualife Science *Contact Information* Phone: +82-61-659-7160 Fax: +82-61-659-7169 E-mail: kkh@jnu.ac.kr URL: http://www.jnu.ac.kr

# What is the Department of Aqualife Science?

Aqualife Science is mainly concerned with the science and art of marine biology, aquaculture and fisheries. The department aims to have students obtain good technical knowledge on marine fisheries' resources and also contribute to the sustainable use and increased production of fish.

The course provides a solid foundation and applied studies in zoologies of vertebrates and invertebrates, Phycology, aquaculture, aquaculture environment ecology, physiology, ecology, genetics, molecular biology, fisheries business management, etc.

The department was established the Yeosu Public Fisheries School in May of 1915 and has produced a multitude of alumni in the field of aquaculture and fisheries over the past 80 years.

Now it has gathered an able and talented research staff in various majors and runs undergraduate and post-graduate courses and additionally graduate schools of industry and education.

After graduation, students may pursue careers in the field of research institutes(National Fisheries Research and Development Institute, Korea Institute of Ocean Science and Technology, research institutes of local governments), administrative agencies (Maritime and fisheries ministry and local governments) and companies feeds, and seafood to name but a few.

# School of Aqualife Science at Chonnam National University

The Department aims to have students acquire good technical knowledge of marine biology and develop their potential capacity to utilize, conserve, and manage marine resources. To this end, it provides specialized subjects regarding fish, shellfish, and seaweed farming along with a basic knowledge of aquaculture.

The Department is composed of eight main laboratories: aquaculture environment ecology, resource organisms, fish culture and nutrition, reproduction organisms, invertebrate culture, algae culture, fisheries business management, and molecular physiology.

# Professors

- Woon Kyo Lee, Ph.D. [Professor, Reproduction organisms, wklee@jnu.ac.kr, +82-61-659-7161]
- Gwan Sik Jeong, Ph.D.
   [Professor, Fish Culture and Nutrition., ksjeong@jnu.ac.kr, +82-61-659-7162]
- Kyeong Ho Han, Ph.D.
   [Professor, Ichthyology Ecology and Taxonomy, aqua05@jnu.ac.kr, +82-61-659-7163]
- Kyeong Ho Kang, Ph.D.
   [Professor, Invertebrate Culture, mobidic@jnu.ac.kr, +82-61-659-7165]
- Sang Duk Choi, Ph.D.
   [Professor, Aquaculture Environment Ecology, choisd@jnu.ac.kr, +82-61-659-7166]
- Kang Hee Kho, Ph.D.
   [Professor, Molecular Physiology, kkh@jnu.ac.kr, +82-61-659-7168]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years, with 18 credits earned on average per semester.

## What Do You Study?

Physiology of Aquatic Organism and Experiments (3) Aquatic Breeding Science and LAB (3) Invertebrate Zoology and Lab (3) Developmental Biology lecture and experiment (3) Cell Biology lecture and experiment (3) Fisheries Oceanography and Lab (3) Ichthyology and experiment (3) Chemistry lecture and experiment (3) Phycology and Lab (3) Introduction and Experiment to Aquaculture (3) Biological chemistry and Lab (3) Fish culture and Lab (3) Phycocultivation Science and Lab (3) Coastal fisheries biology and Lab (3) Aquaculture Biology Disease and Lab (3) Invertebrate culture and Experiment (3) Skin-Scuba Diving (1) Readings in Aquaculture texts and Practice (3) Marine Retoration Ecology and Field Training (3) Molecular biology and Experiments (3) Biotechnology and Experiments (3) Quality control and experimental fisheries (3)

Aquaculture expert learning and training (3) Zoology and Experiment (3) Botany and experiment (3) Fresh-water Fish culture and experiment (3) Marine-fish Culture and Lab (3) Fisheries Culture Field Practice (2) Fresh-water Biology and lab (3) Principles of Fisheries and law (3) Experimental Biology and practice (3) Fisheries Business Management and Practice (3) Aqua-Environment and Ecology & Lab (3) Food Organism and Lab (3) Fresh-water Biology and lab (3) Aquaculture system and lab (3) Aquaculture seed production and practice (3) Fish Nutrition and Lab (3) Animal Physiology & Lab (3) Plant Physiology & Lab (3) Genetics and Lab (3) Organic Chemistry and Lab (3) Fisheries Resources Dynamics (3) Marine Ecology and Lab (3)

#### Careers

Graduates may seek careers with the Ministry of Maritime Affairs and Fisheries, the Korea Ocean Research and Development Institute, and the National Fisheries Research and Development Institute. They may find positions as civil servants, fisheries officers, teachers, professors, and fisheries managers.

Naval Architecture and Ocean Engineering <u>Contact Information</u> Tel: +82-61-659-7150 Fax: +82-61-659-7159 E-mail: parkih@jnu.ac.kr URL: http://oceaneng.jnu.ac.kr

# What is the Naval Architecture and Ocean Engineering?

Naval architecture and ocean engineering focuses on research and education in a variety of areas from basic theory to advanced technology on ship and offshore structures. The final goal of the Department lies in the design and production of the reliable and cost-effective transport systems and offshore structures which can carry out missions successfully in harsh ocean environments. The research scopes of naval architecture consist of resistance and propulsion, propulsors, structures and materials, motion and maneuverability, noise and vibration, and welding. Ocean engineering involves various scopes of technical problems that arise during the design, construction, load-out, and operation of various forms of structures developed to meet the needs of offshore petroleum and construction industries. Research on the marine environment itself is also one of the major research fields of the Department. To meet increasingly complex technical demands, the Department extends research fields to cover rigorous analysis of detailed subjects using powerful computers. In particular, it offers on-board training course on university-owned research and training ships.

# Department of Naval Architecture and Ocean Engineering at Chonnam National University

- 1997. 3: Establishment of Department of Ocean Engineering
- 1999. 3: Reorganization of Department of Ocean Engineering and Ocean Environmental System
- 2006. 3: Reorganization of Department of Ocean Engineering, Ocean Environmental System, Aquaculture, Bio-resources Utilization, Marine Production Management and Power System Engineering
- 2007. 9: Renaming of Naval Architecture and Ocean Engineering

# Professors

- Moon-Ock Lee, Ph.D.
   [Professor, Environmental Hydraulics (Coastal Oceanography), leemo@jnu.ac.kr]
- Il-Heum Park, Ph.D.
   [Professor, Coastal and Ocean Engineering, parkih@jnu.ac.kr]
- Ok-Sam Kim, Ph.D. [Professor, Manufacturing Engineering of Ships,

kos@jnu.ac.kr]

- Jong-Kyu Kim, Ph.D.
   [Professor, Ocean Informatics, kimjk@jnu.ac.kr]
- Hee-Jong Choi, Ph.D.
   [Professor, Ship Design, chiohj@jnu.ac.kr]
- Jee-Hun Song, Ph.D.
   [Professor, Ship Structural Vibration, jhs@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years, with 18 credits earned on average per semester.

#### What Do You Study?

Engineering Mathematics 1 (3) Engineering Mathematics 2 (3) Dynamics of Structures and Exercise(3) Structure Dynamics (3) Structural Dynamics (3) Structural Vibration (3) Naval Architectural Calculation and Practice (3) Shipbuilding technology (3) Ship structural design (3) Auxiliaries of ship (3) Manufacturing of Shipbuilding (3) Ship Acoustic and Noise Engineering (3) Welding Engineering of Ship and Practice (3) Ship Motion and Controllability (3) Ship Equipments (3) Material Science of Ship (3) Ship Resistance (3) Optimum design of ship & Practice(3) Ship Propeller Design (3) Ship Structural Designand Exercise(3) Fluid Mechanics 1 (3) Fluid Mechanics 2 (3) Computer aided drawing of ship & Practice (3) Numerical Methods for Engineers & Practice (3) Introduction to Naval Architecture (3)

Naval Architecture equipment design (3) Project of Ship & Ocean Engineering (3) Ship and Ocean Engineering Laboratory (3) Professional English for Naval Architecture and Ocean Engineering (3) Capstone Design (3) Computer-Aided Ship Hull-From Design (3) Design of special ship (3) Marine Geoinformatics & Practice (3) Introduction to Ocean Engineering (3) Coastal and Offshore Structures Design and Training(3) Marine Meteorology (3) Ocean Energy Engineering (3) Dynamical Oceanography (3) Marine Information Engineering & Practice (3) Water Wave Mechanics and Field Observations (3) Offshore Plant Engineering (3) Oceanography and Field Training (3) Marine Environmental Engineering (3) Marine Environmental Informatics & Practice (3) Theories of Teaching in Mech. & Metal. Eng. Edu. (3) Text Research & Teaching Methodology in Mech. & Metal. Eng. Edu. (3) Logic and Essay writing in Mech. & Metal. Eng. (3)

# Careers

Graduates currently play active roles in central and local government organizations (e.g., Ministry of Land, Transport and Maritime Affairs, Ministry of Foreign Affairs and Trade Ministry of Education, Science and Technology), public corporations, and research institutes (e.g., Korea Ocean Research and Development Institute, Korea Marine Equipment Research Institute, Korea Institute of Construction Technology). Also, private companies and corporations dealing with ships, offshore and coastal structures, floating islands and harbors are looking to hire naval and ocean engineers. Some graduates go on to graduate school to further specialize in their discipline in the field of naval architecture and ocean engineering.

Marine Production Management *Contact Information* Tel: +82 61 659 7120 Fax: +82 61 659 7129 E-mail: hhshin@jnu.ac.kr URL: http://marine.jnu.ac.kr

### What is Marine Production Management?

The aim of the Marine Production Management program is to foster high-quality human resources who will lead continuous improvement efforts and efficient management of marine resources. The Department? It provides education related to eco-friendly and efficient marine production systems and shipping service systems for marine transportation and fishery production (Official Education and Training Institution for Marine Officers designated by the Ministry of Oceans and Fisheries). The department also provides students with opportunities to visit other countries through overseas ship boarding practices.

## School of Marine Technology at Chonnam National University

Marine Technology (MT) is one of seven national agendas with regard to striving to achieve excellence in areas of technology(IT, BT, ET, NT, ST, CT, MT) fixed by the National Science and Technology Council. MT is considered to be the future technology for achieving such goals as increasing competitiveness in the marine industry, intensifying the management of marine territory, and preventing the draining of marine resources and global environmental changes, for which everyone in recent history shares the blame. The aim here is to foster excellent talents who will lead the new marine age of the 21st century by sharing information through international workshops and developing technology through cooperative research.

It provides customized education, on-the-job training opportunities through cooperation with related industries, government agencies, and research institutions. It specializes in the development of marine high-technology, the development and use of ocean resources, and the maintenance of the ocean environment. This school currently consists of 5 majors: Marine Production Management, Aquaculture, Power System Engineering, Environmental Oceanography, and Naval Architecture and Ocean Engineering.

## Professors

- Doo-Jin Hwang, Ph.D.
   [Professor, Fisheries Acoustics, djhwang@jnu.ac.kr]
- Taeho Kim, Ph.D.
   [Professor, Fisheries
   Engineering, kimth@jnu.ac.kr]
- Hyong-Ho Shin, Ph.D. [Professor, Ship Navigation,

hhshin@jnu.ac.kr]
Jihoon Lee, Ph.D. [Professor, Fishing System, jihoon.lee@jnu.ac.kr]
Kyounghoon Lee, Ph.D. [Professor, Fishing Information khlee71@jnu.ac.kr]

## Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years, with 18 credits earned on average per semester.

# ■ What Do You Study?

Boarding Training1	Leadership and Teamwork Training
Boarding Training2	Leisure Fishing Technology and Practice
Boarding Training3	Marine Laws
Celestial Navigation	Marine Traffic Law
Computer Aided Fishing Gear Design & Practice	Maritime English
Deep-sea Fishing	Maritime Safety Training
ECDIS Training	Meterology Traning
Fisheries hydrography	Nautical Instrument and Practice
Fisheries Management	Numerical Analysis & Practice
Fisheries Resources Dynamics	Ocean Fisheries Law
Fishery Biology	Ocean Systems Control Theory & Practice
Fishery Management in Loading of Ship	Oceanography and Pratice
Fishing Gear Design	Principles of Fisheries
Fishing Gear Engineering	Radar Simulaition Training
Fishing Gear Materialy	Radio Navigation and Practice
Fishing Information	Seamanship
Fishing Methodology	Seamanship Control
Geo-Navigation	Techniques of Fishing Machinery & Lab.
GMDSS Communication Training	Techniques of Fishing System

# Careers

Graduates may find careers as public service employees of local autonomous entities or institutions under the control of the Ministry of Oceans and Fisheries, Korea Coast Guard, custom examiners, researchers of the National Fisheries Research and Development Institute or the Korea Institute of Ocean Science and Technology, personnel of the Korea Marine Environment Management Corporation, the Korea Ship Safety Technology Authority, the National Federation of Fisheries Cooperatives, deep-sea fishery companies, companies related to fisheries, marine transportation business (possible substitution of military service), and educational institutions (after completing the teaching training course). Environmental Oceanography *Contact Information* Tel: +82-61-659-7140 Fax: +82-61-659-7149 E-mail: shinhc@jnu.ac.kr URL: http://ocean89.jnu.ac.k

# What is Environmental Oceanography?

The most striking feature of Earth in the 21st century is the marine environment. Students aim to understand the phenomena of the marine environment, focusing on the global ecosystem, the scientific and technological development for space uses of marine environment, the development of marine energy, the exploration of marine resources, and the management and conservation of the marine ecosystem. More recently, sustainable ecosystem development and management of marine environments has become a crucial branch of study. This program provides the understanding of scientific and technological applications for marine environments. The study of marine phenomena may be divided into four broad caregories as follows: biology, chemistry, physics, and geology, leading to a study of the uses and management of the true marine environment. The program's main purpose is to educate students into experts in developing various and plentiful marine resources. In addition, faculty members and students are involved actively in advance studies and exploration with overseas universities and international partners: Students have opportunities for both research and study abroad.

# Major in Environmental Oceanography at Chonnam National University

As a leading partner in marine science and technology research and development, the Department of Environmental Oceanography has a study program providing the understanding of scientific and technological applications for marine environments.

The program is divided into four main broad categories as follows: biology, chemistry, physics, and geology. The main purpose of this program is to educate about and foster a greater understanding of the essential preservation and development of our diverse and plentiful marine resources.

### Professors

- Yang Ho Yoon, Ph.D.
   [Professor, Phytoplankton Ecology and Environmental Science, yoonyh@jnu.ac.kr]
- Yeon Gyu Lee, Ph.D. [Professor, Marine Geology, lyg6342@jnu.ac.kr]
- Hyo-Sang Choo, Ph.D.
   [Professor, Physical Oceanography, choo@jnu.ac.kr]
- Hyun Chool Shin, Ph.D. [Professor, Marine Benthic Ecology, shinhc@jnu.ac.kr]
  Hyeon Seo Cho, Ph.D. [Professor, Chemical Oceanography, hscho@jnu.ac.kr]
  Ho Young Soh, Ph.D.
- [Professor, Zooplankton Systematics and Ecology, hysoh@jnu.ac.kr]
- Ihn-Sil Kwak, Ph.D.
   [Professor, Zoology,iskwak@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 Years, with 18 credits earned on average per semester.

#### What Do You Study?

#### Core Courses

Environmental Oceanography & Lab 1 (3) Environmental Oceanography & Lab 2 (3) Marine Ecoenvironmentalogy & Lab 1 (3) Marine Ecoenvironmentalogy & Lab 2 (3)

#### Electives

Introduction to Fisheries Science (3) Marine Biodiversity & Lab (3) Ocean-ecotoxicology & Training (3) Geophysical Fluid Dynamics for Oceanographer and Lab (3) Marine Chemistry and Lab (3) Marine Field Observation 1 (1) Zooplanktonlogy & Lab (3) Ocean Animal Behavior & Lab (3) Ocean Security and Lab (3) Marine Pollution and Lab (3) Marine Sedimentology and Lab (3) Phytoplanktonlogy and Lab (3) Estuary Ecology (3) Seawater Analysis and Lab (3) Marine Observations and Technics Practice (3) Marine Field Observation 2 (1) Marine Meteorology and Lab (3) Marine Benthic Ecology and Lab (3) Marine Geotectonics and Lab (3) Statistics for Biological Oceanography (3) Fisheries Oceanography and Lab (3) Deep Sea Biology (3) Coastal Environment Oceanography and Lab (3) Intertidal Ecology and Lab (3) Marine Paleontology and Lab (3) Chemical Oceanography and Application (1) Biological Oceanography and Application (1) Fisheries Oceanography and Application (1) Geological Oceanography and Application (1) Marine Ecosystem Assessment (3) Ocean-Biotoxicology (1) Marine Energy Developments and Practice (3) Biology of Marine Nekton and Lab (3) Introductional Environmental Engineering & Lab (3)

#### Careers

Graduates pursue careers as public service personnel of local autonomous organizations, or institutions under the control of the Ministry of Maritime Affairs and Fisheries. They may find positions as maritime police officers, custom examiners, researchers of the National Fisheries Research and Development Institute or the Korea Ocean Research and Development Institute, or personnel of the Korea Marine Pollution Response Corporation, the Korea Ship Safety Technology Authority, the National Federation of Fisheries Cooperatives, deep-sea fishery companies, companies related to fisheries, marine transportation business (possible substitution of military service), and educational institutions (after completing the teaching training course).

# Department of Aqualife Medicine

*Contact Information* Phone: +82-61-659-7170 Fax: +82-61-659-7179 Email: ljs@jnu.ac.kr URL: http://fishpath.jnu.ac.kr

# What is Aqualife Medicine?

Aqualife Medicine enable the studies in basic medical sciences, fish medicines, general hygiene management, and the diagnosis, treatment, and prevention of fish disease. On the basis of fundamental studies, the major aims are to cultivate qualified experts in the field of aqualife medicine and public sanitation, and to train fish doctors to contribute fisheries' production by effectively managing fish and shellfish diseases.

# Department of Aqualife Medicine

The Department of Aqualife Medicine was established in 1995 for the purpose of research and education of disease diagnosis and control of aquatic organisms to produce safe and high quality food for human consumption. Students have many opportunities to conduct lab experiments, to get on-field training, practice interviews, overseas training and master in scientific techniques. Students are encouraged to promote their professional qualifications by pursuing graduate studies.

# Professors

- Eunheui Kim, Ph.D. [Professor, Pathogenic Bacteriology and Genetics, ehkim@jnu.ac.kr]
- Jung Sick Lee, Ph.D.
   [Professor, Fish and Shellfish Anatomy, ljs@jnu.ac.kr]
- Myung Joo Oh, Ph.D.
   [Professor, Fish Virology and Parasitology, ohmj@jnu.ac.kr]
- Heung Yun Kim, Ph.D.
   [Professor, Fish Physiology and Toxicophysiology, hykim@jnu.ac.kr]

- Sungju Jung, Ph.D.
   [Professor, Fish Pathology and Immunology, sungju@jnu.ac.kr]
- So Young Kang, Ph.D.
   [Professor, Fish Pharmacology and Pharmacognosy sykang1@jnu.ac.kr]
- Toyohiko Nishizawa, Ph.D. [Professor, Virology and Cell Biology jjnishi@jnu.ac.kr]
- Wi-Sik Kim, Ph.D. [Assistant Professor, Clinical diseases, wisky@jnu.ac.kr]

# Degree Requirements

Liberal		Major Credits			General	Graduation
Major	Arts	Minimum Recognition	Enhancement	Total	Electives	Credits
Aqualife Medicine	30			83	27	140

Students are required to earn the above credits, as well as demonstrate proficiency in a foreign language.

# What Do You Study?

Life Science and Lab Developmental Biology and Lab.(Capstone Design) Introduction to Aqualife Medicine Fisheries Pharmacology and Lab. 1 Medical Biochemistry and Lab 1 Fisheries Pharmacology and Lab. 2(Capstone Medical Biochemistry and Lab 2 Design) Pathology of Fisheries Animal and Lab(Capstone Principles of Aqualife Medicine Clinical Lecture of Aqualife Medicine Design) Pathology of Noninfectious Disease and Lab. Water Analysis and Lab. Management of Fish Hospital and Training Ecology of Aquatic Disease Aquatic Animal and Ecology Study of Clinical Cases Aquaculture of Fisheries Animal and Training Field Management of Fish Diseases Aquatic Environment and Disease Invertebrate Diseases and Lab. Anatomy of Aquatic Animal and Lab. Disease of Seaweeds and Lab. Fish Parasitology and Lab. Aquatic Toxicology and Lab. Fish Immunology and Lab. Prophylaxis of Disease Molecular Biology and Lab. Quarantine Management and HACCP of Aquatic Nutrition and Nutritional Diseases of Aquatic Organisms Virus and Viral Disease Animal General Histology and Lab. Diseases of Ornamental Fishes and Lab. Virology & Lab Aquatic Laws Histology of Fisheries Animal and Lab. Bacteriology and Lab Aquatic Animal Physiology and Lab. Aquatic Public Health(Capstone Design) Bacterial Fish Pathogens and Lab. Organic Chemistry and Lab Microbiology and Lab. Principles of Fisheries Hematology and Lab.

#### Careers

Category	Career Fields
Government Organizations	<ul> <li>National Fishery Products Quality Management Service(NFQS) and related organizations</li> <li>Public servants in charge of fishery affairs in the Provincial, Municipal, and County offices</li> <li>National Institute of Fisheries Science - Korea Ocean &amp; Fisheries Institute</li> <li>Research institutes under local governments, corporate research centers, etc.</li> </ul>
Educational Organizations	- Secondary school teachers
General Corporations	<ul><li>Pharmaceutical companies</li><li>Animal feed manufacturers</li></ul>
Fishery-related Fields	<ul> <li>National Federation of Fisheries Cooperatives</li> <li>Korea Fisheries Cooperatives</li> <li>Joint fishery product market</li> <li>Fishery industry</li> <li>Fishery product distribution &amp; processing companies</li> <li>Launch of Fish Disease Control Center</li> <li>Launch of office in charge of medicines for aquatic organisms</li> </ul>

Department of Marine Bio Food Science \_\_*Contact Information* Tel: +82-61-659-7210 Pax: +82-61-659-7219 C-mail: foodkims@jnu.ac.kr

# What is Marine Bio Food Science?

Marine Bio-Food Science is the scientific field of marine-derived foods studying the basic principles of marine food sources, food quality, processing and preservation of food materials, distribution, sanitation, food technology, and methods evaluating food safety.

# What is the Department of Marine Bio Food Science?

The Marine Bio-Food Science department was established in 1987 and has educated in various techniques and harnessed knowledges about food fields related with marine-derived resources.

Furthermore the department has strived to become a leader in the development or production of functional and high quality food materials that could benefit all humankind.

The students can have many opportunities to train in companies, practice interviews and master scientific techniques. We provide an excellent educational environments with outstanding facilities and scholarships to our students.

# Professors

- Tae-jin Bae, Ph.D.
   [Professor, Seafood Processing, bae5658@jnu.ac.kr]
- Dong Soo Kang, Ph.D.
   [Professor, Fisheries Chemistry, dskang@jnu.ac.kr]
- Sun-jae Kim, Ph.D.
   [Professor, Food Safety, foodkims@jnu.ac.kr]

- Gin-Nae Ahn, Ph.D.
   [Associate professor, Marine Biotechnology, gnahn@jnu.ac.kr]
- Sun-Hee Cheong, Ph.D. [Associate professor, Functional Foods, sunny3843@jnu.ac.kr]

# Degree Requirements

Liberal		Major Credits			General	Graduation
Major	Arts	Minimum Recognition	Enhancement	Total	Electives	Credits
Marine Bio Food Science	30	48	21	69	31	130

Students are required to earn the above credits, as well as demonstrate proficiency with a foreign language.

# What Do You Study?

Molecular Biology Fishery Products Maintenance Biochemistry Analytical Chemistry and Lab. Food Utilization 1 and Experiment Food Utilization 2 and Experiment Marine toxicology Food Hazard analysis & Practice Molecular Nutrition General fisheries Fisheries Law Fisheries Marketing Fisheries Quality Management IntroductiontoFisheriesScience Physiology Food Bioscience Food Science Sea Food Refrigeration Fisheries Industrial Materials Bio-food English in Major Field Food Additives Instrumental Analysis Seaweed Food Processing Food Safety & Practice Marine food materials and experiments Food Enzymology Food Engineering Basic Concepts Seafood manufacturing practice

Marine Biomaterials & Lab Utilization of Fisheries By-Products Marine Bio-Food and Lab. Seafood Design Technology and Experiment Seminar in bio-food materials Canned Sea Food Technology Animal Cell Culture and Lab. Fermentation metabolism Field Training of Marine Biotechnology Microbiology & Practice Organic Chemistry and Lab Seafood Chemistry and Lab. Seafood processing and lab. Functional Examination of Fisheries Product Quantitative Analysis of Seafood and Lab. Fermentation Chemistry & Practice Marine Natural Products Chemistry

### Careers

#### **O** Employment

Graduates in the Marine Bio-Food Science department may expect to employment in biotechnology companies, national/private research centers, and food-related companies including in food production, processing, and distribution.

#### O Graduate school

Our department has the postgraduate courses offering intensive education leading to opportunities to become major experts in the field of Marine Bio-Food Science.

Department of Maritime Police Science \_\_*Contact Information* Fel: +82-61-659-7180 Fax: +82-61-659-7189 E-mail: hosamms@jnu.ac.kr JRL: http://police.jnu.ac.kr

# ■ What is Maritime Police Science?

The Department of Maritime Police Science offers highly motivated students basic education of law, social sciences, maritime police science, and maritime safety technology, and professional education comprising of maritime science and technology.

### Department of Maritime Police Science

Recently, due to the importance of marine environments, there are increasing concerns about the establishment of maritime sovereignty in the area. The Department of Maritime Police Science was founded to address this situation. It provides students with lectures and training necessary for maritime police officers.

# Professors

- Dall-Hyun Park, Ph.D.
   [Professor, Criminal Law, Criminal Procedure, Maritime Police Science, dhpark328@jnu.ac.kr]
- Duck-Jong Jang, Ph.D.
   [Professor, Marine Safety, Navigation, Marine Pollution Response, jdj@jnu.ac.kr]
- Ho-Sam Bang, Ph.D. [Professor, International Law of the Sea, Maritime Law, hosamms@jnu.ac.kr]
  Ki-Soo Lee, J.S.D.
- [Professor, Criminal Law, Police Science, kslee@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, with 30 credits from cultural electives, 15 credits from core courses, 35 credits from electives, and 21 credits from deepening courses. Students must also demonstrate proficiency in a foreign language.

#### What Do You Study?

Constitutional Law Introduction to Engineering General Theory of Criminal Law Principles of Fisheries International Law Science of Chivalry and Practice Introduction to Navigation Introduction to Ship Engines Engineering Materials Electrical Engineering General Theory of Civil Law Introduction to Naval Architecture Geo-Navigation Nautical Instrument and Practice Computer Aided Design Police Organization and Management Introduction to Police Science Workshop Practice Criminology Auxiliary Machinery Seamanship Control Electronic Engineering Marine Traffic Law Machine Design And Exercises Engine Management & Safety Internal Combustion Engine Seamanship External Combustion Engine Automatic Control Celestial Navigation Administrative Law Detailed Theory of Criminal Law Criminal Procedure 1 Criminal Procedure 2 Administrative Law regarding Police Civil Law Fishery Management in Loading of Ships Radio Navigation and Practice

Maritime English Practice of Manufacturing Internal Combustion Engine Practice Auxiliary Machinery Practice Sequence Control Practice External Combustion Engine Practice Electric Electronic Practice Computer Aided Mechanical Design Practice Marine Accident Management Maritime Police Science Theory of Police Investigation Ship Boarding Training Marine Laws The Law of the Sea and International Maritime Ocean Pollution Control Engine English Marine Pollution Response Practice Introduction to Public Administration GMDSS Communication Training Propulsion Engineering Fluid Mechanics & Exercises Heat Transfer Leadership and Teamwork

Total Credits: 181

#### Careers

Most graduates are expected to work as maritime police officers. They can also advance to positions in maritime administrative organizations, marine companies, national marine accident inquiry offices, and maritime-related organizations. Department of Fisheries Marine Areas, Industry, Tourism & Leisure *Contact Information* Tel: +82-61-659-7180 Fax: +82-61-659-7189 E-mail: jnukcg@naver.com URL: http://police.jnu.ac.kr

# What is the Department Fisheries, Marine areas , Industry, Tourism & Leisure?

The Department of Fisheries, Marine, Industry, Tourism & Leisure is supported by not only CNU but also Jeonnam Province(50% of scholarship) and companies(25% of scholarship) related to the major, so students who are employed at the companies belong to school can be accepted with only 25% tuition and work and study at the same time.

The educational purpose is to know various theories and application ways such as understanding of marine environment, using, develop, utilizing and preserving fishery marine resources including theories and practical education belong to many types of industry for tourism and leisure fields based on these researches about fisheries and marine areas.

Besides, amalgamated and combined major between fisheries&marine industry and tourism&leisure industry is are researched and educated for students who can contribute to public welfare society, nation and human development.

Training talents for amalgamated industry with fishery&marine and tourism&leisure Educating for capability and actual business in international and informational generation Reinforcing abilities for the 4th industrial revolution though ICT education

#### Professors

 Kyeong Ho Han, Ph.D.
 [Professor, Ichthyology Ecology and Taxonomy, aqua05@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 120 credits, normally over a period of 4 years, with 15 credits earned on average per semester.

# What Do You Study?

Fisheries & Marine Resources (3) Oceanography and Field Training (3) Fisheries & Oceanography and Lab. (3) Fisheries & Marine Education (3) Tourism Resources (3) Marine Tourism Development (3) Travel Business Management (3) Leisure Sports Tourism (3) Maritime Safety Training (3) Marine Pollution and Lab. (3) Environmental oceanography & Lab. (3) Coastal ecology and Lab. (3) Marine Energy Developments & Practice (3) Principles of Fisheries (3)

- Marine Traffic law (3) Marine Meteorology and Practice (3) Fresh-water Biology and Lab. (3) Marine Ecology and Lab. (3) Marine & Fisheries business and economics (3) Conservation Biology (3) Marine Geoinformatics & Practice (3) Resources Management (3) Tourism Law (3) Hotel and Tourism Services (3) Business Management & Practice (3)
- Culture & Tourism (3) Tourism Research & Analysis and Practice (3) Ecotourism (3) Cruse Management (3) Tourism Festival Event Planning & Practice (3) MICE Industry (3) Leisure and Sport Management (3) Marina Practice (3) Exhibition Convention Center Management (3) Leisure Practice and Start-up (3) Hotel Management (3)

# College of Veterinary Medicine

\_*Contact Information* Phone: +82-62-530-2804, 2805, 2806 Fax: +82-62-530-2809 URL: http://vetmed.jnu.ac.kr/

Veterinary Medicine

Veterinary Medicine

*Contact Information* Phone: +82-62-530-2804, 2805, 2806 Fax: +82-62-530-2809 JRL: http://vetmed.jnu.ac.kr/

#### What is Veterinary Medicine?

Veterinary medicine is the branch of science that deals with the application of medical, diagnostic and therapeutic principles pets, and domestic, wild life and livestock animals. Veterinary medicine helps human health through the careful monitoring of livestock, companion animals, and wildlife health. Modern veterinarians serve the needs of the public in a variety of significant ways: prevention of disease in animals and humans, enhancement of animal agriculture and wildlife management, humane health care of animals, research of diseases of animals and provision of wholesome food.

# College of Veterinary Medicine

The College of Veterinary Medicine exists to better the health and welfare of animals and humans. Since 1952, the Department of Veterinary Medicine has been serving the public through teaching, research and service programs benefiting animal health, public health, and environmental health in Jeonnam province. It became the College of Veterinary Medicine in 1988 when it separated from the College of Agriculture.

The College of Veterinary Medicine set up an accord in 1995 with Murdoch University, located in Australia, Since then, the College has built similar relationships with Universidad Austral de Chile (Chile), and Nippon Veterinary Medicine and Animal Science (Japan), and has had professor and student exchange programs and common research projects with these institutions.

The college trains the next generation of small and large animal veterinarians as it develops leaders in public health, disease control, food safety, environmental protection, biotechnology, higher education, and research.

The faculty and staff of the college are committed to exceptional teaching, research, and patient care. Many changes will shape the future of veterinary medical education and veterinary medicine in the future.

#### Professors

- Dong-Ho Shin, Ph.D.
   [Professor, Vet. Pharmacology, dhshin@chonnam.ac.kr]
- Mun-Il Kang, Ph.D.
   [Professor, Vet. Pathology, mikang@chonnam.ac.kr]
- Hong-Bum Koh, Med.D.
   [Professor, Vet. Microbiology, hbkoh@chonnam.ac.kr]
- Jae-Il Lee, Ph.D. [Professor, Vet. Public Health,

jaeil@chonnam.ac.kr]

- Sung-Ho Kim, Ph.D. [Professor, Vet. Anatomy, shokim@chonnam.ac.kr]
- Chang-Ho Son, Ph.D.
   [Professor, Vet. Theriogenology, chson@chonnam.ac.kr]
- Sung-Shik Shin, Ph.D.
   [Professor, Vet. Parasitology, sungshik@chonnam.ac.kr]
- Chun-Sik Bae, Ph.D.

[Professor, Vet. Surgery, csbae210@chonnam.ac.kr]

- Bong-Ju Lee, Ph.D.
   [Professor, Vet. Infectious, Diseases, bjlee@chonnam.ac.kr]
- Kyoung-Oh Cho, Ph.D. [Professor, Avian Diseases, choko@chonnam.ac.kr]
- Tae-Ho Ahn, Ph.D. [Professor, Vet. Biochemistry, thahn@chonnam.ac.kr]
- Jong-Choon Kim, Ph.D.
   [Professor, Vet. Toxicology, toxkim@chonnam.ac.kr]
- Seong-Soo Kang, Ph.D. [Professor, Vet. Surgery, vetkang@chonnam.ac.kr]
- Ki-Seok Oh, Ph.D. [Associate Professor, Vet. Theriogenology, gsoh@chonnam.ac.kr]
- Chang-Jong Moon, Ph.D. [Professor, Vet. Anatomy, moonc@chonnam.ac.kr]
- Guk-Hyun Suh, Ph.D.
   [Professor, Vet. Medicine, ghsuh@chonnam.ac.kr]
- Tae-Jung Kim, Ph.D. [Professor, Vet. Public Health,
- tjkim@chonnam.ac.kr] • Ji-Hye Choi, Ph.D. [Associate Professor, Vet. Medical Imaging, imsono@chonnam.ac.kr] • Sang-Ik Park, Ph.D. [Associate Professor, Vet. Pathology, sipark@chonnam.ac.kr] • Jong-Hwan Park, Ph.D. [Associate Professor, Lab. Animal Medicine, jonpark@chonnam.ac.kr] • In-Sik Shin, Ph.D. [Associate Professor, Vet. Pharmacology, dvmshin@chonnam.ac.kr] • Ha-Jung Kim, Ph.D. [Assistant Professor, Vet. Medicine, kimhj614@chonnam.ac.kr] • Dong-Il Kim, Ph.D. [Assistant Professor, Vet. Physiology, kimdi@chonnam.ac.kr] • Chang-Min Lee, Ph.D. [Assistant Professor, Vet. Laboratory, cmlee1122@jnu.ac.kr] • Woon-Sung Na, Ph.D. [Assistant Professor, Vet. Virology, wsungna@jnu.ac.kr] • Se-Eun Kim, Ph.D. [Assistant Professor, Vet. Surgery,
  - ksevet@jnu.ac.kr]

# Degree Requirements

Students are required to complete the 2-year pre-veterinary medical program in addition to the 4-year veterinary medical program.

They are required to earn 160 credits, with 140 credits from department courses and 20 credits from electives.

# What Do You Study?

#### Core Courses (1st)

Veterinary Physiology 1 Veterinary Physiology Lab. 1 Veterinary Biochemistry 1 Veterinary Biochemistry Lab. 1 Veterinary Histology 1 Veterinary Histology Lab. 1 Veterinary Anatomy 1 Veterinary Anatomy Lab. 1 Veterinary Physiology 2 Veterinary Physiology Lab. 2 Veterinary Biochemistry 2 Veterinary Biochemistry Lab. 2 Veterinary Bacteriology Veterinary Bacteriology Lab. Veterinary Histology 2 Veterinary Histology Lab. 2 Veterinary Anatomy 2 Veterinary Anatomy Lab. 2

#### Core Courses (2nd)

Veterinary Parasitology 1 Veterinary Parasitology Lab. 1 Veterinary Toxicology 1 Veterinary Immunology Veterinary Immunology Lab. Veterinary Pathology 1 Veterinary Pathology Lab. 1 Veterinary Pharmacology 1 Veterinary Pharmacology Lab. 1 Veterinary Applied Embryology Environmental Hygiene Veterinary Parasitology 2 Veterinary Parasitology Lab. 2 Veterinary Toxicology 2 Veterinary Virology Veterinary Virology Lab. 1 Veterinary Pathology 2 Veterinary Pathology Lab. 2 Veterinary Pharmacology 2 Veterinary Pharmacology Lab. 2 Veterinary Infectious Diseases 1 Food Hygiene Laboratory Animal Science

### Core Courses (3rd)

Swine Diseases Aquatic Animal Diseases Veterinary Radiology Veterinary Radiology Lab. Veterinary Diagnosis Veterinary Infectious Diseases 2 Wild Animal Diseases Epidemiology Epidemiology Lab. Avian Diseases Veterinary Public Health Veterinary Public Health Lab Veterinary Medicine 1 Veterinary Medicine Lab. 1 Veterinary Obstetrics 1 Veterinary Obstetrics Lab. 1 Veterinary Surgery 1 Veterinary Surgery Lab. 1 Veterinary Clinical Pathology Lab.

#### Core Courses (4th)

Veterinary Medicine 2 Veterinary Medicine Lab. 2 Veterinary Jurisprudence Veterinary Obstetrics 2 Veterinary Obstetrics Lab. 2 Veterinary Diagnostic Imaging Veterinary Diagnostic Imaging Lab. Veterinary Surgery 2 Veterinary Surgery Lab. 2 Veterinary Dermatology

#### Electives

Thesis Research Animal Hospital Management Animal Hospital Clinical Practice 1 Animal Hospital Clinical Practice 2 Animal Hospital Clinical Practice 3 Equine Medicine Pathophysiology Consulting of Industrial Animal Physiological Biochemistry Current Topics in Biotechnology Veterinary Biomedical Engineering Veterinary Drug Therapeutics Veterinary Epidemiology Veterinary Diagnostic Pathology Wild Animal Management Fish Morphology Veterinary Emergency Pharmacology of Natural Products Field Learning 1 Field Learning 2

# Careers

The Department provides students with the skills and knowledge necessary to become successful veterinarians. The Department's faculty conducts innovative and ground breaking clinical, paraclinical, and general research in the field of veterinary science.

Students may also become scientists who work at clinics or labs in other scientific fields

# College of Pharmacy

Contact Information Phone: +82-62-530-2904~6, 2920 Fax: +82-62-530-2902 E-mail: pharm@jnu.ac.kr URL: http://pharmacy.jnu.ac.kr

# Department

- · Department of Pharmacy
  - Pharmacy major
  - Manufacturing Pharmacy major

# Affiliated Research Centers

- · Research Institute of Drug Development
- · Institute of Bioequivalence and Bridging Study
- · Research and Development Center for Natural Product Drugs

College of Pharmacy *\_\_Contact Information* Phone: +82-62-530-2920, 2953 Fax: +82-62-530-2949 E-mail: pharm@jnu.ac.kr URL: http://pharmacy.jnu.ac.kr/

#### What is Pharmacy?

Pharmacy is the science of development, dispensing, and management of drugs. It is a health profession that links life sciences with chemical and physical sciences. Pharmacy aims to educate and train students to ensure the safe and effective use of pharmaceutical drugs, and development of new therapeutic agents.

# College of Pharmacy at Chonnam National University

The mission of the College of Pharmacy, established in 1981, is to educate and train highly-qualified professional pharmacists, scientists, and other officials in the healthcare field who will care for the health and future of our society. During the last decade, the College has made a strong commitment to intensive education and creative research through programs of education at the undergraduate, professional, and postgraduate levels. The College is well-equipped with research facilities, complete multimedia systems, and computer networks for a thoroughly modern educational experience.

# Professors

- In Joon Oh, Ph.D.
   [Professor, Physical Pharmacy, ijoh@jnu.ac.kr]
- Ik-Soo Lee, Ph.D.
   [Professor, Natural Products Chemistry, islee@jnu.ac.kr]
- Yong-Bok Lee, Ph.D. [Professor, Pharmaceutics, leeyb@jnu.ac.kr]
- Won-Jea Cho, Ph.D. [Professor, Organic Pharmaceutical Chemistry, wjcho@jnu.ac.kr]
- Kyeong-Man Kim, Ph.D. [Professor, Pharmacology, kmkim@jnu.ac.kr]
- Kwonseop Kim, Ph.D.
   [Professor, Pathophysiology, koskim@jnu.ac.kr]
- Kwang Youl Lee, Ph.D. [Professor, Molecular Biology,

kwanglee@jnu.ac.kr]

- Bok Yun Kang, Ph.D. [Professor, Immunology, bykang@jnu.ac.kr]
- Young Ran Kim, Ph.D. [Professor. Pharmacotherapy. kimyr@jnu.ac.kr]
- Young Jun Im, Ph.D.
   [Professor, Structural Biochemistry, imyoungjun@jnu.ac.kr]
- ChangJu Chun, Ph.D.
   [Associate Professor, Bionano-Pharmaceuticals, cchun1130@jnu.ac.kr]
- Joo Young Huh, Ph.D. [Associate Professor. Applied Pharmacology. jooyhuh@jnu.ac.kr]
- Young-Chang Cho Ph.D. [Assistant Professor, Preventive Pharmacy, yccho@jnu.ac.kr]
- Namki Cho, Ph.D.

[Assistant Professor, Pharmacognosy, cnamki@jnu.ac.kr]

 Gyudong Kim, Ph.D.
 [Assistant Professor, Medicinal Chemistry, gdkim0217@jnu.ac.kr] Nakyung Jeon, Ph.D.
 [Assistant Professor, Pharmacotherapy 2, nakyung.jeon@jnu.ac.kr]

# Degree Requirements

Students are required to earn 160 credits, with 113 credits from major core courses and 47 credits from major elective courses.

# What Do You Study?

#### **Basic Pharmacy Courses**

Basic Pharmacy Laboratory 1 Basic Pharmacy Laboratory 2 Physical Pharmacy 1 Physical Pharmacy 2 Microbiology Pharmacognosy 1 Pharmacognosy 2 Pharmaceutical Analysis Pharmaceutical Biochemistry 1 Pharmaceutical Biochemistry 2 Pharmaceutical Chemistry Inorganic/Radiopharmaceutical Medicinal Chemistry Cell Biology Pharmaceutical Synthetic Chemistry 1 Natural Products Chemistry 1 Pharmacokinetics Medicinal Botany Pharmaceutical Statistics Anatophysiology 1 Anatophysiology 2 Infection Cosmeticology

#### **Pharmacy Major**

Toxicology Physiopathology 1 Physiopathology 2 Pharmacology 1 Pharmacology 2 Pharmacology 3 Pharmacy Laboratory 1 Pharmacy Laboratory 2 Preventive Pharmacy & Public Health 1 Preventive Pharmacy & Public Health 2 Drug Synthesis 2 Medicinal Chemistry 1 Medicinal Chemistry 2 Pharmaceutical Design Natural Products Chemistry 2 Instrumental Analysis Immunology Pharmaceutics 1 Pharmaceutics 2 Pharmacy Practice Experience 1 Pharmacy Practice Experience 2 Pharmacy Practice Experience 3 Pharmacy Practice Experience 4 Pharmacotherapy 1 Pharmacotherapy 2 Pharmacotherapy 3 Pharmacotherapy 4 Pharmacopoeia and Pharmaceutical Evaluation Introductory Pharmacy Practice Experience Biopharmaceuticals Applied Clinical Chemistry Pharmaceutical Jurisprudence Advanced Pharmacy Practice Experience 1 Advanced Pharmacy Practice Experience 2

Advanced Pharmacy Practice Experience 3 Molecular Biology Clinical Biochemistry Immunopharmacology Drug Design Chemotherapeutic Agents New Drugs Drug Delivery System Clinical Chemistry Functional Food Applied Pharmacology Clinical Pharmacokinetics Industrial Pharmacy Prescription Pharmacy Degenerative Diseases Social Pharmacy Drugs of Abuse and Addiction Herbal preparations Introduction to Tranditional Medicine Pharmacy Administration Pharmaceutical Process Validation Pharmacy Practice Drug Delivery Technology for Biopharmaceuticals Drug Discovery and Development

#### Manufacturing Pharmacy Major

Toxicology Physiopathology 1 Physiopathology 2 Pharmacology 1 Pharmacology 2 Pharmacology 3 Pharmacy Laboratory 1 Pharmacy Laboratory 2 Preventive Pharmacy & Public Health 1 Preventive Pharmacy & Public Health 2 Drug Synthesis 2 Medicinal Chemistry 1 Medicinal Chemistry 2 Pharmaceutical Design Natural Products Chemistry 2 Instrumental Analysis Immunology

Pharmaceutics 1 Pharmaceutics 2 Pharmacy Practice Experience 1 Pharmacy Practice Experience 2 Pharmacy Practice Experience 3 Pharmacy Practice Experience 4 Pharmacotherapy 1 Pharmacotherapy 2 Pharmacotherapy 3 Pharmacotherapy 4 Pharmacopoeia and Pharmaceutical Evaluation Introductory Pharmacy Practice Experience Biopharmaceuticals Applied Clinical Chemistry Pharmaceutical Jurisprudence Advanced Pharmacy Practice Experience 1 Advanced Pharmacy Practice Experience 2 Advanced Pharmacy Practice Experience 3 Molecular Biology Clinical Biochemistry Immunopharmacology Drug Design Chemotherapeutic Agents New Drugs Drug Delivery System Clinical Chemistry Functional Food Applied Pharmacology **Clinical Pharmacokinetics** Industrial Pharmacy Prescription Pharmacy Degenerative Diseases Social Pharmacy Drugs of Abuse and Addiction Herbal preparations The Safety management for Food and Drugs Introduction to Tranditional Medicine Pharmacy Administration Pharmaceutical Process Validation Pharmacy Practice Drug Delivery Technology for Biopharmaceuticals Drug Discovery and Development

# Careers

Pharmacy graduates play a pivotal role in the development of new drugs and scientific technologies in leading research institutes, government agencies, and pharmaceutical industries both in Korea and around the world.

# College of Arts

*Contact Information* Phone: +82-62-530-3000~3008 Fax: +82-62-530-3002 URL: http://arts.jnu.ac.kr

# Departments

- · Department of Korean Music
  - Vocal Music Major
  - Instrumental Music Major
  - Theory & Composition Major
- Department of Design
- · Department of Fine Arts
  - Korean Painting
  - Drawing & Painting
  - Carving & Modeling
  - Visual Communication Design
  - Craft Fine Arts
  - Theory of Art
- · Department of Music
  - Voice/Vocals
  - Piano
  - String, Wood, Brass, Percussion
  - Composition

# Affiliated Research Centers

- · Arts Institute of Chonnam National University
- · Research Center for the Culture of Sori in Chonnam National University

# Korean Music

\_\_*Contact Information* Phone: +82-62-530-3050 Fax: +82-62-530-3059 JRL: http://koreanmusic.jnu.ac.kn

#### What is Korean Music?

There are two basic types of Korean music: classical music and folk music. Classical music was enjoyed by the upper class from the court to the aristocrats. It is righteous, refined and elegant, with little obvious emotion. Folk music is lively, artistic and full of emotion and enthusiasm. The most prominent characteristic of Korean music is rhythm. Rhythmic cycles, called *jangdan*, which are constantly repeating patterns with an internal code of stresses and accents, underpin virtually all music. The performance techniques with full ornamentation, called *sigimsae*, particularly before or after the main pitch of a tone sound, are also very important in Korean music.

# Department of Korean Music

The educational goal of CNU's Department of Korean Music is to preserve, cultivate, and develop Korea's traditions. Many efforts have been conducted to pursue this task, and the Department of Korean music does so by offering lectures to students with performance, practice, theory, and composition of Korean music. Accordingly, Western and Asian music is comprehensively studied.

Students are able to enlarge or develop their view of music. There are three major parts: instrumental music (Gayageum, Geomun-go, Daegeum, Piri, Haegeum, Ajaeng, and percussion), vocal music (Pansori, Gayageum Byeongcheng, Jeongga), composition and theory.

Additionally, there is another optional practice for students develop minor fields in order to broaden their musical competence. The major class instructions are done in face-to-face lessons. There are several performances in a year, including freshmen's performance, annual performance, and performances for each major instrument, to enhance the students' performance ability.

In 1992, the Department launched a pedagogy course which trains students to become school teachers; 10% of students can take teacher preparation courses and acquire the music teachers' certification of secondary schools in their major areas. The Department also offers a master's degree program and a doctoral degree program, established in 1989 and 2008 respectively, to educate more mature performers and scholars.

#### Professors

Ai-Soon Seong
 [Professor, Gayageum, sas7543@jnu.ac.kr]

- In-Sam Jeon
   [Professor, Pansori, insam3052@jnu.ac.kr]
- Hee-Bong An

[Professor, Haegeum, haeguman@jnu.ac.kr]

• Hye-jin Yoon [Associate Professor, Composition, humanias@jnu.ac.kr]

- Yong-Shik Lee [Associate Professor, Theory, yongshiklee@jnu.ac.kr]
- Sang-yeon Kim [Assistant Professor, Daegeum, sy5979@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, with 24 credits from core courses, 85 credits from Department courses, and 21 credits from electives.

# What Do You Study?

#### Vocal Music Major Courses Core Courses

Major of Korean Vocal Music 1-8 Instruction to Korea Operas 1-8 Chorus in Korean Traditional Music 1-8 Appreciation and Critics of Korean Music 1-8 Vocal and Instrumental Music 1-2 (Folk song) Vocal and Instrumental Music 3-4 (DanSo) Instruction to Western Music Western Music History Introduction to Korean Traditional Music 1-2 Korean Music History 1-2 Transcription of Korean Traditional Music 1-2 Sight & Ear Training 1-2 Janggu Accompanying 1-2

#### Electives

Folk Music Culture 1-2 Introduction to Court Music 1-2 Pedagogy of Korean Traditional Music Minor Practice 1-4 Piano Accompanying 1-4 Harmony and Counterpoint 1-2 Developing Teaching&Learning Programs on Korean Traditional Music Development and Use of Teaching Materials & Tools on Korean Traditional Music Korean Music and Computer Analysis on Korean Traditional Music 1-2 Introduction to Korean Opera Pansori Production, and Promotion of Music Introduction to Sanjo Introduction to Asian Music Reading Music 1-2

Field Research in Music Industry Music Aesthetics and Philosophy Conducting

#### Teaching Profession Courses

Teaching Material and Pedagogy of Music Teaching Logic and Essay Writing in Music Education Pedagogy of Music Education Introduction to Musicology

#### Instrumental Music Major Courses Core Courses

Major of Korean Tradition Instrumental Music 1-8 Korean Music Orchestra 1-8 Korean Chamber Music 1 (Chong-Ak) Korean Chamber Music 2 (Ka-Gok) Korean Chamber Music 3 (Min-Yo Ensemble) Korean Chamber Music 4 (San-Jo Ensemble) Korean Chamber Music 5-6 (Sinawi) Korean Chamber Music 7-8 (Creation) Appreciation and Critics of Korean Music 1-8 Vocal and Instrumental Music(Folk song) 1-2 Vocal and Instrumental Music(DanSo) 3-4 Instruction to Western Music Western Music History Introduction to Korean Traditional Music 1-2 Korean Music History 1-2 Transcription of Korean Traditional Music 1-2 Sight & Ear Training 1-2 Janggu Accompanying 1-2

#### Electives

Folk Music Culture 1-2

Introduction to Court Music 1-2 Pedagogy of Korean Traditional Music Minor Practice 1-4 Piano Accompanying 1-4 Harmony and Counterpoint 1-2 Developing Teaching&Learning Programs on Korean Traditional Music Development and Use of Teaching Materials & Tools on Korean Traditional Music Korean Music and Computer Analysis on Korean Traditional Music 1-2 Introduction to Korean Opera Pansori Production, and Promotion of Music Introduction to Sanio Introduction to Asian Music Reading Music 1-2 Field Research in Music Industry Music Aesthetics and Philosophy Conducting

#### Teaching Profession Courses

Teaching Material and Pedagogy of Music Teaching Logic and Essay Writing in Music Education Pedagogy of Music Education Introduction to Musicology

# Theory and Composition Major Courses Core Courses

Major of Composition & Theory of Korean Music 1-8 Seminar of Korean Music 1-8 Appreciation and Critics of Korean Music 1-8 Vocal and Instrumental Music 1-2 (Folk song) Vocal and Instrumental Music 3-4 (DanSo) Instruction to Western Music

Western Music History

Minor instrument 1-4 Studies in the Music Literature 1-4 Introduction to Korean Traditional Music 1-2 Korean Music History 1-2 Transcription of Korean Traditional Music 1-2 Sight & Ear Training 1-2 Janggu Accompanying 1-2

#### Electives

Folk Music Culture 1-2 Introduction to Court Music 1-2 Pedagogy of Korean Traditional Music Minor Practice 1-4 Piano Accompanying 1-4 Harmony and Counterpoint 1-2 Developing Teaching&Learning Programs on Korean Traditional Music Development and Use of Teaching Materials & Tools on Korean Traditional Music Korean Music and Computer Analysis on Korean Traditional Music 1-2 Introduction to Korean Opera Pansori Production, and Promotion of Music Introduction to Sanjo Introduction to Asian Music Reading Music 1-2 Field Research in Music Industry Music Aesthetics and Philosophy Conducting

#### Teaching Profession Courses

Teaching Material and Pedagogy of Music Teaching Logic and Essay Writing in Music Education Pedagogy of Music Education Introduction to Musicology

#### Careers

Graduates from the Department of Korean music work in diverse fields such as performers in music orchestra and ensemble, educators, scholars, experts in music business and industries, and broadcasting.

# Design

*Contact Information* Tel: +82-62-530-3070, 3072 Fax: +82-62-530-3079 E-mail: jnudesign@naver.com URL: http://design.jnu.ac.kr

# What is Design?

Humans can express and communicate their experiences in the form of objects with visual language. In particular, visual communication by images (pictures) is more common than by language or numbers. The process of recreating visual language is the beginning of design and enables us to communicate information about things necessary for our daily survival. The teleology and the lyrical expression of our designs enrich our own existence and quality of life. The design of our lives depends on the technological prowess of the era and the shape of the times, and its role and meaning continues to evolve.

# Department of Design at Chonnam National University

The Department of Design is a newly introduced major, formally classified in 2016 through an amalgamation of the Chonnam National University College of Art, The department of Fine Art, and the Department of Visual communication Design.

The department of design is structured with academic courses in theory and practical skills that will manifest students' abilities of planning, analyzing, and evaluating to cultivate competitive designers.

Tracks of subjects are classified into visual design, media art design, fusion service design and through each individual intensive class, we and planning to send out design specialists that the current generation requires by fostering global designers that will meet the demands of future society.

# Professors

• Kim, EelKwon	• Suh, YoungSang
[Professor, Media Art	[Professor, Photo and Media,
eelkwon@gmail.com]	ysang@jnu,ac.kr]
• Yun, JaeSung	• Choi, Souk
[Professor, Visual Communication Design,	[Professor, Visual Communication Design,
asvi84@naver.com]	choiss@jnu.ac.kr]
• Nam, HoJung	• Jung, JungHo
[Professor, Visual Communication Design,	[Assistant Professor,
hojungn@jnu.ac.kr]	Marketing Communication Design,
	vava@jnu.ac.kr]

# Degree Requirements

• Students in the Department of Design are required to earn 140 credits, with 30 credits from core courses, 48 credits from electives, 32 credits from general courses, and 30 credits from liberal arts courses.

All students are required to pass English for Global Communication (EGC) , participate in a graduate exhibition, and submit a thesis.

# What Do You Study?

# **Department of Design Courses**

2,3 Dimensional Modelling
Digital Art Graphic
UI/UX Design
Visual Contents Design
Commercial Photography
Marketing Communication Design
Package Design
Brand Design
Design Portfolio

#### Electives

Design Concept Basic Graphic Design Design Color An introduction to Design Study Idea and Expression Digital Graphic Design Theory of Design Photography Editing Design Design Research1 Illustration 1,2 Animated Image Design Typography Editorial Design Motion Graphic Design Photo graphic Design 1,2 Design Trend Advertising Design Video Media Design Public Design Web Application Design Virtual Contents Design Photography Editing Design Service Design Interaction Design 3D Design Visual Information Design 1,2 Digital Art Design Workshop 1,2 Brand Identity Design 1,2 Image Design 1,2 Package Design Seminar 1,2 Service Marketing Design 1,2

## Careers

Students may obtain positions in/as:

 Contents Design / Editorial Design / Publication Design / Graphic Design / Digital Design / Media Design / Service Convergence Design / Art Teachers in Middle and High Schools

# Fine Arts

<u>Contact Information</u> Tel: +82-62-530-3020, 2540 Fax: +82-62-530-2549 E-mail: altnfgkrrhk@hanmail.net URL: http://fineart.jnu.ac.kr

#### What is Fine Art?

All art is an abstraction and many fine arts inevitably register figurative associations in the spectator's eye and mind. Fine art is a visual experience, achieving a greater "reality" than the contemporary environment, particularly in its new spiritual, philosophical, or scientific experiences.

What do we mean by Fine Arts? Do we mean the arts of a certain period in time? Are these arts expressing a certain style? Are they the works of certain key individuals? Do we intend to study all the works of a particular period? Perhaps the arts revealing a certain philosophy? Or on the other hand, should we study the arts of a certain period emphasizing certain materials? All of these questions are incorporated into Fine Arts.

# Department of Fine Arts at jeonnam National University

Department of Jeonnam Arts School, as a leading organization of the National Universities in Jeonnam province, has cultivated numerous talented people over 30 years. We strive to foster domestic and international students in Gwangju aiming at the culture center in Asia with practical and creative education.

Since 1982, we have provided numerous business ventures such as academic seminars, special lectures of famous artists, publication of academic journals, etc. In addition, we had made an agreement with Yanbian University and have had exchange programs and joint exhibition of works in Gwangju as well as Yanbian. Our department is made up of six parts: Korean Painting, Western Painting, Sculpture, Visual Design, Crafts and Theory. Each department recruits students in their own ways and offers the methodical practice education and theory with the subdivided curriculum to them. Graduates can work in many areas as an artists, sculptors, designers, craftspeople and curators in an administrative agency. Especially, our students who hold high ranks for three semesters can have a qualification for being a middle school teacher after completing a course in teacher education. Our department was established in 1982. The number of our graduates who received Bachelor's degree is presently about 2,433, 208 for Master's and 20 for Ph.Ds. All of them have improved our status while working in various fields internationally and domestically. Moreover, our graduates distinguish themselves in culture and arts fields as a curator, designer in exhibition and museum. The volume of recruitment is 11 in each department in order to improve education and environment quality. Also, we have consistently selected excellent personnel since 2010

#### Professors

• Dae-Gil Kim [Professor, Sculpture, kl401@ hanmail.net]

• Gyu-Chul Choi

[Professor, Sculpture, cgc2456@hanmail.net]Jin Hur[Professor, Korean Painting, hurjin5@naver.com]

- Kum-Hee Jung
   [Professor, Western Art History, khjhjung@hanmail.net]
- Chul-Woo Kim [Professor, Fine Crafts(Ceramic Art), dogong63@hanmail.net]
- Ku-Yong Lee [Professor, Korean Painting, seed290@jnu.ac.kr]

- Kee-Moon Seo [Associate Professor, Drawing & Painting, jinzza01@hanmail.net]
  Jei-Min Kim [Assistant Professor, Drawing & Painting, jeimin@gmail.com]
- Hyun-ju Kim [Assistant Professor, Fine Crafts(Metal Art), blueart00@jnu.ac.kr]

# Degree Requirements

 Students in the majors of Korean Painting, Oil Painting, Sculpture, Visual Communication Design, Craft and Art Theory are required to earn 140 credits, with 36 credits from core courses, 42 credits from electives, 32 credits from general courses, and 30 credits from liberal arts courses. All students are required to pass English for Global Communication (EGC) and participate in a graduate exhibition and submit a thesis.

# What Do You Study?

#### Major in Korean Painting Courses

Basic Korean Ink Painting 1, 2 Basic Korean Painting 1, 2 Korean Ink Painting 1, 2, 3, 4 Korean Painting 1, 2, 3, 4

#### Electives

Basic Drawing 1, 2 Calligraphy and Seal Carving 1, 2 Painting of The Four Gracious Plants 1, 2 Computer graphic1, 2 Pedagogy on Arts through Creative Approach Planning · Producing & Demonstrating Korean Painting Media & Techniques 1, 2 Figure Drawing 1, 2 Three Dimensional Presentation Exercise of Photography Creative Drawing 1, 2 Two Dimensional Presentation Chromatics Theory of Asian Arts Portrait 1, 2 Portfolio & Presentation Creative Korean Painting 1, 2 Techniques of Korean Painting 1, 2 Conservation 1, 2 Understanding Cultural Policy and Arts & Cultural Education Communication Skills

### Major in Drawing & Painting Courses

Basic Studio Arts 1, 2 Fundamentals of Painting 3, 4 Studio Arts 1,2 Advanced Course in Studio Arts 3, 4 Creative Painting 1, 2, 3, 4

#### Electives

Instructional Theory of Art Research On Teaching Materials And Methods Of Arts A Course on Fine Arts Logic and Essay writing Figurative Drawing 1, 2 Materials 1, 2 Computer graphic1, 2 Water Color Painting 1, 2 Pedagogy on Arts through Creative Approach Planning · Producing & Demonstrating Figure Drawing 1, 2 Three Dimensional Presentation Exercise of Photography Creative Drawing 1, 2 Two Dimensional Presentation Chromatics Seminar on Arts 1, 2 Portrait 1, 2 Print Making 1, 2 Portfolio & Presentation Techniques of Portrait 1, 2 Technics of Drawing & Painting 1, 2 Conservation 1, 2 Techniques Of Painting Representation 1, 2 Understanding Cultural Policy and Arts & Cultural Education Communication Skills Understanding Integrated Arts Educational Programs

#### Major in Carving & Modeling Courses

Human Body Molding 1, 2, 3, 4 Study of Terra-cotta Technique Study of Metal Sculpture Technique Study of stone sculpture technique Study of Wooden Sculpture Technique Practical Molding Tutorial 1, 2 Study of Creative Design 1, 2

#### Electives

Computer graphic1, 2 Academic plan counselling Basic Molding 1, 2 Basic Plane Design Basic Three-dimensional Design Korean Design and Culture Pedagogy on Arts through Creative Approach Planning · Producing & Demonstrating Figure Drawing 1, 2 Three Dimensional Presentation Exercise of Photography Creative Drawing 1, 2 Two Dimensional Presentation Study of Relieved Sculpture Technique Three-dimensional Drawing 1, 2 Practical Art Anatomy Seminar on Art in Field Basic Introduction of Science of Arts Chromatics Portrait 1, 2 Portfolio & Presentation Study about practical art(ornamental sculptures and ceramic sculptures)) Contemporary Art Criticism Computer and Plane Design Computer and three-dimensional Design Public art project Environment Sculpture Art and Marketing Study of Complex Media Interactive Art Understanding Cultural Policy and Arts & Cultural Education Communication Skills Understanding Integrated Arts Educational Programs

# Major in Visual Communication Design Courses

Advertising Design 1, 2, 3 Package Design 1, 2 Identity Design Visual Environmental Design 1, 2 Visual Information Design 1, 2 Brand Package Design 1, 2

# Electives

Basic Design Studio-3D Detailed Representation 1, 2 2D Design Studio Typography Color moulding Basic Design Studio-3D Design Research computer graphic1, 2 Teaching&Learning Approach to Design(Infant,Elementary,Middle&High School, Adult) Pedagogy on Design through Creative Approach Planning · Producing & Demonstrating Figure Drawing 1, 2 Three Dimensional Presentation Illustration 1, 2 Media Design 1, 2 Commercial Photo Photography Exercise of Photography Creative Drawing 1, 2 Design project Two Dimensional Presentation Chromatics Theory of Design Portrait 1, 2 Digital Design 1, 2 Portfolio & Presentation Understanding Cultural Policy and Arts & Cultural Education Communication Skills Understanding Integrated Arts Educational Programs

#### Major in Craft Fine Arts Courses

Ceramic Art : Basic 1, 2 Wood Lacquer Art : Basic 1, 2 Ceramic Art : Advanced Skill 1, 2, 3, 4 Wood Lacquer Art : Advanced Skill 1, 2, 3, 4

#### Electives

Basic Drawing 1, 2 Detailed Representation 1, 2 Basic Wheel Throwing 1, 2 computer graphic1, 2 Teaching&Learning Approach to Crafts(Infant,Elementary,Middle&High School,Adult)

Pedagogy on Arts through Creative Approach Pedagogy on Crafts through Creative Approach Developing Teaching & Learning Programs on Crafts Planning · Producing & Demonstrating Figure Drawing 1, 2 Three Dimensional Presentation Exercise of Photography Mechanical Drawing 1, 2 Textile Art : Basic 1, 2 Metallic Art : Basic 1, 2 Creative Drawing 1, 2 Two Dimensional Presentation Chromatics Theories of Crafts Portrait 1, 2 Portfolio & Presentation Metallic Art : Advanced Skill 1, 2, 3, 4 Textile Art : Advanced Skill 1, 2, 3, 4 Interior Design 1, 2 Understanding Cultural Policy and Arts & Cultural Education Communication Skills Understanding Integrated Arts Educational Programs

#### Major in Theory of Art Courses

History of Art 1, 2 History of Aesthetics History of Korean Painting in Chs?n Dynasty History of Korean Art The Way to Modern Arts Art Management Theory The Methodologies of Art Criticism of Modern art Modern and Contemporary Korean art theory Reading in English Theory of Art Exhibition

#### Electives

Art and Culture computer graphic1, 2 Visual Media Comprehension Topics in Comparative Research of the Arts in East and West Art and Sociology Pedagogy on Arts through Creative Approach Planning · Producing & Demonstrating Figure Drawing 1, 2 Three Dimensional Presentation Exercise of Photography Creative Drawing 1, 2 Two Dimensional Presentation Theory of art and marketing Contemporary Design Theory Chromatics History of Oriental Art Museology History of Chltural Assets

Art philosophy Theory of Installation Art Animation Art Portrait 1, 2 Portfolio & Presentation Contemporary Aesthetics Appreciation Of Art Art Psychology Contemporary Art Discourse Theory of Art Therapy A Study of the Artist Understanding Cultural Policy and Arts & Cultural Education Communication Skills Understanding Integrated Arts Educational Programs

# Careers

Students may obtain positions in/as:

- · Art Administrators
- · Curators in Fine Art Museums
- · Restoration and Judgment of Cultural Assets
- · Private Art Institutes
- · Professional Designers in Companies and as Freelancers
- · Art Teachers in Middle and High Schools
- · Mental Treatment in Art Students may obtain positions in:
- · Broadcasting and Newspaper Company Related Art Departments
- · Art Gallery Management, Display and Planning
- · Developing Art Products
- · Manufacturing Environmental Monument
- · Producing Video Image Methods and Advertising Media

# Music

*Contact Information* Tel: +82-62-530-3030, 0390 Fax: +82-62-530-3049 E-mail: cnumusic@hanmail.net URL: music.jnu.ac.kr

# What is Music?

Music may be defined as the art of creating or performing the pattern of notes.

# Department of Music at Chonnam National University

The department of music has educated talents as one of the most leading and comprehensive institutions in the Honam province. With acclaimed faculty members, the department inspires prospective leaders of every musical fields by providing systematic coursework. The department also helps voice, piano, composition, string, and wind major students broaden their musical insight by offering numerous performance opportunities including regular concerts, masterclasses, and guest recitals each year. The Department also comprises of Yehyang Hall, Jieum Hall, 40 individual sound-proof practice rooms, music library, music listening room, computer room, chorus room, and lockers for instruments. There are a wide range of careers available to graduates including further studies at local or national graduate schools, teaching jobs at colleges, teaching jobs at middle and high schools, professional performer positions, professional music department jobs at broadcasting companies, or professional composer positions.

# Professors

- Hyun-Ok Moon, D.M.A. [Professor, Piano, hyun0404@jnu.ac.kr]
- Sukyung Shin, D.M. [Professor, Piano, sushin@jnu.ac.kr]
- Hyun-Sue Chung, Ph.D. [Professor, Composition, music@jnu.ac.kr]
- Kyung-Jin Han, Ph.D.
   [Associate Professor, Composition, hankj7@jnu.ac.kr]
- Byung-Kil Yoon, Diplom [Associate Professor, Voice corelliyoon@jnu.ac.kr]

- Eun-Shik Park, D.M.A. [Associate Professor, Piano meunspark@jnu.ac.kr]
- Hyejung Lee, Diplom [Associate Professor, Violin hjlee0608@jnu.ac.kr]
- Byung-Woo Kong, Perfectionnement [Assistant Professor, Voice veritaspaul@jnu.ac.kr]
- In-Woock Park, M.A. [Assistant Professor, Conducting parkinwoock@jnu.ac.kr]
- Yun-Joo Na, D.M.A.
   [Assistant Professor, Cello nayunjoocello@jnu.ac.kr]

# Degree Requirements

Music Major Students are required to earn 130 credits, with 50 credits from core courses, 20 credits from electives, 32 credits from general courses, and 30 credits from liberal arts courses.
 All students are required to pass English for Global Communication 1 and to complete a degree recital.

# What Do You Study?

### **Voice Major Courses**

#### Core Courses

Voice Major 1-8 Chorus 1-8 Music Theory - Sight Singing & Ear Training 1-2 Harmony 1-2 Deutch Diction 1-2 Italian Diction 1-2 Computer for Real Life Music History 1-4 Writing for Self-reflection and communication Career Plan and Self Understanding Performance 1-2

#### Electives

Theory & Practice of Computer Music 1-2 Opera Workshop 1-2 Korean Art Songs Introducing Musicology 1-2 Music Form Keyboard Harmony 1-2 Counterpoint 1-2 Deutch Art Songs Italian Art Songs French Art Songs English and American Art Songs Vocal Literature 1-2 Multimedia Music Vocal Ensemble 1-2 Instruments 1-2 Arts Management Music Education Theory Music Software 1-2 Class Piano 1-2 Music Analysis 1-2

Jazz Piano Pedagogy 1-2 Conducting 1-2

# Piano Major Courses Core Courses

Keyboard Harmony 1-2
Instrumental Accompanying
Vocal Accompanying
Computer for Real Life
Writing for Self-reflection and communication
Career Plan and Self Understanding
Music History 1-4
Performance 1-2
Music Theory - Sight Singing & Ear Training 1-2
Piano Major 1-8
Piano Literature (Baroque Period) 1
Piano Literature (Classic Period) 2
Piano Literature (Romantic Period) 3
Piano Literature (Contemporary Period) 4
Harmony 1-2

# Electives

Chorus 1-8 Piano Ensemble 1-2 Piano Chamber Music 1-2 Piano Pedagogy 1-2 Arrangement 1-2 Class Piano 1-2 Theory & Practice of Computer Music 1-2 Conducting 1-2 Jazz Music Form Introduction to Musicology 1-2 Music Therapy 1-2 Music Software 1-2 Music Analysis 1-2 Art Management Music Education Theory Instruments 1-2 Counterpoint 1-2 Multimedia Music

# String, Wood, Brass, Percussion Major Courses

# Core Courses

Instrument Major 1-8 Orchestra 1-8 Music Theory - Sight Singing & Ear Training 1-2 Harmony 1-2 Music History 1-4 Performance 1-2 Writing for Self-reflection and communication Computer for Real Life

#### Electives

Wind Ensemble 1-8 String Ensemble 1-8 Chamber Music 1-6 Counterpoint 1-2 Multimedia Music Instruments 1-2 Vocabulary of Musical Terms Keyboard Harmony 1-2 Music Software 1-2 Music Analysis 1-2 Introduction to Musicology 1-2 Composition 1-2 Class Piano 1-2 Music Form Orchestra Literature 1-2 Jazz Theory & Practice of Computer Music 1-2 Arrangement 1-2 Arts Management

Conducting 1-2 Study on Piano Tuning & Technology 1-2 Excerpt Class 1-6

# Composition Major Courses Core Courses

Computer for Real Life Writing for Self-reflection and communication Career Plan and Self Understanding Orchestration 1-2 Counterpoint 1-2 Music History 1-4 Performance 1-2 Music Theory - Sight Singing & Ear Training 1-2 Composition 1-2 Composition 1-2 Modern Composition Technique & Analysis 1-2 Harmony 1-2

# Electives

Class Piano 1-2 Theory & Practice of Computer Music 1-2 Arrangement 1-2 Piano Pedagogy 1-2 Keyboard Harmony 1-2 Multimedia Music Chorus 1-8 Instruments 1-2 Music Software 1-2 Art Management Music Education Theory Music Analysis 1-2 Music Therapy 1-2 Introduction to Musicology 1-2 Conducting 1-2 Music Form Jazz

## **Careers**

- Professional performer
- Teacher at middle and high schools
- Professorships at colleges
- Professional composer
- Director at broadcasting and publishing services

# Medical School

\_\_Contact Information Phone: +82-62-220-4000~9 +82-61-379-2526-30 Fax: +82-62-232-9708 +82-61-379-2560 URL: http://medicine.chonnam.ac.kr/

## 1. Pre-medical Science

## 2. Medical Science

- 1) Basic Medical Science
  - Department of Anatomy
  - Department of Physiology
  - Department of Biochemistry
  - Department of Pathology
  - Department of Pharmacology
  - Department of Microbiology and Immunology
  - Department of Preventive Medicine
  - Department of Forensic Medicine
  - Department of Medical Education
  - Department of Biomedical Sciences
- 2) Clinical Medical Science
  - Department of Internal Medicine
  - Department of Surgery
  - Department of Obstetrics and Gynecology
  - Department of Pediatrics
  - Department of Psychiatry
  - Department of Neurology
  - Department of Dermatology
  - Department of Orthopedic Surgery
- Affiliated Research Centers
  - · Research Institute of Medical Sciences

- Department of Neurosurgery
- Department of Thoracic and Cardiovascular Surgery
- Department of Ophthalmology
- Department of Otolaryngology and Head & Neck Surgery
- Department of Plastic and Reconstructive Surgery
- Department of Urology
- Department of Anesthesiology and Pain Medicine
- Department of Radiology
- Department of Radiation Oncology
- Department of Laboratory Medicine
- Department of Nuclear Medicine
- Department of Emergency Medicine
- Department of Physical & Rehabilitation Medicine
- Department of Occupational and Environmental Medicine

Dept. of Premedica Course <u>Contact Information</u> Phone: +82-62-220-4191 +82-61-379-2516 Fax: +82-62-232-9708 +82-61-379-2560 E-mail: han8432@jnu.ac.kr http://medicine.jnu.ac.kr/english/

The educational goal of premedical education is to provide a desired college-level training in liberal arts as well as sciences, and to provide a basis for future medical studies. Accordingly, the premedical curriculum is an indispensable period for the medical students to prepare themselves before they move on to medical school. In this premedical curriculum, students should learn subjects with regard to the natural sciences and cultural subjects that will form the basis of a medical curriculum in the future.

## Professors

See Medical School Professors

#### Degree Requirements

Students are required to earn 74 credits and minimum G.P.A. of 1.75 for all semesters (including summer/ winter session)

#### What Do You Study?

#### **Required Courses**

#### [Major]

Human Embryology and Morphology (3) Basics for Medical research (3) Microbial Pathogen and Immunity (3) Cellular and Molecular Biology (3) Gross Anatomy of Human Body (3)

#### **Elective Courses**

#### [Major]

Medical Etymology (3) Foundation of Medical Science (3) Microbes & Society (2) Organic Chemistry 1 (3) Medical Physics (3) Brain and Life (3) Comparative Anatomy (3) Genetics (3) (\* At least 12 credits should be chosen.)

#### [General]

Writing for Self-reflection and Communication (3) Introduction to Psychology (3) Career Plan and Self Understanding (2) Volunteer Social Service (1) Bioethics (3) Coaching Leadership for Self-effectiveness (3)

#### [General]

Introduction to Economics (3) Intellectual Property Right (3) Understanding of Social History (3) Logic (3) Mathematics 1 (3) Reading & Discussion in English (3) General Physics 1 (3) General Biology 1 (3) General Chemistry 1 (3) Debate and Democratic Intelligence (3) The Life and Literature of the Korean People (3) Contemporary Science Studies (3) Understanding of Modern Society (3) Environmental Science (3) Understanding of Architecture (3) Classical Literature and Korean Culture (3) The Strategy of Speaking (3) Appreciation of Arts (3) Democracy and Community (3) Life and Law (3) Psychology of Human Sexuality (3) Mathematics 2 (3) Food and Nutrition (3) What is History (3) Artistic Sensibility and Aesthetics (3) Appreciation of Music (3) Human and Values (3) General Physics 2 (3) General Biology 2 (3) General Chemistry 2 (3) Understanding Creative Problem-Solving Process (3) Introduction to Philosophy (3) Korean History (3) Modern Society and Human Rights (3) Introduction to Contemporary Korean Politics (3) Introduction to Statistics and Practice (3) (\* At least 32 credits should be chosen.)

### **Credits Required**

At least 9 credits from each field : Creativity, Sensibility, Community Values.

### Careers

Students who complete the premedical program are automatically admitted to the Medical School.

Science

\_\_Contact Information

Medicine is the science of diagnosing, treating, or preventing disease and other damage to the body or mind. There is a multitude of medical research which is now directed toward such problems as cancer, heart disease, AIDS, re-emerging infectious diseases, organ transplants, and cell replacement. Currently, the largest worldwide study is the Human Genome Project, which will identify all hereditary traits and body functions controlled by specific areas on the chromosomes. Gene therapy, the replacement of faulty genes, offers the possible abatement of hereditary diseases. Genetic engineering has led to the development of important pharmaceutical products.

## Medical School

The Medical School is committed to teaching and training students through the most modern and efficient academic programs. The programs are aimed at producing able primary care physicians and creative medical scientists. To meet these institutional objectives, the Medical School offers both undergraduate and graduate courses which lead to advanced degrees including Master's and Doctorates

The undergraduate degree is composed of a 2-year premedical and a consequent 4-year medical course.

#### Professors

256 full-time faculty members (Professors: 169, Associate Professors: 56 and Assistant Professors: 31) and 13 teaching assistants are currently employed. The interests of members and contact profiles are located online: http://medicine.jnu.ac.kr.

#### Degree Requirements

Students are required to earn 165 credits (required) and 4 credits (electives). At the end of the fourth year, every student who has fulfilled these requirements will be recommended to the President of Chonnam National University for a Doctor of Medicine Degree (M.D.).

#### What Do You Study?

Graduates and graduate candidates are unconditionally recommended to the National Board of Medical Examinations for a license to practice medicine in Korea.

#### [Required Courses]

## Eirct Voor

First Year					Reproductive Systems (3)	
Lab in Basic Science 1 (2)					Microbiology and Parasitology (4)	
Basic	Medical	Science	in	Endocrine	and	Basic Medical Science in Digestive System and

- 653 -

Metabolism (4) Basic Neuroscience (4) Structure and Function of the Human Body (3) Cadaver Dissection Course (3) Problem-Based Learning 1 (1) Introduction to Clinical Medicine 1 (2) Introduction to Clinical Medicine 2 (2) Lab in Histology and Pathology (2) Introduction to Pathology and Pharmacology (3) Preventive Medicine (4) Basic Medical Science in Cardiovascular and Urinary Systems (4) Basic Medical Science in Pulmonology and Hematology (2) Patient-Doctor-Society 1 (2)

#### Second Year

Growth and Development (3) Clinical Medicine in Musculoskeletal System (3) Clinical Medicine in Reproductive System (4) Clinical Medicine in Digestive System (5) Clinical Medicine in Cardiovascular System (4) Allergology and Clinical Immunology (2) Clinical Medicine in Respiratory System (4) Infectious Diseases (3) Clinical Medicine in Endocrinology & Metabolism (3) Anesthesiology and Emergency Medicine (2) Problem-Based Learning 2 (1) Clinical Medicine in Nervous System (4) Clinical Medicine in Urinary System (3) Psychiatry (3) Dermatology, Ophthalmology, Otorhinolaryngology (3) Clinical Hemato-oncology (3) Patient-Doctor-Society 2 (1)

#### **Third Year**

Clerkship in Infectious Diseases (1) Clerkship in Endocrinology & Metabolism (1) Clerkship in Rheumatology (1) Clerkship in Urology (1) Clerkship in Obstetrics and Gynecology (4) Clerkship in Pediatrics (4) Clerkship in Gastroenterology (2) Clerkship in Cardiology (2) Clerkship in Neurology (2) Clerkship in Neurosurgery (1) Clerkship in Nephrology (1) Clerkship in Ophthalmology (1) Clerkship in Allergy (1) Clerkship in Surgery (5) Clerkship in Emergency Medicine (2) Clerkship in Otorhinolaryngology and Head & Neck Surgery (1) Clerkship in Psychiatry (4) Clerkship in Orthopedic Surgery (1) Summative Evaluation 1 (1) Clerkship in Dermatology (1) Clerkship in Hematology & Onocology (1) Clerkship in Pulmonology (2) Clerkship in Thoracic and Cardiovascular Surgery (1) Transition to Clinical Clerkship (1) Clinical Reasoning 1 (2) Patient-Doctor-Society 3 (2) Clinical Reasoning 2 (2)

### Fourth Year

Summative Evaluation 1 (1) Clerkship in Family Medicine (1) Clerkship in Radiation Oncology (1) Clerkship in Forensic Medicine (1) Clerkship in Plastic and Reconstructive Surgery (1) Clerkship in Radiology (2) Clinical Reasoning 3 (2) Clinical Presentation-Based Practice (2) Clerkship in Rehabilitation Medicine (1) Clerkship in Community Medicine (1) Clerkship in Occupational and Environmental Medicine (1) Clerkship in Laboratory Medicine (1) Specialized Clinical Clerkship (2) Sub-intership (2) Clerkship in Nuclear Medicine (1) Patient-Doctor-Society 4 (1)

Department of Anatomy \_\_Contact Information Phone: +82-61-379-2700 Fax: +82-61-375-5834

## Mission

The Department of Anatomy provides high quality teaching of anatomical sciences to medical students and graduate students as appropriate. The Department is responsible for teaching several courses including Anatomy, Neuroanatomy, Histology, and Embryology and periodically offers electives and special courses for other groups of students and faculty within the Chonnam community. Six faculty members with primary full-time appointments conduct research in various fields of medical science. The Department also administers Body Donation Program to allow Gwangju and Chonnam residents the opportunity to donate their bodies for research and teaching.

## Research Interests

- 1) Mechanistic studies on kidney diseases
  - ① Screening and cloning the candidates genes involving in regulation of potassium balance and chronic renal disease
  - ② Characterization of expressions, functions, and regulating roles of these candidate gene in kidney and other related organs
- 2) Clinical and basic proteomics study on oncologic and metabolic diseases
  - ① Discovery of biomarkers of diagnosis (early detection and relapse), prognosis, treatment response prediction.
  - 2 Deciphering of their molecular mechanisms
- 3) Clinical anatomy all aspects as applied to medical practice, new developments in clinical anatomy and teaching techniques
- 4) Understanding mechanical functions underlying development of urologic cancers
  - ① Elucidation of molecular mechanism involved in the progression of hormone resistant prostate cancer
  - 2 Development of biomarkers to predict recurrence of cancers of prostate and bladder
- 5) Study on metabolic change in central nervous system (CNS) diseases
  - ① The related molecular mechanisms between metabolic diseases and CNS diseases
  - 2 Discovery of anti-aging mechanisms to cure neurodegenerative diseases

## Professors

 Kyu Youn Ahn [Professor, Anatomy and Histology, Kidney molecular biology, kyahn@jnu.ac.kr] [Professor, Anatomy and Histology, Proteomics, seunglee@jnu.ac.kr]

• Kwang Il Nam [Professor, Anatomy, atlas@jnu.ac.kr]

· Seung Won Lee

- Chae Yong Jung [Professor, Histology and Embryology, chjung@jnu.ac.kr]
- Ju Hyun Song [Assistant Professor, Neuroanatomy, Histology, juhyunsong@jnu.ac.kr]

Department of Physiology \_*Contact Information* Phone: +82-61-379-2812 Yax: +82-61-

## Research Interests

- 1) Development of cell therapy strategies for hearing loss using human mesenchymal stem cells
- 2) Genetic and epigenetic control of mesenchymal stem cell fate during neurogenic differentiation
- Study of stem cell transplantation for degenerative CNS disease including Alzheimer's disease, Parkinson's disease, and stroke
- 4) Neurophysiological mechanisms of vestibularly-evoked responses of the olivocerebellar tract
- 5) Hormonal and neural mechanisms responsible for the pathogenesis of hypertension
- 6) Electrophysiological study on the ion channels of the nervous system

- Sah Hoon Park
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- Jong Seong Park [Professor, Neurophysiology, parkjs@jnu.ac.kr]

- Han Seong Jeong [Professor, Neurophysiology, Stem Cell Bioengineering, hsjeong@jnu.ac.kr]
- Su Jeong Jang
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Department of Biochemistry \_\_*Contact Information* Phone: +82-61-379-2778 Fax: +82-61-

### Research Interests

Biochemistry and molecular biology are essential learning as an academic foundation for medical students to identify the cause of diseases and develop therapies based on the molecular structure and function of biomolecules.

In the department of biochemistry, lectures including the structure and metabolism of proteins, lipids, carbohydrates, and nucleic acids, the regulation of metabolism, hormones, biological membranes, molecular biology, nutrition, cancer, aging, etc. are given to students, thereby widening their understanding of biochemistry.

For first-year medical students, the 'Biochemistry' class is distributed in the various integrated courses and participate mainly in the "Human Physiology and Metabolism", and for the second-year pre-medical students, a 'Cell and Molecular Biology' course is offered (total: 45 hours of lectures; 3 credits). Biochemistry experiments are provided as a "Basic medical experiments" course in conjunction with the departments of microbiology, physiology, and pharmacology (total: 64 hours of practice; 2 credits). There are also lectures, experiments, and seminars for graduate students.

In the department of biochemistry, various experimental devices are equipped to study the fields of biochemistry and molecular biology. The main research topics include among others: studying the role of reactive oxygen species and the development of antioxidants, the elucidation of the aging process, the study of signaling in carcinogenesis and angiogenesis, the study of regulatory mechanisms by miRNA, etc.

## Professors

- Sung Yeul Yang
   [Professor, Prooxidant and Antioxidant Biology, Cytogerontology, syyang@jnu.ac.kr]
- Young Do Jung [Professor, Cancer Biology: Signal Transduction and Genetic Regulation in Angiogenesis and Cancer Metastasis, ydjung@jnu.ac.kr]
- Kee Oh Chay [Professor, Cell Adhesion and Migration in Cancer Metastasis, kochay@jnu.ac.kr]
- Seung Rock Lee

[Professor, Redox Biology and Medicine: Redox Regulation of Tumor Suppressor PTEN and Protein Tyrosine Phosphatases, Enzyme Activity and Cellular Function of Selenoproteins, Ascorbic Acid (Vitamin C) Derivatives. leesr@jnu.ac.kr]
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## Department of Pathology

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The study of pathology is divided into General Pathology and Systemic Pathology. The former is concerned with the basic reactions to abnormal stimuli that underlie all diseases, while the latter examines the abnormal responses of specialized organs and tissues. The four aspects of disease process (etiology, pathogenesis, morphologic changes, clinical significance) are studied by means of lectures, laboratory work, classroom demonstrations, seminars, case studies, as well as through the use of fresh and museum specimens, along with a full collection of slide teaching sets. The first portion of the course is devoted to the subject of cellular injury and cellular death, cellular growth and differentiation, inflammation and repair, hemodynamic disorders, genetic disorders, disease of immunity, infectious diseases, and neoplasia. The rest deals with special systemic pathology, such as cardiology, hematology, pulmonology, gastroenterology, male and female reproductive systems, neuroscience, nephrology, endocrinology, and the musculoskeletal system.

- Min Cheol Lee [Professor, Neuropathology, mclee@jnu.ac.kr]
- Chan Choi [Professor, Pathology of Urinary Tract, cchoi@jnu.ac.kr]
- Jong Hee Nam [Professor, Gynecologic Pathology, jhnam@jnu.ac.kr]
- Jae Hyuk Lee [Professor, Pathology of Gastrointestinal Tract and Hepatobiliary/Pancreatic System, jhlee@jnu.ac.kr]

- Ji Shin Lee [Professor, Breast Pathology, jshinlee@hanmail.net]
- Yoo Duk Choi [Associate Professor, Respiratory pathology, drydchoi@jnu.ac.kr]
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## Department of Pharmacology

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Our research ranges from classical pharmacologic work to gene-based work. The following contains recent research interests of faculty members in our department:

1.Study of drug metabolism and pharmacogenomics

- 2. Characterization of transcriptional factors involved in cardiovascular diseases
- 3. Investigation of the effects of altering master gene expression on regulating osteoclast function.
- 4.Screening and characterization of the candidate genes involved in regulation of tumor cell invasion and metastasis
- 5. Characterization of the candidate genes involved in regulation of cell cycles
- 6.Functional analysis of vascular smooth muscles
- 7.Screening some neuroprotective agents in animal models and cultured neuronal cells
- 8.Study of the mechanisms of neuronal cell death
- 9.Development of animal disease models for research into cancer, cardiovascular diseases, and bone metabolic diseases; and the evaluation of the therapeutic potential of specific gene regulation using animal disease models
- 10.Philosophical reflection on drug therapy and problems of modern medicine
- 11.Research on medical humanities and ethics

- Jong Keun Kim [Professor, Central Nervous System Pharmacology, ckkim@jnu.ac.kr]
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- Young Chae Lim [Professor, Clinical Pharmacology, limyc@jnu.ac.kr]

- Hyun Kook
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- Nack Sung Kim [Professor, Molecular Biology, nacksung@jnu.ac.kr]
- Jung Min Kim [Associate Professor, Molecular Biology, jungminkim@jnu.ac.kr]
- Gwang Hyeon Eom [Associate Professor, Molecular Pharmacology, eomgh@jnu.ac.kr]

## Department of Microbiology and Immunology

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The graduate program in our department offers comprehensive and goal-oriented education, as well as intensive research training, in order to produce qualified and motivated young scientists who will be future leaders in the field of microbiology and immunology. It is our belief that collaborative research among our faculty members will maximize our potential to obtain greater achievements and to reach our goals sooner. Therefore, students in our department are encouraged to become active members of interactive and innovative research groups. Our research interests include cellular microbiology, oral microbiology, immunology, and cancer biology.

- Boo Ahn Shin [Professor, Molecular Biology, bashin@jnu.ac.kr]
- Hyon E Choi [Professor, DNA-Protein Interaction, hyonchoy@jnu.ac.kr]
- Phil Youl Ryu [Professor, Microbiology, pyryu@jnu.ac.kr]
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## Department of Preventive Medicine

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Preventive medicine is an unique specialized field of medical practice composed of distinct disciplines that utilize skills focusing on the health of individuals, communities, and defined populations in order to prevent disease, prolong life and promote health through the organized efforts and informed choices of society, organization, public and private, communities and individuals. It is also called 'public health', which puts stress on the community rather than individuals, or 'social medicine' relating social factors to the disease.

Three special areas of preventive medicine are epidemiology, environmental and occupational health, and health policy and management. Epidemiology program has conducted two large-scale population-based cohort studies (Namwon study and Dong-gu study) to determine the etiologies of and effective preventive measures for cardiovascular disease, cognitive decline, osteoporosis and cancer. Health policy and management program deals with community-based health program development. Environmental and occupational medicine works to assess and reduce risks to individuals and communities from chemical, biological and physical hazards in the home, community, school, and workplace environments.

- Seok Joon Sohn
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- Joon Ho Shin [Professor, Health Policy and Management, jhshin@jnu.ac.kr]
- Min Ho Shin [Professor, Epidemiology, mhshinx@paran.com]
- Sun-Seog Kweon
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## Department of Forensic Medicine

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Lectures in forensic medicine, 16 hours in the second quarter of the third year, provide the basic medicolegal knowledge necessary for application to both criminal and civil law and for medical practice, which consists of the cause of sudden unexpected natural death, pathophysiology of shock, post-mortem inspection, post-mortem changes, injuries, asphyxia, poisoning, several kinds of accidental death, DNA fingerprinting, as well as medical documents and medico-legal jurisprudence

- Jong Tae Park
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- Hyung Seok Kim [Professor, Forensic Medicine, Neuropathology veritas@jnu.ac.kr]

## Department of Medical Education

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The Department of Medical Education was established at Chonnam National University Medical School (CNUMS) in 2001. We have focused on nurturing primary doctors, medical scientists, and medical educators compatible with the educational purposes of CNUMS. We participate in a wide range of educational activities. We offer many excellent courses and programs related to health professional education and research. We provide expertise in curriculum development, innovation in teaching and learning methods, support for the faculty program and student learning, and research in medical education.

## Professors

• Eun Kyung Chung [Professor, Medical Education, ekcmedu@jnu.ac.kr] • Eui Ryoung Han [Assistant Professor, Medical Education, jolie@jnu.ac.kr]

## Department of Biomedical Sciences

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### Research Interest

We study biomedical sciences via molecular and cellular biology.

The following are recent areas of research by faculty members in our department.

1. Prof. In-Kyu Park: Delivery of genes and proteins into living organisms Studies to increase the efficiency of the delivery of genes and proteins into living organisms, which would help to develop effective therapeutic modalities against human diseases.

2. Prof. Hee-Young Shin: Clinical epidemiology and research ethics

Prof. Hee-Young Shin works in the area of clinical epidemiology and research ethics. Dr. Shin is mainly interested in the scientific and ethical conduct of clinical trials. Clinical epidemiology and biostatistics are the basic elements to implement scientific clinical research. Moreover, ethical considerations are very important in developing innovative medical treatment. The other areas of interest are geriatric diseases (including dementia) and public health.

3. Prof. Seok-Yong Choi: Fate specification of glial cells

The central nervous system (CNS) consists of neurons and glial cells. Knowledge about fate specification of cells in the CNS is essential to develop therapeutic modalities for CNS diseases, especially neurodegenerative diseases. Whereas the fate specification of neurons has been studied extensively, research into glial cells remains unclear. Our research group investigates the fate specification of glial cells, especially ependymal cells, in the zebrafish model using genetic and cell biological approaches.

4. Prof. Jihoon Jo

Research in our lab focuses on a wide range of projects from molecular mechanisms of synaptic plasticity which is a strong model for learning and memory, and Neurodegenerative disease including Alzheimer's disease.

5. Prof. Hoon Hyun: Molecular Imaging

The lab focuses on the development of novel contrast agents for tissue- and organ-specific targeting and diagnosis. Of particular interest is "Structure-Inherent Targeting," where small molecules can be used for targeting, imaging, diagnosis and therapy by specifically visualizing target tissue with high optical properties and by avoiding nonspecific uptake in normal background tissue.

#### Professors

In Kyu Park
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- 665 -

Seok Yong Choi [Professor, zebrafish@jnu.ac.kr]
Hee Young Shin

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- Ji Hoon Jo [Professor, Pharmacoepidemiology, Bioethics, Jihoon.Jo@jnu.ac.kr]
- Hoon Hyun

[Associate Professor, Molecular Imaging, Cancer Therapy, Drug Delivery, hhyun@jnu.ac.kr] Department of Parasitology and Tropical Medicine

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### Research Interest

The Department of Parasitology and Tropical Medicine was established in 2019 at Chonnam National University Medical School (CNUMS). The visions of our department are i) to control endemic parasitic infections in Korea and finally to improve public health; ii) to educate medical students with a practical and globalized point of view, and iii) to contribute the development of parasitology as a part of basic medicine.

Parasitology is the study of parasites, their hosts, and the relationship between them. A parasite is an organism that live on or within another organism called the host. These include organisms such as: protozoa, nematoda, cestoda, trematoda, and medically important arthropoda. Medical parasitology is the subject which deals with the parasites that infect humans, the diseases caused by them, clinical features and the response generated by humans against them. It is also concerned with the various methods of their diagnosis, treatment and finally their prevention and control. Tropical diseases are endemic diseases in tropical and subtropical areas. There are many kinds of diseases such as malaria, cholera, dengue fever, sleeping sickness, and yellow fever. Tropical medicine is a medicine that deals with the pathophysiology, diagnosis and treatment of Tropical diseases.

The vision of our research is to overcome parasitic diseases and tropical diseases and to contribute to humanity and society as a basic and true medical scientists. The goals of the research are i) to study Parasites for the treatment of tropical diseases, ii) to study the relationship between Parasites and hosts to overcome intractable immune system diseases; and iii) to utilize useful parasites as translational research.

## Professors

 Eun Jeong Won, M.D., Ph.D.
 [Assistant Professor, Parasitology and Tropical Medicine, Parasite.woni@jnu.ac.kr]

## Department of Internal Medicine

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The Department of Medicine has 9 subdivisions: gastroenterology, cardiology, pulmonology and critical care medicine, endocrinology and metabolic disease, nephrology, hemato-oncology, infectious disease, allergy, and rheumatology.

Medical students are instructed in case-orientated and problem-solving approaches to diverse medical problems. From their third year, students are grouped into small units for clinical practice and turn subdivisions every week where they learn clinical skills and complete their knowledge under close contact with professors, fellows, residents, and patients. Faculty deliver weekly lectures to residents and students. Also, there are weekly case conferences to show typical or difficult clinical problems and journal reviews.

#### Professors

#### Gastroenterology

- Jong Sun Rew [Professor, Gastroenterology, jsrew@jnu.ac.kr]
- Sung Kyu Choi [Professor, Gastroenterology, choisk@jnu.ac.kr]
- Hyun Soo Kim [Professor, Gastroenterology, dshskim@jnu.ac.kr]
- Young Eun Joo [Professor, Pancreatobiliary Disease, yejoo@jnu.ac.kr]
- Chang Hwan Park
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- Wan Sik Lee [Professor, Gastroenterology, jadelook@hanmail.net]
- Sung Bum Cho
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- Seon Young Park [Associate Professor drpsy@naver.com]

- Chung Hwan Jun [Associate Professor, Hepatology, estevanj@naver.com]
- Dae Seong Myung [Assistant Professor, Gastroenterology, colonoscopy, underlove@jnu.ac.kr]

## Cardiology

- Jong Chun Park
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- Jeong Gwan Cho [Professor, Electrophysiology, Arrhythmia, Heart Failure, Syncope, chojg@unitel.co.kr]
- Myung Ho Jeong [Professor, Intervention, Atherosclerosis, myungho@chollian.net]
- Young Keun Ahn [Professor, Intervention, Basic Study, cecilyk@hanmail.net]
- Hyung Wook Park
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- Young Joon Hong [Associate Professor, Intervention, Atherosclerosis, hyj200@hanmail.net]
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- Kye Hun Kim [Professor, Echocardiography, Valve, Heart Failure, christiankyehun@hanmail.net]
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- Doo Sun Sim [Professor, Intervention, Atherosclerosis, true1021@gmail.com]
- Ki Hong Lee.
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- Jae Yeong Cho.
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## Pulmonology

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- Sung Chul Lim [Professor, Pulmonary and Critical Care Medicine, lscmd@jnu.ac.kr]
- Yu Il Kim [Professor, Pulmonary and Critical Care Medicine, kyionly@jnu.ac.kr]

- Yong Soo Kwon [Associate Professor, Pulmonary and Critical Care Medicine, yckwon@jnu.ac.kr]
- In Jae Oh [Professor, Pulmonary and Critical Care Medicine, droij@jnu.ac.kr]
- Cheol Kyu Park [Assistant Professor, Pulmonology, Lung cancer, kpark214@jnu.ac.kr]

#### **Endocrinology and Metabolism**

- Dong Jin Chung
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- Jin Ook Chung [Professor, Endocrinology and Metabolism, imagine-jjo@jnu.ac.kr]
- Hee Kyung Kim [Assistant Professor, Endocrinology and Metabolism, albeppy@jnu.ac.kr]

#### Nephrology

- Nam Ho Kim [Professor, Acute Renal Failure, Diabetic Nephropathy, nhk111@jnu.ac.kr]
- Soo Wan Kim [Professor, Chronic Kidney Disease, Kidney Transplantation, Hemodialysis, Peritoneal Dialysis, skimw@jnu.ac.kr]
- Seong Kwon Ma
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- Eun Hee Bae [Professor, Chronic Kidney

Disease, Hemodialysis, Hypertension, Diabetic Nephropathy, Glomerulonephritis, baedark@hanmail.net]

 Chang Seong Kim [Assistant Professor, Kidney transplantation, Diabetic and Hypertensive Nephropathy, Translational research in Kidney diseases, laminion@hanmail.net]

### Hemato-oncology

- Hyeoung Joon Kim [Professor, Hematopoletic Stem Cell Transplant, Acute and Chronic AML, CML, hjoonk@jnu.ac.kr]
- Ik Joo Chung [Professor, Gastric Cancer, Colon Cancer, ijchung@jnu.ac.kr]
- Je Jung Lee
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- Sang Hee Cho [Professor, Gastric Cancer, Colon Cancer, sh115@chollian.net]
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- Woo Kyun Bae [Professor, hemato-oncology, drwookyun@jnu.ac.kr]
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- Sung Hoon Jung

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#### **Infectious** Diseases

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- Hee Chang Jang [Professor, Infection, haroc153@naver.com]
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#### Allergies

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## Rheumatology

- Shin Seok Lee [Professor, Rheumatology, shinseok@jnu.ac.kr]
- Yong Wook Park [Professor, Rheumatology, parkyw@jnu.ac.kr]
- Tae Jong Kim [Professor, Clinical and Basic Research on Spondyloarthritis (especially Ankylosing Spondylitis), ktj1562@jnu.ac.kr]
- Dong Jin Park [Assistant Professor, Rheumatology, dongjin02@jnu.ac.kr]

Department	of
Surgery	

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#### Sophomore course

The lecture course, 147 hours (7 credits) in total, covers general problems and must be taken for three quarters. There is an examination at the end of each quarter.

#### Junior and Senior course

The clerkship is 3 weeks: a week in the outpatient department, a week in gastrointestinal and hepatobiliary surgery, and a week in endocrinologic and pediatric surgery. The workload for clerks includes ward rounds, case assignments, and informal discussions with faculty surgeons as they appear in weekly schedules. All students should be prepared to participate in preoperative conferences and to assist at operations. Students are exposed to diseased patients who can or should be treated by operative intervention. Students participate in outpatient and inpatient care. They are expected to obtain enough experience in wound care and be familiar with important emergency procedures. Every Friday, case presentation is done by students, and an examination is given.

#### Divisions

Gastroenterologic Surgery, Colorectal Surgery, Hepaticobiliary and Pancreatic Surgery, Endocrine Surgery, Pediatric Surgery, Vascular and Transplantation Surgery, Trauma Surgery

## Professors

#### Gastroenterologic Surgery

- Dong Yi Kim [Professor, Gastric Cancer and Benign Gastric Diseases, Trauma, dockim@jnu.ac.kr]
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  Oh Jeong
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Ho Gun Kim
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#### **Colon and Rectal Surgery**

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Jae Kyun Ju [Professor, Colorectal Cancer, Benign Proctology Trauma, jkju@jnu.ac.kr]

- Chang Hyun Kim [Assistant Professor, Colon and Rectal Surgery santiagokim@jnu.ac.kr]
- Soo Young Lee [Assistant Professor, Colon and Rectal Surgery syleecrs@jnu.ac.kr]

### Hepaticobiliary and Pancreatic Surgery

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- [Professor, Liver, Biliary and Pancreatic Diseases, Laparoscopic Surgery, Liver Transplantation, koh88@dreamwiz.com]
  Young Hoe Hur

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### **Endocrine Surgery**

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- Min Ho Park
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sabiston@hotmailcom]

## **Pediatric Surgery**

 Sang Young Chung [Professor, Pediatric, Vascular and Transplantation Surgery, sycpvts@jnu.ac.kr]

### Vascular and Transplantation Surgery

Soo Jin Na Choi [Professor, Pediatric, Vascular and Transplantation Surgery, choisjn@jnu.ac.kr]
Ho Kyun Lee [Assistant Professor, Pediatric, Vascular and Transplantation Surgery, hklee@jnu.ac.kr]

### **Traumatic Surgery**

 Jung Chul Kim [Professor, Liver, Biliary and Pancreatic Diseases, Laparoscopic Surgery, Liver Transplantation, 3rdvivace@hanmail.net]

## Department of Obstetrics and Gynecology

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In the Department of Obstetrics and Gynecology, 80 hours of formal lectures for sophomore medical students are offered through the second quarter. The lectures for sophomores cover reproductive endocrinology, infertility, general gynecology, gynecological oncology, phenomena and management of pregnancy, labor and puerperium, in both normal and abnormal circumstances. Four weeks are devoted to a clerkship in the ward for clinical experiences of juniors. Daily clerkship begins with participation in journal meetings, beginning at 8:00 am. Students are encouraged to participate in answering and questioning. The objective of the clerkship is to acquaint the student with the varied aspects of the medical care for women, with emphasis on acquiring the basic skills of gynecologic and obstetrical history taking and physical examination, participating and assuming responsibility in the evaluation and care of outpatients and inpatients, and acquiring practical experience in the operating and delivery room areas with close supervision by the staff.

- Sung Tack Oh [Professor, Endocrinology and Infertility, ohst@jnu.ac.kr]
- Yoon Ha Kim [Professor, Perinatology, Genetics, kimyh@jnu.ac.kr]
- Seok Mo Kim [Professor, Gynecologic Oncology, seokmo2001@hanmail.net]
- Chul Hong Kim [Professor, Urogynecology and Reconstructive Pelvic Surgery General Gynecology, hongkim@jnu.ac.kr]

- Moon Kyung Cho [Professor, Endocrinology and Infertility, chomk@jnu.ac.kr]
- Jong Woon Kim [Associate Professor, Perinatology, Genetics, jwkimmd@jnu.ac.kr]
- Woo Dae Kang [Associate Professor, Gynecologic Oncology, kangwoodae@gmail.com]

Department of Pediatrics \_\_\_*Contact Information* Phone: +82-62-220-6646 Fax: +82-62-222-6103

The Department of Pediatrics has been providing a diverse range of services aimed at achieving good health and well-being for all children since 1945. We provide active clinical services with 10 pediatric subspecialties including neurology, neonatology, hematology, oncology, cardiology, endocrinology, pulmonology, allergies, nephrology and gastroenterology.

We anticipate multidisciplinary, dedicated services with the launching of the new state-of-the-art CNU Children's Hospital in 2017. Being the largest tertiary referral pediatric hospital in the Chonnam Provice, CNU Children's Hospital offer not only the most effective treatment and care, but also research activities to meet the needs of our patients, families and society in general.

Research interests:

- 1. Basic research and clinical care with extensive knowledge and experience on the treatment of hematologic malignancies, solid tumors, hematologic diseases, immune deficiencies, and rare diseases.
- 2. Clinical research on hematopoietic stem cell transplantation.
- 3. Research to identify the causative factors of pediatric malignancies (Environmental Health Center)
- 4. Preoperative diagnosis and postoperative care for children with congenital heart diseases. Therapeutic catheter interventions.
- 5. Right ventricular dysfunction in overload right ventricular pressure models in animals.
- 6. Biomarkers of diagnosis and genetic changes associated with vasculitis in Kawasaki disease.
- 7. Variable research on care and prognosis of ELBW (extreme low birth weight) infants.
- 8. The epidemiology and pathogenic mechanisms of perinatal infection and care of intrauterine infections.
- 9. Management of patients with childhood epilepsy, headache diseases, and other developmental disorders.
- 10. Molecular genetic studies for underlying abnormalities of variable neurologic disorders in childhood, clinical studies for the progress of epilepsy in early childhood, and developmental disorders associated with genetic or environmental etiologies.
- 11. Neonatal jaundice and liver diseases, pathogenesis and treatment of childhood obesity, steatohepatitis in children.
- 12. Diabetes mellitus, thyroid disease, precocious puberty, short stature, obesity, and Vitamin D metabolic diseases.
- 13. Pulmonary diseases including respiratory tract infectious disease and congenital pulmonary abnormalities
- 14. Pediatric allergic diseases including asthma, allergic rhinitis, atopic dermatitis and drug allergies.
- 15. Congenital Anomalies of the Kidney and Urianry Tract (CAKUT), glomerulonephritis, acute kidney injury, and chronic kidney disease in children

## Professors

• Young Youn Choi [Professor, Neonatology, Genetics & Rare case yychoi@jnu.ac.kr]

• Young Jong Woo [Professor, Pediatric epilepsy, Developmental disorders Growth and development, yjwoo@jnu.ac.kr]

 Hoon Kook
 [Professor, Hematopoietic stem cell transplantation for children, Genetic Rare
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 Chan Jong Kim [Professor, Vitamin D metabolism, Congenital adrenal, hyperplasia, cjkim@jnu.ac.kr]

• Young Ok Kim [Professor, Pediatric neurology, Epilepsy, Pediatric gastroenterology, ik052@jnu.ac.kr]

• Hee Jo Baek [Associate Professor, Hemato-oncology, Infection, pe00069@jnu.ac.kr]

- Eun Song Song [Associate Professor, Neonatology, essong@jnu.ac.kr]
- Hwa Jin Cho [Assistant Professor, Cardiology, Intensive Care Medicine, chhj98@gmail.com]
- Eun Mi Yang [Assistant Professor, Pediatric nephrology, emyang@chonnam.ac.kr]
- Eun Lee

[Assistant Professor, Pediatric allergy and pulmonology, unelee@hanmail.net]

Department of Psychiatry *Contact Information* Phone: +82-62-220-6146 Fax: +82-62-225-2351

The Department of Psychiatry in Chonnam National University Medical School - one of the oldest and leading faculties of psychiatry in Korea - has devoted more than 60 years to exceptional patient care, innovative research, and teaching. The close collaboration between research and clinics are one of our unique strengths, enabling us to provide patients with the best care available as we work to discover more effective strategies to prevent, control, and treat mental disorders. Researches has been carried out in various areas, particularly in the fields of mood disorders, anxiety disorders, schizophrenia, early intervention, geriatric psychiatry, psychopharmacology, psychiatric epidemiology, sleep medicines, psychosomatic medicines, child/adolescent psychiatry, and psycho-oncology. Our department has published many valuable papers in these areas, and we managed more than 50,000 patients per year in outpatient clinics in two national general hospitals. Also, we have managed several national centers for public mental health, schizophrenia rehabilitation, dementia, and child sexual abuse. Today, we continue our long tradition of established excellence in patient care, teaching, and research.

## Professors

· Jin Sang Yoon · Sung Wan Kim [Professors, psychopharmacology, [Professor, schizophrenia, bipolar schizophrenia and other psychotic disorder, early intervention in psychiatry disorders, sleep disorders, swkim@jnu.ac.kr] jsyoon@jnu.ac.kr] • Ju Yeon Lee • Il Seon Shin [Associate Professor, [Professor, dementia, geriatric psychiatry, child and adolescent psychiatry, developmental organic mental disorder, disabilities, trauma-related disorders, isshin@jnu.ac.kr] jylee31@jnu.ac.kr] • Jae Min Kim · Seon Young Kim [Professor, depressive disorders, [Associate Professor, alcohol and other substance-related disorder, psycho-oncology, psychosomatic medicine, biological psychiatry consultation-liaison psychiatry, jmkim@jnu.ac.kr] sykimpsy@jnu.ac.kr]

Department of Neurology \_\_\_Contact Information Phone: +82-62-220-6173 Fax: +82-62-228-3461

The Department of Neurology provides a total of 33 lecture hours to 2nd year medical students during the 3rd and 4th quarters. Topics of lectures include instruction in neurology, neurologic diagnosis, cerebrovascular disease, dementia, seizure disorder, peripheral nerve disorder, movement disorder, infectious CNS diseases, headaches, and other CNS disorders. The lectures are designed to both satiate and stimulate the student's curiosity for "the secret of the brain." Clinical clerkships in neurology are available to 3rd and 4th year medical students. Students have the opportunity to participate in daily conferences, rounds, neuroimaging seminars, journal club, and group meetings for neurologic examination; assist in diagnostic procedures; and assist the emergency stroke team which is always on call. Operations occur around the clock for both interventional surgery and the early management of patients with potential for strokes.

- Ki Hyun Cho [Professor, Stroke, kcho@jnu.ac.kr]
  Myeong Kyu Kim
- [Professor, Epilepsy, mkkim@jnu.ac.kr]
- Byeong Chae Kim [Professor, Cognitive Neurology, byeong.kim@jnu.ac.kr]
- Man Seok Park [Associate Professor, Stroke, Demyelinating Disease, mspark@jnu.ac.kr]
- Seung Han Lee [Professor, Neuro-ophthalmology, Neuro-otology, Neuromuscular Disease, nrshlee@jnu.ac.kr]

- Sung Min Choi [Professor, Movement Disorder, mvement@jnu.ac.kr]
- Joon Tae Kim [Associate Professor, Stroke, alldelight2@jnu.ac.kr]
- Tai Seung Nam [Associate Professor, Neuromuscular Disorder, nts0022@jnu.ac.kr]
- Kang Ho Choi [Assistant Professor, Stroke, Neurodegenerative disease, Headache, Sleep disorder, ckhchoikang@chonnam.ac.kr]

## Department of Dermatology

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The Department of Dermatology conducts both clinical and basic research by 5 faculty members, 10 residents, 2 fellowship, 2 technicians, and individual research associates.

Faculty member areas of interest in research are:

1) Mycology

The division of mycology is devoted to the investigation of fungal organisms causing skin diseases. Current interest of this division is to identify Dermatophyte species and Malassezia species, a normal flora of human skin, as a causative organism inducing various skin diseases, including atopic dermatitis and seborrheic dermatitis. The method used in this study includes fungal culture, morphology, PCR, and gene sequencing.

2) Biochemistry and Photobiology

This division of biochemistry is devoted to the investigation of basic biochemical processes involved in normal physiology of skin. For example, the distribution and function of peroxiredoxin, an antioxidant, is identified by immunohistochemical stain and western blot analysis.

3) Dermatopharmacology and Clinical Study

Skin pharmacology and toxicology has been studied under clinical efficacy evaluations using bioengineering measurements of physiological properties of skin. Clinical cosmetic research with various products and skin barrier function are performed with objective evaluation methods such as skin color, capacitance, TEWL(transepidermal water loss), elasticity, and neurosensory functions.

#### 4) Dermatopathology

Our department has kept its own dermatopathology laboratory fot over 25 years. Cumulative histopathologic archives are very useful for retrograde clinical studies, as well as immunopathology and tissue prep for Mohs surgery.

#### 5) PDT and LLLT

Photosensitizer and novel porphyrin derivatives are the research interests for treating acne and both benign and malignant skin tumors. Also, low-level laser therapy(LLLT) using light emitting diode LED) are the main research interests for treating rosacea, photorejuvenation, various pigmentation disorders including melasma or Riehl's melanosis, et al. Industry sponsored clinical studies have been conducted for many years.

#### Professors

 Young Ho Won [Professor, Dermatopathology, Skin Immunology, Mycology, yhwon@jnu.ac.kr] • Seung Chul Lee [Professor, Photobiology, Skin Tumors, schul@jnu.ac.kr]

- 678 -

- Seong Jin Kim [Professor, Dermatotoxicology, Skin Bioengineering, seongkim@jnu.ac.kr]
- Jee Bum Lee [Professor, Laser and Light Therapy,

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• Sook Jung Yun

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## Department of Orthopedic Surgery

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Orthopedic surgery or orthopedics is the branch of surgery concerned with conditions involving the musculoskeletal system. The musculoskeletal system includes bones, joints, ligaments, tendons, muscles, and nerves. Orthopedic surgeons use both surgical and nonsurgical means to treat musculoskeletal trauma, sports injuries, degenerative diseases, infections, tumors, deformities and congenital disorders of extremities and spinal column.

- Taek Rim Yoon [Professor, Hip Joint Surgery Biomaterials, tryoon@jnu.ac.kr]
- Sung Taek Jung [Professor, Oncology and Pediatric Surgery, stjung@jnu.ac.kr]
- Keun Bae Lee [Professor, Foot and Ankle Trauma, kbleeos@jnu.ac.kr]
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- Hyoung-Yeon Seo [Associate Professor, Spine Surgery, hyseo2001@hanmail.net]

- Myung Sun Kim [Associate Professor, Shoulder Surgery, rhamses@chol.com]
  Kyung Soon Park
- [Associate Professor, Hip Joint, Arthroplasty, Osteoporosis and Fracture, chiasma@hanmail.net]
- Sung Kyu Kim [Assistant Professor, Orthopaedics, Spine surgery, skkim@jnu.ac.kr]

## Department of Neurosurgery

The Department of Neurosurgery, one of the largest clinical services at the Chonnam National University Hospital, provides extensive inpatient and outpatient care opportunities. The mission of the department is the advancement of the specialty of neurosurgery through the interrelated efforts of resident training, patient care, and clinical and laboratory research. In particular, the experiences of the faculties fall into virtually every facet of this diverse specialty area. The department is committed to providing the highest quality of neurosurgical care for patients who have an illness or injury that affects the brain, spine, or peripheral nerves. We offer the full range of modern neurosurgical techniques, including cerebrovascular surgery, brain tumor surgery, skull-base surgery, spinal surgery, spinal instrumentation, transsphenoidal surgery, peripheral nerve surgery, stereotactic surgery for movement disorders, epilepsy surgery, pediatric neurosurgery, craniofacial reconstructive surgery, functional surgery, and neuroendovascular surgery. We also have perfected operations since the Neuronavigator system (Brain Lab) Can this be deleted? The sentence is fine without it; if it is kept, something must be added, such as when it was introduced.was introduced.

Research is integral to the department's clinical and academic goals. The department has a well-equipped basic science laboratory space, as well as facilities for clinical research. Current major research projects include brain tumors and molecular neurobiology, cerebral ischemia and experimental models for cerebral aneurysm joined with pharmacology, epilepsy, degenerative spinal disorders, spine injury, and other neurosurgical topics.

The four-year neurosurgery residency program focuses on providing broad academic, clinical, and research experience. We also offer a fellowship for residents interested in further specialization. Clinical internship programs are given to senior students. During the one-week internship, one week of clerkship, students participate in a daily neurosurgical preoperative and postoperative conference, rounds, other seminars, operations, special studies, and emergency care in the emergency and the neurosurgical intensive care unit. Assigned case studies are presented by students and are discussed with staff. Students are evaluated by written examinations, attendance, and the degree of participation in the clinical clerkship. A total of 57 lecture hours are given to third-year medical students during the first and second quarters. The lecture subjects include instruction in neurosurgery, neurosurgical diagnosis, cerebrovascular disease, brain tumors, spinal disorders, neurotrauma, pediatric neurosurgery, functional neurosurgery, and other CNS diseases.

#### Professors

Shin Jung

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[Professor, Cerebrovascular Disease and Experimental Models of Cerebral Ischemia, taesun1963@yahoo.co.kr]

- Jung Kill Lee
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- Bong Ju Moon [Associate Professor, Spine and Spinal Cord Disorders, Head Injuries, bongjumoon@jnu.ac.kr]
- Sung Pil Joo [Professor, Surgery and Genetic Study of Cerebrovascular Disease, nsjsp@jnu.ac.kr]

- Kyung Sub Moon [Professor, Brain Tumor, Skull Base Surgery, Gamma Knife Radiosurgery, herhuz@hanmail.net]
- Tae Young Jung [Professor, Brain Tumor Surgery, Skull Base Surgery, Molecular Neurosurgery, jung-ty@jnu.ac.kr]
- Woo Yeol Jang [Assistant Professor, Brain Tumor Surgery, Skull Base Surgery, Molecular Neurosurgery, breadot@hanmail.net]

Department of Thoracic and Cardiovascular Surgery

\_\_\_Contact Information Phone: +82-62-220-6546 Fax: +82-62-227-1636

The Department of Thoracic and Cardiovascular Surgery in our hospital originated in 1965. Currently, our department is subdivided into thoracic and cardiovascular centers, and has a rich tradition of dedicated surgeons who provide expert surgical services to patients with all types of diseases.

Our cardiovascular center offers a full complement of cardiac services for acquired heart disease (especially valve repair and replacement, coronary artery bypass grafts, treatment of thoracic aneurysm, and dissection) and congenital heart disease (especially neonatal heart surgery, adult congenital heart surgery).

Our thoracic center is treating patients who have pulmonary disease, mediastinal disease, and esophageal disease. Efficient cooperation within the medical staff encourages accurate diagnosis, surgery and other supportive care. Also, our department provides outstanding medical services to surgical patients through thoracoscopy and the Da Vinci Surgical Robot System.

Since our department involves vital organs critical to human life, we continue to strive to be the best.

#### Professors

 Kook Joo Na [Professor, Thoracic Oncology Thoracoscopic and Robotic Surgery, kjna@jnu.ac.kr]

In Seok Jeong
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 Sang Gi Oh [Professor, Adult Cardiac and Vascular Surgery, drosg@hanmail.net]

Sang Yun Song
 [Associate Professor,
 General Thoracic Surgery and
 Thoracoscopic and Robotic Surgery,
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Yo Chun Jung [Associate Professor, valvular heart disease & arrhythmia, yochun@medimail.co.kr]
Kyo Seon Lee [Associate Professor, Adult cardiac and aortic surgery, Heart transplantation, waytogosun@gamil.com]
Do Wan Kim [Assistant Professor, Trauma, Surgical critical care, extracorporeal membrane oxygenation therapy, maskjoa@hanmail.net]

## Department of Ophthalmology

*Contact Information* Phone: +82-62-220-6753 Fax: +82-62-227-1642

Since its establishment in 1945, the department of ophthalmology at Chonnam National University Medical School has faithfully implemented medical practice, research, and education, aiming to help the public maintain healthy vision. In particular, it is one of the best eye clinics in Korea, and provides professional care by specialists in ocular surfaces, cataracts, glaucoma, retinal and uveal diseases, oculoplasty, strabismus and pediatric ophthalmology, and neuro-ophthalmology using advanced medical equipment.

This department carries out approximately 50,000 procedures in outpatient care, 2,500 operations, and 1,500 specialized laser treatments per annum. In addition, since 1992, it has operated the Chonnam National University Eye Bank and performed about 600 cases of corneal transplantation surgery. In 2007, it carried out the first suture-less corneal endothelial transplantation surgery (DSAEK) in South Korea.

This department actively conducts basic experimental research, as well as much clinical research, by opening a certified animal laboratory for eye diseases. Through this, dozens of research articles, including SCI level international journals, have been published each year and our excellence in research has been recognized domestically and internationally. In addition, since 1996, the department of ophthalmology has hosted a nationwide ophthalmology academic symposium every year.

### Professors

- Kyung Chul Yoon
   [Professor, Cornea and external eye diseases, Cataract and refractive surgery, Oculoplasty, kcyoon@jnu.ac.kr]
- Sang Woo Park [Professor, Glaucoma, Cataract, exo70@naver.com]

• Hwan Heo

[Associate Professor, Strabismus, Pediatric Ophthalmology, opheye@hanmail.net]

 Yong Sok Ji [Associate Professor, Retina, Uveitis, yongsok.ji@jnu.ac.kr]

## Department of Otolaryngology and Head & Neck Surgery

*Contact Information* Phone: +82-62-220-6776 Fax: +82-62-228-7743

Established in 1942, Chonnam National University's Medical School's Department of Otolaryngology-Head and Neck Surgery is one of the oldest otolaryngology departments throughout the country. From the beginning until now, our mission and vision were to devote ourselves to cure patients and overcome diseases in the field.

We have a long tradition of enthusiastically taking care of ill patients, especially in the region. Chronic otitis media, dizziness, facial palsy, congenital and acquired hearing loss etc. have been our major targets in the otologic field. Benign and malignant tumors, voice problems and many infectious diseases were cured in the heads and necks of patients. Finally, Allergic rhinitis, sinusitis, and (reconstructive) facial plastic surgery were done in the rhinologic division.

We are committed to training the next generation of leaders in the field, including medical students, residents, fellows, and post-doctors. Since the opening of our department, we have been sending out a constant stream of outstanding doctors and researchers in the field of otolaryngology on a national scale.

We have embarked on a new era in the treatment of otolaryngologic by conducting clinical and basic research. Our department has been and is performing many clinical trials, by ourselves and also for international companies. We have a research center for hearing regeneration, head and neck cancer, and Nasal physiology & rhinitis. We have performed and pioneered innovative developments in the diagnosis and treatment of ear, nose, and throat diseases.

## Professors

- Yong Beom Cho [Professor, Otology, Rhinology, choyb@jnu.ac.kr]
- Chul Ho Jang [Professor, Otology, chulsavio@hanmail.net]
- Sang Cheol Lim [Professor, Head and Neck Surgery, limsc@hanmail.net]
- Hyong-Ho Cho [Professor, Pediatric Otolaryngologyotology, victocho@hanmail.net]
- Joon Kyoo Lee [Professor, Head and Neck Neoplasm Laryngology, joonkyoo@hanmail.net]
- Tae Mi Yoon
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- Dong Hoon Lee [Associate Professor, Rhinology, Skull base surgery, Salivary gland tumor, Pediatric otorhinolaryngology leen3l@hanmail.net]

Department of Plastic and Reconstructive Surgery

\_\_Contact Information Phone: +82-62-220-6354 Fax: +82-62-220-6357

During the 2nd year curriculum, a total of 10 hours of lectures are given on various topics including reconstructive plastic surgery, congenital anomalies, hand surgery, head and neck surgery, skin tumors, and trauma (including burns). Students are given the opportunity to pursue a one-week clinical clerkship during the 3rd or 4th year of medical school. Student activities include accompanying rounds, receiving case assignments, and informal discussion sessions with staff. Students observe outpatient care in the outpatient clinic and participate in inpatient care under the guidance of residents. Through bedside teaching, students are expected to gain experience in the field of plastic surgery, become familiar with practical patient care, and attend regularly scheduled departmental conferences.

## Professors

• Sam Yong Lee [Professor, Head and Neck Tumor, Breast Reconstruction, sylee@jnu.ac.kr]

 Kwang Seog Kim [Professor, Microsurgery, Hand Surgery, pskim@jnu.ac.kr] • Jae Ha Hwang [Associate Professor, Aesthetic Surgery, Trauma psjhhwang@daum.net]

	Contact Information
Department of	Phone: +82-62-220-6700
Urology	+82-61-379-7745 (Hwasun Hospital) Fax: +82-62-227-1643
	+82-61-379-7750 (Hwasun Hospital)

The Department of Urology was established at Chonnam National University in September 1967. The mission of our department of urology is committed to offering the highest quality urologic care, innovative research programs, an outstanding education for world-class leaders, and the discovery and evolution of new ideas and information about urologic disease, from research to the clinical implementation phases of disease control in the field. The Department of Urology has several subdivisions: Uro-oncology, Voiding Dysfunction, Sexual Medicine, Pediatric Urology, Endourology, Urinary Infection, Prostate Disease, Urinary Trauma and Reconstruction, and Urinary Ultrasonography. Our residency and student program is one of the best in the country.

The Department enjoys the strong support of the Chonnam National University Hospital, which is also affiliated with the Hwasun University Hospital and School of Medicine.

## Professors

- Kwang Sung Park [Professor, Sexual Medicine, Prostate disease, uropark@gmail.net]
- Dong Deuk Kwon
   [Professor and Chairman, Uro-oncology, Prostate Disease, Female Urology, urokwon@gmail.com]
- Taek Won Kang [Professor, Uro-oncology, sydad@hanmail.net]
- Seung Il Jung [Professor, Uro-oncology, Endourology, Urinary Infection, drjis@yahoo.co.kr]
- Sun Ouck Kim [Professor, Pediatric Urology, Female Urology, Neurology, seinsena@hanmail.net]

- Kyung Jin Oh [Assistant Professor, Endourology, Urinary Trauma and Reconstruction, Urinary Ultrasonography, exeokj@hanmail.net]
- Eu Chang Hwang [Associate Professor, Urologic Oncology, Genito-urinary infection, urohwang@gmail.com]
  Ho Song Yu
- [Associate Professor, General urology, Voiding dysfunction, Endourology, Pediatric urology, hsyou76@gmail.com]

# Department of Anesthesiology and Pain Medicine

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The Departement of Anesthesiology and pain medicine was established at Chonnam National University in 1961. Since that time, the Department of Anesthesiology and pain medicine has offered a full range of educational and research opportunities in anesthesia, critical care, and pain management.

Our Department has focused on specific aspects of each of these areas in which faculty members have established strength or increased potential for development.

The research programs include both basic science and applied clinical sciences. These priority research areas are:

#### A. Cardiovascular Anesthesia Laboratory

Our cardiovascular laboratory focuses on preventing myocardial infarction and its reperfusion injury. The main objective of our laboratory is to search for cardioprotective mechanisms of known or newly manufactured drugs.

In the early 1990's, cardiovascular research focused mostly on hemodynamic effects of study drugs. In that period, Professor Kyung Yeon Yoo, who studied stunned myocardium, performed animal testing using dogs. Nowadays, we are carrying out experiments on rats with an ischemia/reperfusion model. We are also focusing on the Reperfusion Injury Salvage Kinase (RISK) Pathway in ischemia/reperfusion injury.

#### B. Research for Critical Care Medicine

The Division of Critical Care is dedicated to the collaborative research that improves the management and outcome of critically ill patients. Over the past several years, our research activities have focused on four topics related to patient outcome, respiratory critical care, sepsis laboratory, and basic research:

- Interventional studies aimed at decreasing the incidence of complications in critically ill patients, such as 'A Comparative Study on Weaning Time of Mechanical Ventilation as Analgesic Strategy Using Different Opioids'
- 2. Animal studies aimed at finding out the protective effects of new materials or drugs against acute lung injury in animal models
- 3. Molecular and cellular investigations on pathophysiology of inflammation and sepsis

#### C. Pain Medicine

The main research interests of this laboratory include the pathophysiological mechanisms of neuropathic, inflammatory, and cancer-related pain to provide rationale for new therapy. The research emphasis is focused on various neurotransmitters and their receptors, or channels implicated in the modulation of nociception in the spinal cord. We utilize various rodent models inducing chronic pain, behavioral analysis of nociception, and molecular biologic methods.

## Professors

- Myung Ha Yoon [Professor, Pain Management, Neuroanesthesia, mhyoon@jnu.ac.kr]
- Sang Hyun Kwak
   [Professor, Critical Care Medicine, Cardiac Anesthesia, shkwak@jnu.ac.kr]
- Seong Wook Jeong [Professor, Anesthetic Pharmacology, Critical Care Medicine, anesman@jnu.ac.kr]
- Jeong Il Choi [Professor, Pain Management, Neuroanesthesia, jichoi@jnu.ac.kr]
- Hong Beom Bae [Professor, Cardiac Anesthesia, Critical Care Medicine, nextphil2@jnu.ac.kr]
- Joung Min Kim [Assistant Professor, Ventilator induced lung injury and sepsis, tca77@jnu.ac.kr]

- Seong Tae Jeong [Associate Professor, Neuroanesthesia, Pediatric Anesthesia, anesjst@jnu.ac.kr]
  Hyung Kon Lee [Associate Professor, Pain Management, Regional Anesthesia, leehg@jnu.ac.kr]
  Woong Mo Kim
- [Associate Professor,
- Pain Management, Regional Anesthesia, kimwm@jnu.ac.kr]
- Seong Heon Lee
- [Assistant Professor,
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# Department of Radiology

\_\_Contact Information Phone: +82-62-220-5746 Fax: +82-62-226-4380

Accurate diagnosis is the starting line of patient care. Our department of radiology at Chonnam National University aims to offer the best patient health care available.

The department operates various state-of-the-art diagnostic modalities such as 3.0T MRI, 128 channel volume CT, ultrasound, fluoroscopy, mammography, and plain radiography.

Our radiologists perform and provide interpretations of radiologic exams, biopsy procedures guided by ultrasound or CT scans, and also various interventional treatments for vascular diseases, biliary or urinary tract diseases as well as oncologic interventions such as transarterial chemoembolization (TACE) and radiofrequency ablation (RFA).

In addition to clinical practices, we continuously pursue excellence in health care through research, education, and active interaction with fellow clinicians through consultations or conferences.

The department of radiology consists of the following specializations:

- Abdominal radiology
- Genitourinary radiology
- Thoracic radiology
- Cardiovascular radiology
- Neuroradiology and Head and Neck radiology
- Musculoskeletal radiology
- Breast radiology
- Pediatric radiology
- Interventional radiology

## Professors

- Jae Kyu Kim [Professor, Cardiovascular and Interventional Radiology, kjkrad@jnu.ac.kr]
- Yun Hyeon Kim [Professor, Thoracic Radiology cardiovascular Radiology, yhkim001@jnu.ac.kr]
- Yong Yeon Jeong [Professor, Oncologic Imaging &

therapy, Molecular Imaging Gastrointestinal Radiology, yjeong@jnu.ac.kr]

- Woong Yoon
   [Professor, Neuroimaging Neurointervention, radyoon@jnu.ac.kr]
- Sang Soo Shin
   [Professor, Abdominal, Genito-urinary Radiology,

kjradsss@gmail.com • Hyo Soon Lim [Professor, Breast Radiology, nicolas-hs@hanmail.net] • Suk Hee Heo [Associate Professor, Abdominal & Genitourinary Imaging, sheo@jun.ac.kr] • Il Woo Park

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# Department of Radiation Oncology

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The mission of Department of Radiation Oncology is to advance the state of knowledge in radiation oncology, to provide the most optimal cancer therapy, to educate medical students, physicians, radiation technologists, physicists, and to develop state-of-the-art research models that can be translated into clinical trials.

Our faculty members are working in close cooperation with colleagues in surgical and medical oncology to facilitate a comprehensive multidisciplinary team approach for the implementation of qualified cancer management.

About three hundred cancer patients are daily visiting on weekdays. Our department is equipped with two CT-simulators, five linear accelerators including Novalis Tx, high dose rate remote controled after-loading system for brachytherapy, and TomoTherapy. We provide a wide range of radiation treatment options including high precision 3-D conformal radiation therapy, high dose rate brachytherapy, stereotactic radiotherapy, intensity modulated radiation therapy (IMRT), total body radiation, respiratory gated radiotherapy, and image-guided radiotherapy (IGRT).

Recently faculty members are actively involved in various prospective clinical trials which are conducted by Korean Radiation Oncology Group(KROG) and Radiation Therapy Oncology Group (RTOG).

#### Professors

 Woong-Ki Chung
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 Sung Ja Ahn [Professor, Radiation Oncology for Lung and Breast Cancer ahnsja@jnu.ac.kr]

 Taek Keun Nam [Professor, Radiation Oncology for Gastrointestinal, Genito-Urinary and Hematologic Tumor, Soft Tissue Sarcoma, tknam@jnu.ac.kr] Ju Young Song [Associate Professor, Medical Physics (Radiation Therapy Physics), jysong@jnu.ac.kr]
Mee Sun Yoon

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## Department of Laboratory Medicine

\_Contact Information Phone: +82-62-220-5353 Pax: +82-62-224-2518

The Department of Laboratory Medicine is devoted to cutting-edge laboratory service, outstanding biomedical research, and comprehensive education in our field. Our department includes six services: diagnostic hematology, clinical chemistry, laboratory immunology, clinical microbiology, transfusion medicine, and cytogenetics & molecular genetics. Our department provides laboratory testing for inpatients and outpatients at Chonnam National University Hospital (CNU) and Chonnam National University Hwasun Hospital (CNUHH). There is a laboratory information system (LIS) that interfaces with the hospital information system.

Research interests:

- Diagnostic molecular biology for hematologic malignancy and blood transfusions
- Pathogenesis of fungal infections and antifungal susceptibility testing
- Development of disease-specific biomarkers (tumor markers)
- Diagnostic immunology and molecular diagnostics

## Professors

- Jong Hee Shin [Professor, Clinical Microbiology, shinjh@jnu.ac.kr]
- Myung Geun Shin [Professor, Diagnostic Hematology, Molecular Diagnostics, Cytogenetics, mgshin@jnu.ac.kr]
- Seung Jung Kee [Professor, Diagnostic Immunology, Diagnostic Molecular Genetics, sjkee@jnu.ac.kr]
- Soo Hyun Kim [Professor, Clinical Microbiology, alpinboy@jnu.ac.kr]
- Se Jong Chun [Assistant Professor, Transfusion Medicine, sjchun79@chonnam.ac.kr]
- Hyun Jung Choi
   [Assistant Professor, Clinical chemistry, hyunjung.choi@jnu.ac.kr]

# Department of Nuclear Medicine

\_\_\_*Contact Information* Phone: +82-62-220-5646 Fax: +82-62-223-1666

The Department of Nuclear Medicine provides various diagnostic and therapeutic services for the patients in a safe and non-invasive way. The imaging service furnish functional information along with anatomy for early diagnosis, characterization and determination of severity and prognosis, and prediction of therapeutic responses of diseases. Department provides radionuclide-based therapeutic modalities for cancerous diseases as well as nuclear imaging services for a variety of diseases including many types of cancers, heart disease, gastrointestinal, endocrine, neurological disorders and other abnormalities.

In addition to clinical services, department's research has focused on new innovative imaging technologies to decipher the transformation from normal healthy to abnormal diseased state on biochemical and molecular/cellular level. It also develops the simultaneous Imaging-and-Therapeutic (Theranostics) technology based on the diversification of radiotracers and bioactive molecules/microorganisms.

The ultimate mission/goal of Nuclear Medicine Department is to provide a new avenue with pioneering medical science and technologies for the determination of the status of health, identification of early symptoms and signs for the diseases, prediction of disease courses and the demonstration of precise molecular profile of diseases as a part of the new era of the precision medicine.

#### Professors

- Hee Seung Bom [Professor, Nuclear Cardiology, Radionuclide Therapy, Biomedical Informatics, hsbom@jnu.ac.kr]
- Ho Chun Song [Professor, Nuclear Neurology, Radionuclide Therapy. Medical Radiation Safety, songhc@jnu.ac.kr]
- Jung Joon Min [Professor, Molecular Imaging, Cancer Theragnostics, Nuclear Oncology, jjmin@jnu.ac.kr]

Chang Ho Lee

[Assistant Professor, Biomedical Optical imaging, Molecular imaging, Photoacoustic, ch31037@jnu.ac.kr]

 Seong Young Kwon [Associate Professor, Nuclear Oncology, Radionuclide therapy, kwonsy@jnu.ac.kr]

# Department of Emergency Medicine

*Contact Information* Phone: +82-62-220-6809 Fax: +82-62-228-7417

The goal of the Department of Emergency Medicine is to provide the highest quality of emergency medical care to our patients within the setting of advanced research, training, and education. The main focus of research and clinical activities of the department is on cardiopulmonary resuscitation such as basic life support, advanced cardiovascular life support, and advanced trauma life support. The department is also a pioneer in the development of novel solutions to improve several critical and interesting clinical areas including toxicology, emergency medical service system, environmental medicine, disaster medicine, and critical care medicine. Through these activities the members of the department are proud to be able to provide cutting-edge and state-of-the-art emergency care in the community.

## Professors

- Young Il Min [Professor, Advanced Cardiac Life Support, Trauma, minyi46@hanmail.net]
- Tag Heo [Professor, Cerebral Resuscitation, Toxicology, docheo@hanmail.net]
- Byeong Jo Chun [Professor, Toxicology, cbjbawoo@hanmail.net]
- Jeong Mi Moon [Professor, Toxicology, Resuscitation, drmjm@hanmail.net]

- Kyung Woon Jeung [Professor, Resuscitation, neoneti@hanmail.net]
- Hyun Ho Ryu [Associate Professor, Trauma, oriryu@hanmail.net]
- Byung Kook Lee [Associate Professor, Resuscitation, bbukkuk@hanmail.net]
- Yong Hun Jung [Associate Professor, Resuscitation, jungyh@cnuh.com]

Department of Physical & Rehabilitation Medicine

\_\_Contact Information Phone: +82-62-220-5186 Fax: +82-62-228-5975

The Department of Physical & Rehabilitation Medicine (PRM) is active in developing clinical rehabilitation medicine and furthering clinically applied basic rehabilitation science research. This PRM Lab (a.k.a. Dynamic Rehabilitation Medicine Science and Technology Institute Lab) has deep interests in Neuro-Rehabilitation, Musculoskeletal rehabilitation, Pain rehabilitation, Cardiac rehabilitation, Pulmonary rehabilitation, Pediatric rehabilitation, and Geriatric rehabilitation. We have not only general rehabilitative therapeutic facilities for Physical therapy, Exercise therapy, Occupational therapy, and ADLs training but also special laboratory facilities for Neurophysiologic exercise including Electromyogram-Biofeedback training systems and RS (rehabilitation system) models of BTE (Baltimore therapeutic equipment) systems, 3D-Motion analysis systems, Electrodiagnostic Lab I (for electromyographic studies and intraoperative monitoring) and Electrodiagnostic Lab II (for evoked potential studies and transcranial magnetic stimulation studies) for the diagnosis and the management of muscle and nerve diseases, and a Digital infrared thermography Lab for the evaluation of neuromusculoskeletal pain and its outcomes. We also have cutting-edge rehabilitation systems for improving neuronal plasticity such as finger-synchronized robot-assisted hand rehabilitation systems, body weight support treadmill training systems, dynamic balance evaluation and training systems, 3-D motion analysis systems, and repetitive transcranial magnetic stimulation (rTMS) with Neuronavigation Systems (Brainsight<sup>TM</sup>) for noninvasive brain stimulation. Several research areas are in active operation, provided with evidence-based rehabilitation services for the best functional outcome.

The Neuro-Rehabilitation Team deals with the evaluation and management of patients with strokes, traumatic brain injuries, spinal cord injuries, and cerebral palsy. Our main interests of research rest on neurological recovery with neural reorganization and plasticity, and functional recovery. We also provide non-invasive brain stimulation for people with motor impairments, cognitive disorders, aphasia, and central neuropathic pains. Neurological functions can be improved by stimulating focal brain areas using transcranial magnetic stimulation or transcranial direct current stimulation.

The Musculoskeletal & Sports Rehabilitation Team deals with the evaluation and management of people with a broad range of muscle and joint problems such as back, shoulder, knee, arm or hand pain, and any other musculoskeletal pain or dysfunction caused by trauma, overuse, maladaptive lifestyles, or sporting activities. Individuals with acute and chronic injuries, muscle imbalance, and overuse (repetitive strain) injuries participate in a comprehensive pain management program aimed at restoring functional capabilities and increasing functional status to return home and to the wider community.

The Pain Rehabilitation Team deals with any pain patients receive due to neuromuscular or musculoskeletal pathology, and cancer. The aim of pain rehabilitation is also to increase the functional status and quality of life through various pain-relieving interventions.

The Cardiac Rehabilitation Team deals with the functional evaluation and management of patients with cardiovascular diseases using various aerobic exercise equipment, such as: treadmills, bicycles with ergometers, and upper extremity ergometers. The aim of cardiac rehabilitation is to maintain, restore, and increase the optimal physical, medical, psychological, emotional, vocational, and socioeconomic status

of the patients and to maximize the quality of life of patients.

The Pulmonary Rehabilitation Team deals with the functional evaluation and management of persons with pulmonary diseases such as chronic obstructive pulmonary diseases, restrictive lung diseases, and intrinsic lung diseases with the goal of achieving and maintaining the individual's maximum level of independence and functioning in the community.

The Pediatric Rehabilitation Team deals with the functional evaluation and management of pediatric patients with developmental delays, cerebral palsy, musculoskeletal problems such as flat feet and torticollis, and congenital anomalies such as myelomeningocele. We evaluate the status of the children thoroughly and discuss plans for current and long-term management, home-care, as well as dispensing information about the prognosis and precautions that may be taken.

The Geriatric Rehabilitation Team focuses on the functional evaluation and management of symptoms and functions of aging individuals to prevent or minimize disabilities and functional deterioration in order to create and maintain healthy longevity.

The Cancer Rehabilitation Team deals with the evaluation and management of patients with pain and neurological symptoms associated with cancer, peripheral polyneuropathy, dysphagia, lymphedema, and so on. Our main interests of research rest on improving quality of life and reducing complications for cancer patients.

The Neuromuscular Electrodiagnosis Team provides neurophysiological approaches in determining the cause of muscular problems (weakness, wasting diseases, spasms, fatigue, etc.) or sensory problems (decreased sensations, abnormal sensations, etc.). Using various electrophysiological tests of muscles and nerves, we can determine the location, severity and recovery status of nerve and muscle lesions.

The Orthotics and Prosthetics Team implement Orthotic devices to help to improve the function of weakened muscles and joints, correct changes in joint structure, and protect weakened joints on the basis of 3-D motion analysis. Prosthetic devices are used for individuals who lost limbs due to accidents or illnesses, or those born without limbs, to regain function. We offer a multidisciplinary clinical service for patients who need orthotic or prosthetic devices while offering courses of study and education for functional improvement.

Finally, this PRM Lab researches the biomedical sciences oriented to rehabilitation medicine and aims to devote itself to the health and longevity of humans.

We also contribute to an environment which provides optimal rehabilitation for the disabled who reside in the local communities of Gwangju and the wider Jeonnam province in cooperation with other national and regional rehabilitation centers.

#### Professors

• Sam-Gyu Lee

[Professor, Brain Neuro-Rehabilitation, Neuro-Musculo-Skeletal Pain Rehabilitation, Geriatric Rehabilitation, sam91@jnu.ac.kr]  Jae-Young Han
 [Professor, Cardiac Rehabilitation, Neuro-Musculo-Skeletal Pain Rehabilitation, Pediatric Rehabilitation, mhanjy@daum.net]

# Department of Occupational and Environmental Medicine

\_\_*Contact Information* Phone: +82-61-379-8253 Fax: +82-61-379-7791

Occupational and Environmental Medicine has continued to become more widely recognized as a specialty with unique capabilities for preventing and treating illnesses and injuries related to working and environmental conditions.

The mission of Occupational and Environmental Medicine is to: identify agents in the environment and workplace that affect human health, elucidate their mechanisms, develop strategies for confronting their effects, assess and communicate their risks, and share the knowledge obtained. To pursue the mission fully, multidisciplinary practices covering clinical medicine, toxicology, industrial hygiene, epidemiology, law, and other public health sciences are needed.

The components of research and services include chemical toxicity, heavy metal exposure, solvent toxicity, epigenetics, occupational asthma, occupational lung diseases, occupational skin diseases, occupational neurological disorders, cumulative traumatic disorders, noise-induced hearing loss, comprehensive risk communication, workers' health management, and diseases of healthcare workers among others.

In addition, students have opportunities to get lectures and conduct their practice in the Department of Occupational and Environmental Medicine Clinic.

#### Professors

• Jai Dong Moon

[Professor, Occupational & Environmental Epidemiology, Epigenetics, Workers' health management, jdmoon@chollian.net]

# Research Institute of Medical Sciences

\_\_*Contact Information* Phone: +82-61-379-2881 Yax: +82-61-379-2890

The Research Institute of Medical Sciences came into existence on November 21, 1979, and contributes to the development of medical sciences and the improvement of public health by studying cooperatively pressing issues. The Center is composed of the Director, General Manager, and research departments, focusing on the following activities:

- Developing research tasks in basic and clinical medicine and offering financial support
- Hosting domestic and overseas academic symposia and delivering presentations of research results sponsored by the Institute
- Publishing journals, newsletters, and medical education materials
- Nurturing competent researchers, offering them chances to study abroad, and supporting discussion sessions
- Providing high-tech equipment for various analysis activities

# College of Humanities

\_\_Contact Information Phone: +82-62-530-3105, 3106, 3107, 3108 Fax: +82-62-530-3109 E-mail: human@altair.chonnam.ac.kr URL: http://human.jnu.ac.kr

#### Departments

- · Department of Korean Language and Literature
- · Department of English Language and Literature
- · Department of German Language and Literature
- · Department of French Language and Literature
- · Department of Chinese Language and Literature
- · Department of Japanese Language and Literature
- · Department of History
- · Department of Philosophy

## Affiliated Research Centers

- · British/American Studies Institute
- · Center for Philosophical Studies
- · European Studies Institute
- · Interdisciplinary Program of Asian Culture
- · Korean Language and Literature Studies Institute
- · Research Center for History and Culture
- · Research Center for Japanese Culture
- · The Institute of Humanities
- · The Institute of Honam Studies
- · The Institute of Honam Buddhist Culture
- · Eurasian Studies Institute

Korean Language and Literature *Contact Information* Phone: +82-62-530-3130 Fax: +82-62-530-3140 E-mail: korean3130@hanmail.net URL: http://korean.inu.ac.kr/

## What is Korean Language and Literature?

The goal of the Department of Korean Language and Literature is to study the history and structure of spoken and written Korean language scientifically, as well as to appreciate and criticize classical and modern literature. Spoken and written languages are the most basic methods to express the human mind and are a resource to construct mental systems. Therefore, through the study of the nature of language, the use of Korean language and the essence of language art, students are enabled to understand the history, modes, and rules of Korean language and literature.

The Department has developed theories of speech skills, literature appreciation, general and creative writing and have put them to practical use to help students improve their language skills, aesthetic sentiments, and writing skills. General education about Korean language and literature, development of language skills, and cultural aesthetic appreciation are the aims of the Department.

#### Korean Language and Literature

The Department of Korean Language and Literature offers three special fields of study: Korean Linguistics, Korean Classical Literature, and Modern Literature. In the field of Korean Linguistics, the department offers a range of linguistic courses, including semantics, phonology, syntax, and dialectology. The field of Classical Literature includes classical poetry, classical prose, Chinese classics, and oral literature. In the field of Modern Literature, the department introduces students to poetry, novels, drama, and criticism. In addition to the major fields of study, students supplement studies through student associations, such as the Classical Literature Society, Poetry Society, the Novel Society, the Drama Society, the Society for Literary Criticism, and the Korean Language Society. These societies have existed for more than 20 years. Most students in the department are members of one of these six societies, which enable them to study actively and gain many social advantages, even when searching for jobs.

#### Teacher Training Courses

Only 5-6 students can complete the courses for the teaching profession. They are selected based on their grades in their first year of studies before commencing their second year of studies.

## Graduation Qualification

Students are required to submit an undergraduate thesis, pass Everyday English 1, and demonstrate proficiency with computers.

#### Careers

Graduates from the Department of Korean Language and Literature work in diverse fields with good

language and literary skills. It is regarded that expressing our thoughts and opinions in a logical and persuasive way is one of the most essential capabilities in all societies. Graduates are active in the public information field as well as in the literary world (poets, novelists, and reviewers).

Graduates have entered the press (as producers, journalists, and drama writers), education (as professors, researchers, and secondary school teachers), broadcasting (as reporters, producers, and editors), government offices, and enterprises.

## Degree Requirements

#### **Graduate Credits**

General Culture	Major (Specialization)	Electives (Minor)	Graduate Credits
a minimum of 30 credits	a minimum of 39 credits (60 credits)	a minimum of 67 credits (21 credits)	at least 130 credits

#### **Core Courses**

- Major courses (3 courses)
- History of the Korean Language, History of Old Korean Literature, History of Modern Korean Literature. - General culture courses (5 courses)

Understanding Literature, Chinese Characters, Writing, Career Plan and Self Understanding, and Global Communication English.

- Other requirements
  - a) Students must complete at least one course from three options: major specialization course, double (joint) major, and minor programs.
  - b) To complete the General Culture course, students must take at least four subjects from eight courses, such as Korean Language and Writing, Foreign Language and Foreign Culture, Literature and Art, History and Philosophy, and Society and Humanities.

## What Do You Study?

## Core Courses

Core Courses	Language Provisions in Korea (3)
Dialectology (3)	Middle Korean Grammar (3)
Graphemics (3)	Modern Korean Novelists (3)
History Of Korean Language (3)	Modern Korean Poets (3)
History Of Modern Korean Literature (3)	Practice of Culture Scenario (3)
History Of Old Korean Literature (3)	Reading in Early Modern Korean (3)
Introduction to Education of Korean as A Foreign	Reading in Korean Modern Drama (3)
Language (3)	Readings in Korean Classical Literature (3)
Introduction to Korean Folklore (3)	Readings in Korean Modern Novels (3)
Introduction to Korean Linguistics (3)	Readings in Korean Modern Poetry (3)
Introduction to Korean Modern Literature (3)	Readings in Middle Korean (3)
Introduction to Korean Old Literature (3)	Readings in Old Korean Essays (3)
Korean Grammar (3)	Readings in Sino-Korean Classical Poetry (3)
Korean Phonology (3)	Sociolinguistics (3)
Korean Semantics (3)	Studies in Hyang-Ga & Poetry in Koryo Dynasty (3)

Studies in Literary Criticism (3)
Studies in Poetry Chosun (3)
Studies of Korean Oral Literature (3)
Studies of Old Korean Novels (3)
The Methodology and Practice of Korean
Linguistics (3)
The Methodology and Practice of Korean Literary
Studies (3)

## Professors

- Shin-Chung Kim, Ph.D. [Professor, Classic Korean Literature, sckim@jnu.ac.kr]
- Heui-Ha Son, Ph.D.
   [Professor, Korean Linguistics, shh@jnu.ac.kr]
- Hwan-Mo Lim, Ph.D. [Professor, Modern Korean Literature, limhm@jnu.ac.kr]
- Dae-Hyun Kim, Ph.D. [Professor, Classic Korean Literature, kdh@jnu.ac.kr]
- Hae-Jin Shin, Ph.D.
   [Professor, Classic Korean Literature, hjshin@jnu.ac.kr]
- In-Joo, Pyo, Ph.D.
   [Professor, Classic Korean Literature, ijpyo@jnu.ac.kr]
- Dong-Geun Kim, Ph.D. [Professor, Modern Korean Literature, dong@jnu.ac.kr]

Theory in Creative Writing (3) Theory of Korean Drama (3) Theory of Modern Novels (3) Theory of Modern Poetry (3) Understanding in Sino-Korean literature (3) Understanding of Honam Classical Literature (3)

- Hyun-Mi Back, Ph.D. [Professor, Modern Korean Literature, hmback@jnu.ac.kr]
- Mi-Ran Lee, Ph.D.
   [Professor, Modern Korean Literature, miranlee@jnu.ac.kr]
- Il-Gu Jang, Ph.D.
   [Professor, Modern Korean Literature, communit@jnu.ac.kr]
- Chae-Hyung Cho, Ph.D. [Associate professor, Korean Linguistics, chochaehyung @jnu.ac.kr]
- Seung-Joo Baek, Ph.D.
   [Associate professor, Korean Linguistics, righttodream
   @jnu.ac.kr]
- Kyung-Sun Jo, Ph.D.
   [Assistant professor, Korean Linguistics, puppetjks
   @jnu.ac.kr]
- Jun-Hwan Yi, Ph.D.
   [Assistant professor, Korean Linguistics, yujunhwan@naver.com]

English Language and Literature \_\_*Contact Information* Phone: +82-62-530-3150 Fax: +82-62-530-3159 JRL: http://ell.jnu.ac.kr

#### What is English Language and Literature?

English Language and Literature was established as a discipline of higher learning in the late 19th century. Having started with a philological inquiry into the English language and canonical literary texts written in English, the field underwent a dynamic transformation over the last century, engaging with other forms of knowledge, such as linguistics, cultural studies, and media studies. Along with such disciplinary innovations, however, English Language and Literature has retained as its central concern of fostering creative and critical abilities through an in-depth study of literary and cultural texts produced in English.

#### Department of English Language and Literature

Established in 1952, the Department is one of the oldest departments at Chonnam National University. It has been at the forefront of national higher education, offering a full range of under- graduate and postgraduate study programs.

The Department also houses the Joint Program of Foreign Language that offers students an option for double (joint) majors in combined studies of Business Management and other foreign languages, such as French, German, Chinese, and Japanese. This joint program strives to prepare students for better career opportunities.

The undergraduate program focuses on three main areas: English Language Acquisition, English Linguistics, and English Literary Studies.

(1) English Language Acquisition: The department offers a range of English conversation and writing courses to enable students to achieve a high level of English proficiency. In these courses, students also develop English skills for use in a range of academic and professional areas, such as academic research, business, translating, media and tourism.

(2) English Linguistics: The department offers a range of linguistic courses, including the College English Grammar, English Phonology, and English Syntax. These courses introduce students to methods of deeply focused investigations into the English language.

(3) English Literary Studies: The department introduces students to a wide spectrum of imaginative writing in English, from Anglo- Saxon times to the present day. The subjects include a survey of literary history, studies of literary genres, critical theories, and seminars concerning great authors and specialized literary topics. Because of its imperial past, English has become a common language for many prominent writers around the world. The department teaches not only British and American Literature, but also global literature in English.

By studying a wide variety of texts produced in different parts of the world, students learn to appreciate cultural differences and understand the profundities of the human experience.

## Professors

• Tae-Un Min. Ph.D. sh3940@jnu.ac.kr] [Professor, Modern British Fiction, • Keun Young, Shin, Ph.D taeun@chonnam.ac.kr] [Asssociate Professor, Syntax-Semantics, • Seung-Hee Roh, Ph.D. kyshin@jnu.ac.kr] [Professor, Shakespeare and Gender Studies, • Yeon-Min, Kim, PhD. [Associate Professor, English Poetry, rover@chonnam.ac.kr] • Robert Grotjohn, Ph.D. kogmc@jnu.ac.kr] [Professor, American Poetry, · Joori Lee, Ph.D. rrdgrotjohn@gmail.com] [Assistant Professor, Contemporary English • Mi-Ra Oh, Ph.D. Literature. [Professor, English Phonology, joorilee00@gmail.com mroh@chonnam.ac.kr] · Seonghoon Kim, Ph.D. • Hee-Kyung Nah, Ph.D. [Assistant Professor, Contemporary American [Professor, American Novels, Literature and Culture, hknah@chonnam.ac.kr] priest23@jnu.ac.kr] • Yoon-Hee Na, Ph.D. • Mark W. Murdaugh, M.A. [Professor, Principles of English Language [Visiting Professor, EIL, Teaching, mwmurdau@hotmail.com] yhna@hanmail.net] • Scott Allan Findlay • Seunghyun Baek, Ph.D [Visiting Professor, TESOL, [Professor, Applied Linguistics, scottfindlay@yahoo.com]

#### Degree Requirements

For the B.A. degree in English Language and Literature, students are required to:

1. Complete 13 courses (39 credits) offered by the Department of English Language and Literature, including required courses (Introduction to English Literature and Introduction to English Linguistics 1: this requirement applies to the students admitted since 2011).

2. Submit an official TOEFL/TOEIC report that shows CBT 197 points / IBT 71 points or more in the case of TOEFL, or 675 points or more in the case of TOEIC.

3. Submit a certificate of computer skills.\* There are two options available: Complete 80 hours of course work at the Information Computing Institute at Chonnam National University, or complete more than two courses, each with a grade of B or better, in computer sciences offered by either the Department of Computer Science or the Department of Computer Engineering.

(\* This requirement applies to students admitted after 2000.)

## What Do You Study?

**First Year Courses** Western Culture and Civilization (3) British and American Culture (3) Current Issues and Debate (3) Media English And Composition (3) English Phonetics (3) English Phonology (3) English Comprehension 1 (3)

#### Second Year Courses

Survey of American Literature (3) Survey of British Literature 1 and 2 (3) Introduction to English Literature (3) Introduction to English Linguistics 1 and 2 (3) Business English (3) English Grammar 1 and 2 (3) Modern Culltures of English-Speaking World (3) English Comprehension 2 (3) English Prose (3) English Language Acquisition (3)

#### **Third Year Courses**

18th and 19th Century British Novel (3)British Novel 2 (3)19th Century American Novel (3)Modern American Novel (3)

Modern British Poetry (3) Pre-20th Century British Poetry (3) American Poetry (3) English Literary Criticism (3) Ethnic American Literature (3) Contemporary British and American Drama (3) English Teaching Methods (3) Shakespeare (3) English Syntax (3)

#### Fourth Year Courses

Advanced English Translation Practice (3) Children's Literature (3) Special Topics in English Literature (3) English Literature in Films and Video (3) English-Speaking World Literature (3) Special Topics in English Linguistics (3) History of the English Language (3) English Semantics (3) German Language and Literature *\_\_Contact Information* Phone: +82-62-530-3170 Fax: +82-62-530-3179 URL: http://german.jnu.ac.kr

## What is German Language and Literature?

Germany's prominence in cultural, geopolitical, and economic aspects accounts for its ever-increasing importance in the world. It comprises the German-speaking heartland, along with Switzerland, Liechtenstein, and Austria. Combined with its geographic centrality in Europe, a reunified Germany has exercised its influence over the international community more than ever before and, thus, created a world-wide interest in its language and culture. Traditionally, Germany has been known for its world-class writers such as Goethe, Heine, and Kafka. The current language Department aims to equip students with skills in communicating in German; understanding German-speaking politics, socioeconomics and cultures, and appreciating German literature.

#### German Language and Literature

On March 1, 1995, the German Language and Literature and German Education departments merged into the Department of German Language and Literature. When students become sophomores, they begin to specialize in either German Language and Literature or German Area Studies in accordance with their future careers.

In order to help students to learn effectively, the Department provides many resources on German Studies and offers Major courses, including Grammar, Composition, Conversation, History of German Literature, Poetry, Drama, Novels, and Introduction to the German Language.

#### Professors

- Kyung-An Song, Ph.D. [Professor, German Literature, kasong@chonnam.ac.kr]
- Dong-Jung Kim, Ph.D. [Professor, German Poetry, kimdj@chonnam.ac.kr]
- Ja-Kyung Cho, Ph.D.
   [Professor, German Linguistics, jkcho@chonnam.ac.kr]
- Hong-Sup Kim, Ph.D.
  [Professor, German Literature, hongskim@hotmail.com]
  Myeong-Sun Jeong, Ph.D.
- [Professor, German Literature, msnjeong@hanmail.net]
- Chirin Eisele, M.A. [Invited Professor, German Literature, chirin.eisele@googlemail.com]

#### Degree Requirements

Students are required to earn 130 credits, normally 17 credits per semester (18 credits in exceptional cases). Students must also submit an undergraduate thesis, and demonstrate proficiency in the German language.

## What Do You Study?

# German Language and Literature Major Courses

Cultures of German-Speaking World (3) History of German Literature (3) German Lyric And Music (3) German Masterpieces in Context (3) Translation Practice of German Literature 2 (3) Translation Practice of German Literature 1 (3) Exercise of German for Beginning (3) Understanding German Sentences (3) German Sentences Exercise (3) Practical German Conversation & Composition (3) Understanding of German Maerchen (3) Understanding of European Culture (3) German Culture in Art (3) German Conversation (3) German for major students1 (3) German for major student2 (3) German Romanticism (3) Feminism in German Literature (3) Understanding Of German Novel (3) German Children Literature (3) The German Language Learning Through Novels (3) Literature and Film (3) The German Society Through Its Novels (3) German Classic (3) German Sturm Und Drang (3) Practical German Practice (3) German Realism and Naturalism (3) Sing and Learn German (3) German Media Culture (3) German Performing Arts (3) German Society Depicted (3) Mythology and German Literature (3) German Travel Literature (3) Understanding German Drama (3) Understanding German Poetry (3) Modern German Literature (3) Contemporary German Literature 1 (3)

German Area Studies Major Courses Principles of German Language Teaching (3) Research in Development of Teaching Materials & Methods for German (3) Teaching Logic and Essay Writing for German (2) Cultures of German-Speaking World (3) German Grammar (3) History of German Literature (3) Appreciation of German Masterpoetry (3) Exercise of German for Beginning (3) German Conversation (3) German Composition (3) German Reading (3) Introduction to German Linguistics (3) Introduction to German-Speaking World Literature (3) Advanced German Grammar & Reading (3) Advanced German Conversation & Composition (3) Practical German Conversation & Composition (3) Business German Grammar & Reading (3) Introduction to The Intercultural Communication (3) Training of The Competence (3) Understanding of German Texts (3) Exploring Career Paths of German-speaking areas (3) Marketing in German Market (3) Understanding of German Culture Circle (3) Business German Conversation & Composition (3) Practical German Practice (3) Practical German Grammar & Reading (3) Professional German Grammar & Reading (3) Professional German Conversation & Composition (3) Introduction to Germany (3) Introduction to Life in Germany (3) German Business Culture (3) Trade Policy of Germany and EU (3) German Industries and Market Research (3) Management Practice in Germany (3) Practice of International Trade with Germany (3) Basic German Conversation (3) Everyday German Conversation (3) Intermediate German Grammar (3) Business German (3) Introduction to German Economy (3)

## **Careers**

Graduates can pursue careers in business, the media, the Ministry of Foreign Affairs, international trade, and in academia.

French Language and Literature \_\_*Contact Information* Tel: +82-62-530-3190 Pax: +82-62-530-3199 JRL: http://french.jnu.ac.kr

## What is French Language and Literature?

Traditionally, France has played a pivotal role in the world politically, economically, and culturally. Its role has become even more prominent since the expansion of the European Union. The goal of the Department is to seek a knowledge and creative adoption of aspects of French literature and culture. Students who are trained in the Department are able to introduce French culture to Korea and vice-versa.

## School of French Language and Literature at Chonnam National University

the first two years of the undergraduate programs, students are expected to take basic courses designed to help them acquire proficiency in French. For the last two years, they are required to take cognitively demanding courses such as French Linguistics and Literature. When students become sophomores, they begin to specialize in either French Language and Literature or French Education in accordance with their future careers.

Graduates from previous years have contributed to cultural exchanges between Korea and France, thereby bringing advancement to Korean culture. They have also played an important role in improving Korea's relationships with Europe and Africa.

### Professors

- Seong-Yeong Kang, Ph.D. [Professor, French Linguistics, sykang@jnu.ac.kr]
- Eul-Shik Shim, Ph.D. [Professor, French Linguistics, esshim@jnu.ac.kr]
- Min Choi, M.A.
   [Professor, French Literature, mchoi@jnu.ac.kr]
- Jae-Han Ryu, Ph.D.
   [Professor, French Literature, jh2059@jnu.ac.kr]
- Chae-Kwang Lim, Ph.D. [Professor, French Literature, cklim@jnu.ac.kr]

- Young-Dong Ha, Ph.D. [Professor, French Linguistics, ydha@jnu.ac.kr]
- Tae-Hoon Kim, Ph.D. [Professor, French Culture, remine@jnu.ac.kr]
- Jin-Young Min, Ph.D.
   [Associate Professor, French Culture, sahara@jnu.ac.kr]
- Soue-Won Rhee, Ph.D.
   [Associate Professor, French Culture, souewon-rhee@jnu.ac.kr]
- Elodie LAURE [Invited Professor, French Conversation, kaidren7@gmail.com]

#### Degree Requirements

For the B.A. degree in French litterature, students are required to:

- 1. Complete 13 courses (39 credits) offered by the Department of French Language and Literature.
- 2. Submit an undergraduate thesis.
- \* Students are required to earn 130 credits, normally 17 credits per semester(18 credits in exceptional cases).

## What Do You Study?

#### **General Courses**

Readings in French (3) French Society and History (3) Introduction to the French Literature (3) Elementary French Grammar1 (3) Elementary French Grammar2 (3) Elementary French Conversation (3) Introduction to French Pronunciation (3) Elementary French Composition (3)

# French Language and Literature Major Courses

French conversation in advanced level (3) French Feminism and Literature (3) Contemporary French Poetry (3) French Popular Culture (3) French composition in advanced level (3) Special topics in French contemporary fiction (3) French modern poetry (3) French Critique (3) French literature and film (3) French Literature and Thought (3) Modern French Drama (3) Study in French Novel (3) Understanding French Linguistics (3) Intermediate French Conversation (3) Understanding of Lexicography (3) Intermediate French Grammar (3) History of French Literature And Art 1 (3) Introduction to the French Poetry (3) Introduction to the French Novel (3) Literature in The Age of Enlightenment (3) Understanding of French Phrase (3) Intermediate French Composition (3) Introduction to French Drama (3) Contemporary French Novel (3)

History of French Literature And Art 2 (3) French modern fiction (3) Advanced level of French grammar (3) Understanding of French cultural area (3) Interpretation of French culture (3) Classic French Drama (3) French Semantic Structure (3)

#### French as a Secondary Language Major Courses

The outline of French language (3) Understanding French Literature (3) Crash Course in Regional studies of Francophonie (3) Language and Culture of Francophonie (3) French Poetry (3) Sentence structure of French language (3) Society and History of Francophone Africa (3) Understanding of Francophone African Cooperation and Development (3) Society and History of Francophone Europe and North America (3) Politics and Economics of Francophone Africa (3) Understanding Regional studies of Francophonie (3) French Conversation 1 (3) French Conversation 2 (3) Readings in French 1 (3) French Grammar 1 (3) French Grammar 2 (3) Readings in French 2 (3) Practice of French Composition (3) French Composition 2 (3) Culture and Arts of Francophonie(3) Culture and Arts of Francophone Europe and North America (3) French Composition 1 (3) Special Topics in French linguistics (3) Topics in French Literature (3)

Politics and Economics of Francophone Europe and North America (3) Culture and Arts of Francophone Africa (3) French fiction (3) Seminar of Francophonie (3) Practical French (3) France Performing Arts (3) Teaching theory of French language (3) Study of French language material and teaching methods (3) Course on logic and essay writing in French Education (2)

#### **Minor Electives**

21 credits must be chosen

## **Teacher Training Courses**

## Careers

Some graduates from the Department have worked as professors, literary critics, and creative writers. Others have worked as either diplomats or journalists including correspondents based in Europe and Africa. Still, others have worked with domestic and international banks and trading companies. Many graduates also have taught French at high schools. Chinese Language and Literature \_\_*Contact Information* Phone: +82-62-530-3200 Fax: +82-62-530-3209 JRL: http://china.jnu.ac.kr

## What is Chinese Language and Literature?

Korea and China have historically competed and cooperated with each other in many respects. The future of Sino-Korean relations calls for a more in-depth approach to Chinese language and culture, which is the focus of various courses provided by the Department. Students take courses from the beginner to advanced levels in Chinese conversation and practical Chinese, while deepening their understanding of modern China through a variety of visual and audio materials. Students progressively move to the advanced, comprehensive courses in linguistics such as phonology, literacy, old and modern grammar, cultural linguistics and literary genres like poetry, prose, dramas, essays, novels, literary theories, and literary criticism. The ultimate objective of these various curricula is to help students have an in-depth, comprehensive grasp of politics, economics, and society beyond Chinese language, literature, and culture.

## Professors

- Hoi-Seok Yang, Ph.D.
   [Professor, Chinese Literature, hoisyang@jnu.ac.kr]
- Gi-Seob Ahn, Ph.D.
   [Professor, Chinese Linguistics, ksahn@jnu.ac.kr]
- Man-Jong Oh, Ph.D. [Professor, Chinese Literature, oumj6011@jnu.ac.kr]
- Tai-Wan Kim, Ph.D.
   [Professor, Chinese Linguistics, lomloy@jnu.ac.kr]
- Joo-No Lee, Ph.D. [Professor, Chinese Literature,

zhongljn@jnu.ac.kr]

- Chun-Seok Jang, Ph.D.
   [Professor, Chinese Literature, jangchun@jnu.ac.kr]
- Jeong-Uk Kim, Ph.D.
   [Professor, Chinese Culture, cineek@hanmail.net]
- Bao-Yu Xu, Ph.D. [Professor, Chinese Literature, bao123@jnu.ac.kr]
- You-Mi Moon, Ph.D.
   [Assistant professor, Chinese Literature, xiammi@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, normally 17 credits per semester (18 credits in exceptional cases). Students must also submit an undergraduate thesis, and demonstrate proficiency in the Chinese language and with computers.

## What Do You Study?

Understanding of Chinese Linguistics(3) China's religious and folklore(3) Understanding of Classical Chinese(3) Elementary Chinese for Majors (3) History of Chinese Classic Literature(3) Philosophy of Chinese Classics(3) Elementary Chinese Conversation 1(3) Chinese Grammar 1(3) Chinese Art & Culture(3) Reading in Classical Chinese(3) Intermediate Chinese for Majors(3) Chinese Poetry(3) Elementary Chinese Conversation 2(3) Chinese Grammar 2(3)Chinese history and historical figures(3) The History of Modern Chinese Literature(3) Classical Chinese Grammar(3) Mass Media & Chinese Culture(3) Chinese Learning through Multimedia(3) Advanced Chinese for majors(3) Chinese Phonology(3) Intermediate Chinese Conversation(3) Study about China's communities(3) Chinese Modern Novel(3)

Chinese Classic Novel(3) Chinese Literature and Film Adaptation(3) Chinese Prose(3) Chinese Composition(3) Introduction to China's science and civilization(3) Introduction to Understanding of China's politic and economy(3)Life and Culture in Contemporary Chinse(3) Theory of Chinese Classic Literature(3) Introduction to China's foreign cooperation(3) Chinese Graphemics(3) Advanced Chinese Conversation(3) Lecture on Chinse traditional society(3) Chinese drama(3) Practice of Chinese Business(3) Exercise in Chinese Translation(3) The History of Chinese Linguistics(3) Lecture on Chinese modern society(3) The Comparative Study of Korean & Chinese Culture(3) Chinese education theory(3) Chinese Textbook Research and Teaching Method(3) Chinese Reasoning and Essay Education(3)

#### Careers

Depending on individual preferences, various careers are available to graduates. For example, some graduates have engaged in businesses involving China and/or Taiwan. Others have worked as freelance translators. Still, others have earned graduate degrees from universities overseas and/or at home and have worked as professors or experts.

Approximately 20 graduates from the Department have served as professors at Korean universities and many more graduates have taught at tertiary levels. Students who take teacher training courses are on track to teach at high schools.

Japanese Language and Literature \_\_*Contact Information* Phone: +82-62-530-3210 Pax: +82-62-530-3219 JRL: http://altair.chonnam.ac.kr/~japan,

#### What is Japanese Language and Literature?

Japan has a close relationship with Korea, historically and geographically. This spawns the need for systematic research on Japanese language and literature and other fields of Japanese Studies. While focusing its curricula on meeting such needs, the department aims to produce experts on Japan. In the age of globalization that calls for both a quality education in foreign language and in-depth studies, the department trains students in practical Japanese through basic courses in Japanese language and literature, balanced perspectives of the East and West through Japanese social studies, global vision, and informed citizenship.

The department originally focused on studies in Japanese language and literature. However, in the 21st century, better known as the era of globalization and information, the curricula of the department developed beyond Japanese language and literature, moving toward courses that equip students with a global perspective.

### Japanese Language and Literature

The courses in Japanese language include Literacy, Beginners' Conversation, Intermediate Conversation, Practical Conversation, Beginners' Composition, Intermediate Composition, Colloquial Grammar, Standard Grammar, Practice in Listening, the History of Japanese Language, Introduction to Japanese Language, Practice in Pronunciation, and Practice in Chinese Characters in Japanese. Among the courses in Japanese Literature are Beginners' Level of Literature, Introduction to Literature, Modern Literature, the History of Old Literature, Modern Poetry, the History of Contemporary Literature, Understanding Old Poetry, Understanding Old Prose, Literary Criticism, Theories and Practice in Translation, the History of Japan, Essays, and Novels.

The courses of Japanese Studies include Popular Culture, Current Issues, Local Cultures, Understanding Film Culture, Folk Culture, and Linguistic Culture. Along with these academic courses, a variety of Department-wide programs aimed at enhancing the levels of students' Japanese proficiency and knowledge about Japanese culture prepare students to cultivate leadership in academic, economic, and cultural exchanges between Korea and Japan.

#### Professors

- Jung-Rye Kim, M.A.
   [Professor, Japanese Literature, kjrey@chonnam.ac.kr]
- Yong-Ui Kim, Ph.D. [Professor, Japanese Culture, yukim@chonnam.ac.kr]
- Dae-Sung Kim, Ph.D. [Professor, Japanese Linguistics,

hanbyeol@chonnam.ac.kr]

- Sung Un Jeong, Ph.D. [Associate Professor, Japanese Literature, sujeong@chonnam.ac.kr]
  Seong-Eun Kim, Ph.D.
- [Assistant Professor, Japanese Thought, jnu2012@chonnam.ac.kr]
- Jiyoung-Lim, Ph.D.

[Professor, Japanese Linguistics, jy-lim@jnu.ac.kr]

• Hyeon Il Moon, M.A. [Guest Professor, Japanese Linguistics, moonhagi@chonnam.ac.kr] • Iida Saroi M.A. [Guest Professor, Japanese?Korean Linguistics, saori77@chonnam.ac.kr]

### Degree Requirements

Students are required to earn 130 credits, normally 17 credits per semester (18 credits in exceptional cases). Students must also submit an undergraduate thesis, and demonstrate proficiency in the Japanese language and with computers.

## What Do You Study?

#### **Core Courses**

Japanese Grammar on Spoken language (3) Japanese Conversation and Composition 1 (3) Japanese Popular Culture (3) Japanese for Reading (3) Japanese conversation and composition 2 (3) Introduction to Japan Literature (3) Japanese Living Culture (3) Japanese Conversation and composition 3 (3) Japanese Religion and Culture (3) Practice of Chines Characters In Japan (3) Introduction to Japanese literature (3) Japanese Grammar on literary language (3) Japanese Listening Exercise (3) Japanese Conversation and Composition 4 (3) Japanese History Culture (3) Japanese Cinema Culture (3) Business Japanese (3) Introduction to Japanese politics (3) Japanese Oral Culture (3) Japanese Literature Appreciation (3) Introduction to Japanese Linguistics (3) Japanese Feminism and Literature (3) History of Japanese contemporary literature (3) Japanese Geography (3) History of Japanese Classical Literature (3) Japanese Folk Culture (3)

Japanese Novel (3) History of Japanese (3) Contemporary Japanese Society and Culture (3) Japanese Contemporary poetry (3) Thesis Research (3) Understanding of Japanese Classic Literature (3) Japanese Meiji Literature (3) Japanese Sociolinguistics (3) Practical Business Japanese (3) Introduction of Translation & Interpretation between Korean and Japanese (3) Criticism of Japanese Literature (3) Japanese economy and our life (3) Korea - Japan Relations (3) Japanese Performing Arts (3) Total Credits: 120

#### **Teacher Training Courses**

Principles of Japanese Language Teaching (2) Japanese Education Theory (3) JLF Instructional Materials (3) Total Credits: (8)

#### **International Internships**

Managerial Field Work of Global Era (5) Economic Field Work of Global Era (5) Total Credits: 10

# History

*Contact Information* Phone: +82-62-530-3240 Fax: +82-62-530-3249 JRL: http://history.jnu.ac.kr

## What is History?

The goal of the Department of History is to achieve understanding of humanity through looking at past events and human society. Lectures and seminars which deal with those topics in the Department of History help students to understand the characteristics of the human condition and society. The discipline is also set to examine transitions in human history and analyze humanity and its society at any specific period. The department offers various courses which comprise the whole realm of human accomplishments, such as politics, society, economy, culture, science, art, and others.

#### Department of History

Since it was founded at Chonnam National University in 1952, the Department of History has grown to be one of the most respected departments within the University and in Korea. Within the Honam region of Korea, the department is generally regarded as the most prestigious in the field of history.

The Department has 11 full-time faculty members, 17 part-time instructors, 30 full-time graduate students, and 165 undergraduate students. The department faculty are committed to helping students think critically and independently, and make them understand how cultures have evolved and become what they are today. The undergraduate program focuses on three main areas: Korean history, Asian history, and Western history. The discipline of the faculty, which ranges across the major geographical and chronological fields, covers from ancient Korea history to contemporary U.S. history.

The department enjoys a reputation for excellence in both undergraduate and graduate teaching. It offers undergraduate and graduate degrees.

## Professors

- Kang-Lae Lee, Ph.D. [Professor, Ancient Korea kllee@chonnam.ac.kr]
- Young-Tae Choi, Ph.D. [Professor, Modern Germany ytchoi@chonnam.ac.kr]
- Bong-Joong Kim, Ph.D. [Professor, Modern and Contemporary U.S., bjkim@chonnam.ac.kr]
- Seon-Ja Yoon, Ph.D.
   [Professor, Modern and Contemporary Korea, yoon0929@chonnam.ac.kr]
- Hae-Young Choi, Ph.D. [Professor, Ancient Greece and Rome,

chyoung@chonnam.ac.kr]

- Han-Yong Song, Ph.D.
   [Professor, Modern and Contemporary China, songhy@chonnam.ac.kr]
- Sang-Chul Park, Ph.D.
   [Professor, Modern Russia, sachpak@chonnam.ac.kr]
- Byoung-In Kim, Ph.D.
   [Professor, Medieval Korean History, kimbi36@chonnam.ac.kr]
- Chong-Myong Im, Ph.D.
   [Professor, Modern Korea imcmyong@chonnam.ac.kr]
- Sung-Won Lee, Ph.D.

[Associate Professor, Ancient History of China luxlee68@chonnam.ac.kr]

• Eun-Young Kang, Ph.D. [Professor, Ancient History of Japan kuare@hanmail.net]Pae-Hwan Seol, Ph D.[Assistant Professor, History of the Mongol Empire, shah@naver.com]

#### Degree Requirements

Students are required to earn 12 credits from core courses and 21 credits from electives. Students must also submit an undergraduate thesis.

## What Do You Study?

#### **Core Course**

Introduction to Historical Documents 1 (3) Introduction to Historical Documents 2 (3) Historical Research Practicum (3)

**First Year Courses** The Understanding of Culture Heritage (3)

Second Year Courses

Ancient History of Asia (3) Medieval History of Asia (3) Ancient History of Europe (3) Medieval History of Europe (3) History of Chinese Historiography (3) Ancient History of Korea (3) Pre-modern History of Korea (3) Historiography of Korean History (3) Medieval History of Korea (3) Conversation with History (3) Local History of Asia (3)

#### **Third Year Courses**

Modern History of Asia (3) Socio-economic History of Asia (3) Contemporary History of Asia (3) History and People (3) Modern History of Europe (3) History of Western Social Thought (3) Contemporary History of Europe (3) History of Russia (3) Modern History of Korea (3) Issues on Korean History (3) Socio-economic History of Korea (3) Contemporary History of Korea (3) Historical Resources and Cultural Contents (3) Research Theory of History(3)

#### Fourth Year Courses

Topics in Asian History (3) History of Eastern Social Thought (3) History of America (3) Topics in Western History (3) History of Everyday Life in the West (3) History of Japan (3) Study of Provincial History (3) Culture-art History of Korea (3) History of Korean Thought (3)

#### Careers

Our graduates are proud of their education in the department and have gone on to a variety of successful careers, including research, education, public service, and many other areas in society.

# Philosophy

\_\_Contact Information Phone: +82-62-530-3220 Fax: +82-62-530-3229 URL: http://philos.jnu.ac.kr/

## What is Philosophy?

Philosophy is a fundamental discipline which provides opportunities for discourses to have functional relationships with one another. It is also the basis for all the humanities and natural sciences, including law, medicine, medical science, economics, and art. Accordingly, philosophy is not only a symbolic sign of culture; thereby, grasping the essence of humans, society, culture, and the world in a holistic manner through critical and creative thinking, but also a discipline that provides an academic foundation for students to grow into real professionals in any field.

### Department of Philosophy

Philosophy greatly helps students improve their ability in critical thinking, logical writing, and reasonable communication, which are emphasized in modern societies, particularly in knowledge- based and pluralistic societies. In knowledge-based societies, in which majors and occupations tangle delicately like a cobweb and in pluralist societies, in which values that are seemingly contradictory with one another might coexist, the ability to communicate plays an important role in acquiring professional knowledge.

Responding to the needs of our time, philosophy provides concrete theories and methods to improve communication ability, to clearly understand others' writing and speaking, to logically and persuasively express one's thoughts and assertions, and further, to accept more reasonable opinions. In this light, professionals from every field actively advise to choose philosophy not only as a major, but also as a double major or minor.

## Professors

- Seung-Yong Won, Ph.D. [Professor, Phenomenology, sywon@chonnam.ac.kr]
- Yang-Jin Noh, Ph.D.
   [Professor, Philosophy of Language, yjnoh@chonnam.ac.kr]
- Kang-Seo Rhee, Ph.D. [Professor, Ancient Western Philosophy, gsrhee@chonnam.ac.kr]
- Yang-Hyun Kim, Ph.D. [Professor, Kant and Practical Philosophy, yhkim2@chonnam.ac.kr]
- Yoon-Ho Cho, Ph.D. [Professor, Chinese Buddhism,

choyh@chonnam.ac.kr]

- Ku-Yong Park, Ph.D.
   [Professor, Political Philosophy, parksem@chonnam.ac.kr]
- Sang-Bong Kim, Ph.D. [Professor, Kant and Aesthetics Philosophy, oudeis@hanmail.net]
- Mi-Ra Chung, Ph.D.
   [Professor, German Idealism and Social Philosophy, mirachung@hanmail.net]
- Soon-Ja Yang, Ph.D. [Professor, Chinese Philosophy, zhaohun@gmail.com]

• Kim Su Rasmussen, Ph.D.	hamhs@jnu.ac.kr]
[Professor, History of Ideas	• Won-seok Lee, Ph.D.
and French Philosophy,	[Professor, Chinese Philosophy_Neo-
seokilseung@gmail.com]	Confucianism,
• Hyoung-Seok Ham, Ph.D.	ophil91@chonnam.ac.kr]
[Professor, Indian and Buddhist Philosophy,	

## Degree Requirements

- For the B.A. degree Philosophy, students are required to:
- 1. Complete 13 courses (39 credits) offered by the Department of Philosophy.
- 2. Submit an undergraduate thesis.
- \* Students are required to earn 130 credits, normally 17 credits per semester(18 credits in exceptional cases).

Liberal arts	Major (Specialization)	Electives	Graduate Credits
a minimum of 30 credits	a minimum of 39 credits (60 credits)	a minimum of 40 credits	at least 130 credits

## ■ What Do You Study?

## **Core Courses**

Core Courses	Buddhist Epistemology (3)		
Introduction of Oriental Philosophy (3)	Readings in Western Philosophical Text (3)		
History of Ancient and Medieval Western	Contemporary French Philosophy (3)		
Philosophy (3)	Metaphysics (3)		
History of Indian Philosophy (3)	Contemporary Korean Thoughts (3)		
Original Buddhism (3)	East Asian Buddhism (3)		
Logic and Critical Thinking (3)	Readings in Eastern Philosophical Text (3)		
Ethics (3)	Philosophy of Culture (3)		
History of Chinese Philosophy (3)	Philosophy of Language (3)		
Plato and Aristotle (3)	Early Chinese Philosophy (3)		
Critical Philosophy (3)	Korean Confucianism (3)		
Mahyna Buddhism (3)	Greek Philosophy (3)		
History of Modern Western Philosophy (3)	Philosophy of Art (3)		
Epistemology (3)	Chinese Neo-Confucianism (3)		
History of Korean Philosophy (3)	Philosophical Essays (3)		
Contemporary Philosophy of Law (3)	Korean Buddhism (3)		
Confucius and Mencius Philosophy (3)	Phenomenology and Existential Philosophy (3)		
German Idealism (3)	The Philosophy of Economics (3)		
European Intellectual History 1(Early Modern Art) (3)	Lao Tzu and Chang Tzu'S Philosophy (3)		
European Intellectual History 2(Nineteenth Century	Social Philosophy (3)		
Art) (3)	Philosophy of History (3)		
European Intellectual History 3(Twentieth Century	British and American Philosophy (3)		
Art) (3)			

#### **Teacher Training Courses**

Principles of Philosophy Teaching (3)

Philosophy Instructional Materials (3) Logic and Essay Writing in Philosophy (2)

#### Careers

Diverse career opportunities are open to graduates with an undergraduate degree in philosophy. Their excellence in synthetic judgment and reasonable communication is clearly recognized in the world of education, the press, culture, and various industries. Some graduates have earned graduate degrees from either universities overseas or in Korea and worked as professors or researchers. Others have worked as high school teachers (those who complete teacher training courses), instructors for in-service programs to industries, philosophical management counseling, communication consulting, reading and writing, education contents design, and ethological development.

Some have entered the world of public service (as government officials) broadcasting (as reporters, producers, broadcast writers, journalists), consulting (as consultants), literature (as culture-related writers, critics, game scenario writers), organization (as planners and operators of international conferences), and business (as company managers) among others. The Department of Philosophy promises to help students realize their career goals.

# College of Natural Sciences

<u>Contact Information</u> Phone: +82-62-530-3305 Fax: +82-62-530-3309 URL: http://natural.inu.ac.kr

## Departments

- · Department of Mathematics
- · Department of Statistics
- · Department of Physics
- · Department of Chemistry
- · Department of Biological Sciences
- · Faculty of Earth Systems and Environmental Sciences
  - Geological Sciences major
  - Oceanography major
- · School of Biological Sciences and Technology

## Affiliated Research Centers

- · Institute for Condensed Matter Theory
- · Institute of Statistics

# Mathematics

\_\_Contact Information Phone: +82-62-530-3330 Fax: +82-62-530-3349 URL: http://math.jnu.ac.kr

## What is Mathematics?

Mathematics may be defined as the study of quantity, structure, space, relation, change, and various topics of pattern, form, and entity. Moreover, mathematics enables one to explain the essence of nature itself and extrapolate by utilizing rigorous mathematical logic. Mathematics can be divided into several departments of study: algebra, which is based on the operations of numbers; analysis, which studies the properties of functions; topology, which is the study of the properties of spaces; and applied math, which is concerned with the application of mathematical knowledge to other fields. Today, mathematics is used as an essential tool in many fields, including natural science, engineering, medicine, and social sciences, such as economics and psychology.

## Department of Mathematics at CNU

The major in Mathematics was established in 1952 with the founding of Chonnam National University. The principal goal of the major in Mathematics is to conduct high quality instruction and research in pure and applied mathematics.

The Department offers undergraduate and graduate studies leading to Bachelor's, Master's, and Doctoral degrees.

The research fields of the Department include algebra, analysis, geometry, topology, applied mathematics, and mathematics education. In addition, the Department sponsors various groups of regular seminars for undergraduate students and colloquia for faculty members and graduate students.

## Professors

• Dong-Soo Kim, Ph.D.	• Jeong-Ook Kim, Ph.D.
[Professor, Geometry, dosokim@jnu.ac.kr]	[Professor, Applied Mathematics,
(Submanifold Theory, Conformal	jkim@jnu.ac.kr]
Vector Fields, Einstein Spaces)	(Systems Theory, Operator Theory)
• Bok-Hee Im, Ph.D.	• Min-Kyu Kwak, Ph.D.
[Professor, Algebra, bim@jnu.ac.kr]	[Professor, Analysis, mkkwak@jnu.ac.kr]
(Group Theory and their	(Partial Differential Equations,
Generalizations, Non-associative	Ordinary Differential Equations,
Rings and Algebras Geometry, Cryptology)	Dynamical Systems)
• Hyeong-Kwan Ju, Ph.D.	• Young-Bok Chung, Ph.D.
[Professor, Combinatorial	[Professor, Analysis, ybchung@jnu.ac.kr]
Mathematics, hkju@jnu.ac.kr]	(One or Several Variable Complex Analysis)
(Dynamical Systems)	• Jong-Taek Cho, Ph.D.

[Professor, Geometry, jtcho@jnu.ac.kr] (Riemannian Geometry related with Contact Structures or Complex Structures, Pseudo-Hermitian Geometry, CR-Geometry)

- Byeong-Chun Shin, Ph.D.
   [Professor, Applied Mathematics, bcshin@jnu.ac.kr] (Numerical Analysis)
- Young-Joo Lee, Ph.D.
   [Professor, Analysis, leeyj@jnu.ac.kr]
   (Several Variable Complex Analysis)
- Dae-Heui Park, Ph.D.
   [Professor, Topology, dhpark3331@jnu.ac.kr]
   (Algebraic Topology,

Semi-Algebraic Topology)
Do-Yong Kwon, Ph.D. [Professor, Number Theory, doyong@jnu.ac.kr]
Hong-Sung Jin, Ph.D. [Professor, Applied Mathematics,

hjin@jnu.ac.kr] (Uniform Superconvergence Wavelets)

- Sang-Wook Kim, Ph.D. [Associate Professor, Algebra, swkim.math@jnu.ac.kr]
- Hyun-Cheul Lim, Ph.D.
   [Assistant Professor, Financial Mathematics, limhc@jnu.ac.kr]

## Degree Requirements

Students are required to earn 130 credits, with 24 credits from general courses, 21 credits from core courses, and 21 credits from electives. Students are also required to demonstrate proficiency with computers and in a foreign language (English).

## What Do You Study?

#### **Core Courses**

Linear Algebra 1 and Laboratory (3) Advanced Calculus 1 and Laboratory (3) Set and Logic (3) Topology 1 and Laboratory (3) Differential Geometry 1 and Laboratory (3) Abstract Algebra 1 and Laboratory (3) Complex Variables 1 and Laboratory (3)

#### Electives

Algebra and Geometry (3) Mathematical Programming (3) Introduction to Geometry (3) Differential Equations 1 and Laboratory (3) Mathematical Statistics 1 (3) Theory of Numbers (3) Computer Aided Mathematics and Laboratory (3) Advanced Calculus 2 and Laboratory (3) Differential Equations 2 (3) Actuarial Mathematics (3) Linear Algebra 2 and Laboratory (3) Theory Of Mathematical Education (3) Combinatorics and Graph Theory (3) Basic Probability Theory (3) Big data programming (3) Teaching for Secondary School Mathematics (3) A Course on Mathematics Logic and Essay writing (2) Vector Analysis (3) Complex Variables 2 (3) Numerical Analysis 1 and Laboratory (3) Topology 2 (3)Matrix Theory and its Applications (3) Abstract Algebra 2 (3) Introduction to Financial Engineering (CapstonDesign) (3) Basic of Real Analysis (3) Differential Geometry 2 (3) Teaching Skill in Mathematics (3) Applied Algebra (3)

Applied Mathematics (3) Topics in Mathematical Finance (3) Topics in Actuarial Mathematics (3) History of Mathematics (3) Introduction to Cryptography (3) Topics in Combinatoric Graph Theory (3) Summary of Mathematics (3)

## Careers

Graduates often continue their study of mathematics in graduate school at CNU or other respected universities, both domestic and overseas and pursue academic careers afterwards. Other students pursue careers in quantitative analysis, as middle and high school teachers, researchers, computer programmers, actuaries, derivative specialists, and information security specialists.

# Statistics

*Contact Information* Phone: +82-62-530-3440 Fax: +82-62-530-3449 E-mail: stat.jnu@gmail.com URL: http://stat.jnu.ac.kr

## What is Statistics?

Statistics is a broad mathematical discipline which studies ways to collect, summarize, and draw conclusions from data. It is applicable to a wide variety of academic disciplines, from physical and social sciences to the humanities, as well as to business, government, and industry.

Once data is collected, either through a formal sampling procedure or by recording responses to treatments in an experimental setting (experimental design), or by repeatedly observing a process over time (time series), graphical and numerical summaries may be obtained using descriptive statistics.

Patterns in the data are modeled to draw inferences about the larger population, using inferential statistics accounting for randomness, and uncertainty in the observations. These inferences may take the form of decision making (hypothesis testing), estimates of numerical characteristics (estimation), prediction of future observations, descriptions of association (correlation), or modeling of relationships (regression).

## Major in Statistics

The major in Statistics was founded in 1990 and has made great developments. The Department currently has 9 professors, about 17 graduate students, and 230 undergraduate students. Balanced programs for students have been established so that they learn statistical theory, as well as practice analyzing data with various statistical computer packages. In order to support independent study, the Department provides two rooms exclusively for a Statistics Library and Computing Lab.

The Statistics Library is filled with numerous statistics and computer science books and relevant outstanding papers. The Computing Lab has computers with programs such as SAS, SPSS, S-PLUS, Minitab, MATLAB, and R. The Department has active research programs in statistical genetics, bio-informatics, Bayesian statistics, statistical computing, pattern recognition, and other topics.

#### Professors

• Wan-Hyun Cho, Ph.D. (Simulation), Meteorological Statistics, [Professor, whcho@jnu.ac.kr] Educational Statistics, Statistical Computing) (Data Mining, Image Partition or Searching) • Jang-Sun Baek, Ph.D. · Young-Sook Son, Ph.D. [Professor, jbaek@jnu.ac.kr] [Professor, ysson@jnu.ac.kr] (Nonparametric Function Estimation, (Time Series Analysis, Data Mining, Multivariate Analysis, Bioinformatics, Bayesian Statistical Inference) Pattern Recognition) · Jeong-Soo Park, Ph.D. • Il-Su Choi, Ph.D. [Professor, jspark@jnu.ac.kr] [Professor, ichoi@jnu.ac.kr] (Design and Analysis of Computer Experiments (Bayesian Statistics (MCMC),

Mathematical Biology,
Environmental Ecology Statistics)
Myung-Wan Na, Ph.D.
[Professor, nmh@jnu.ac.kr]
(Reliability Theory, Statistical Quality Control, Probabilistic Finite Element Method,
Probabilistic Safety Assessment)

• Eun-Sik Park, Ph.D. [Professor, espark02@jnu.ac.kr] (Longitudinal/Categorical Data Analysis, Statistical Methods in Medical Research, Clinical Trials, Bioinformatics)

• Min-Soo Kim, Ph.D. [Professor, kimms@jnu.ac.kr] (Multivariate Analysis, Image Partition or Searching, Financial Statistics)
CHI TIM NG, Ph.D.
[Associate Professor, easterlyng@jnu.ac.kr]
(Time series analysis, Penalized likelihood methods, Composite likelihood methods, Stochastic calculus, Option pricing theory)
Jae-sik Jeong, Ph.D.
[Associate Professor, jjs3098@jnu.ac.kr]
(Bioinformatics (Metabolomics, Genomics),

Biostatistics (clinical trials), Bayesian analysis)
Bong-Gyun Ko, Ph.D.
[Assistant Professor, bonggyun.ko@jnu.ac.kr] interpretative public intelligence

## Degree Requirements

Students are required to earn 130 credits, with 14 credits from core courses, 28 credits from electives, 9 credits from core general education courses, and 18 credits from general electives. Students are also required to write a graduation thesis, and demonstrate proficiency in a foreign language.

## What Do You Study?

#### Year 1 Courses

## ■ General Education Core Courses

Writing English for Global Communication 2 Introduction to Statistics and Practice Global Communication English: GCE

## Electives

Calculus for Statistics Matrix theory for Statistics SAS-Statistical packages and practice

#### Year 2 Courses

#### ■ Core Courses

Mathematical Statistics 1 Mathematical Statistics 2 Financial data Analysis and Lab

#### Electives

Seminar on Mathematical Statistics 1 Seminar on Mathematical Statistics 2 population and official statistics R-bigdata programming and practice Big Data Process Sampling Survey Method Theory Probability and Stochastic Processs R-Exploratory Data Analysis

#### Year 3 Courses

#### ■ Core Courses

Regression Analysis and Lab Big Data Analysis

## Electives

Multiplicate Statistical Analysis Statistical Quality Control and Lab(capstone design) Actuarial Science Design of Experiments Theory of Financial Instruments Categorical Data Analysis Data Mining and Lab Six Sigma Implementing and Lab (university-Industry cooperation)

## Year 4 Courses

## Electives

Economic Time Series Analysis and Lab Big data Capstone design Statistical Methods in Biometry Market risk management Development of Statistical software Credit risk management Statistical Consulting and Practice Statistics Seminar Statistics Project and Lab.

#### Minor Courses

Mathematical Statistics 1 Mathematical Statistics 2 Regression Analysis and Lab

## Careers

Students may seek employment in a number of companies, including major conglomerates, statistical package development firms, life insurance companies, banks, research firms, and the civil service.

## Physics

\_*Contact Information* Phone: +82-62-530-3350~1 Fax: +82-62-530-3369 JRL: http://physics.jnu.ac.kr/

## What is Physics?

Physics may be seen as the most basic science in seeking the fundamental laws in nature. It involves the study of all natural phenomena to discover the laws of nature. The field also considers wide applications to other natural sciences, engineering, medical sciences, agricultural sciences, and even to social sciences, and serves as a source of high technologies.

## Department of Physics at Chonnam National University

The Department educates students to become professionals. Some key aspects of the Department include:

- · 17 experienced faculty members
- · Balanced theory and experiment courses
- · Intern program with industry
- · Support for language program

The Department's advanced resources:

- · Up-to-date educational facilities
- Computer Lab, Audio/Video Classrooms
- · Labs for fundamental and applied physics
- Major Equipment: High Power Laser, Ion Implanter, Low Temperature Cryostat, High Energy Physics
- · In-University research facilities
- NMR, TEM, SEM, Raman, FT-IR, X-ray
- RIE, Deposition, Lithography, RTA, PECVD
- · The Department supports international students through the following initiatives:
- Tuition fee exemptions
- · Free dormitory support
- $\cdot$  TA and RA positions available
- · Additional support by supervising professors

## Professors

• Kie Gon Im, Ph.D. [Professor, Laser Optics, kgim@jnu.ac.kr]

• Kang Seog Lee, Ph.D. [Professor, Nuclear Theory, kslee@jnu.ac.kr]

- Chang Sub Kim, Ph.D.
   [Professor, Condensed Matter Theory, cskim@jnu.ac.kr]
- Sun Hyun Youn, Ph.D.
   [Professor, Quantum Optics and Nonlinear Optics Experiments,

sunyoun@jnu.ac.kr]

- En Jin Cho, Ph.D. [Professor, Condensed Matter Experiments, ejcho@jnu.ac.kr]
- Heung Ryoul Noh, Ph.D. [Professor, Atom Optics, hrnoh@jnu.ac.kr]
- Ki Cheon Kang, Ph.D.
   [Professor, Mesoscopic Physics, kckang@jnu.ac.kr]
- Sang Wan Ryu, Ph.D. [Professor, Nano-Photonics, sangwan@jnu.ac.kr]
- In Kag Hwang, Ph.D. [Professor, Nano Optics, ikhwang@jnu.ac.kr]
- Han Jin Noh, Ph.D.
   [Professor, Condensed Matter Experiments, ffnhj@jnu.ac.kr]
- Kyung Kwang Joo, Ph.D.

- [Professor, High Energy Experiments, kkjoo@jnu.ac.kr] • Jae Sik Lee, Ph.D. [Professor, Elementary Particle Physics Theory, jslee@jnu.ac.kr] • Ha Sul Kim, Ph.D. [Associate Professor, Optical Science & III-V Semiconductor, hydenkim@jnu.ac.kr] • Joong Wook Lee, Ph.D. [Associate Professor, Terahertz Photonics & Plasmonics, leejujc@jnu.ac.kr] • Dong ho Moon, Ph.D. [Associate Professor, High Energy Experiments, dhmoon@jnu.ac.kr ] • Geol Moon, Ph.D. [Assistant Professor, Atom Optics Experiments, cnuapi@jnu.ac.kr ]
  - SoongGeun Je, Ph.D. [Assistant Professor, Condensed Matter Experiments, sgje@jnu.ac.kr ]

Seminar in Mathematical Physics 2 (1)

#### Degree Requirements

Students are required to earn 130 credits, with 48 credits from core courses and 14 credits from general courses. Students must also submit a thesis and demonstrate proficiency with computers and in a foreign language (namely English).

## What Do You Study?

Core Courses	Electromagnetism 1 (3)
Physics Laboratory 1 (2)	Quantum Mechanics 1 (3)
Mechanics (3)	
Physics Laboratory 2 (2)	Electives
Electromagnetism 1 (3)	Photonics Field Practice 1 (2)
Basic Optics Experiments (2)	Photonics Field Practice 2 (2)
Quantum Mechanics 1 (3)	Field Practice 1 (2)
Electromagnetism 2 (3)	Mathematical Physics 1 (3)
Thermal and Statistical Physics 1 (3)	Seminar in Mathematical Physics 1 (1)
Quantum Mechanics 2 (3)	Seminar in Mechanics (1)
	Mathematical Physics 2 (3)
For a Minor Courses	Electronic Instrumental Physics (3)

Mechanics (3)

- 730 -

Modern Physics 1 (3) Seminar in Electromagnetism 1 (1) Seminar in Advanced Mechanics (1) Advanced Mathematical Physics (3) Modern Physics 2 (3) Advanced Mechanics (3) Seminar in Quantum Mechanics 1 (1) Seminar in Electromagnetism 2 (1) Physics with Computers (3) Seminar in Quantum Mechanics 2 (1) Seminar in Thermal and Statistical Physics 1 (1) Optics (3) Theory of Relativity (3) Physics Laboratory 4 (2) Thermal and Statistical Physics 2 (3) Solid State Physics (3) Advanced Physics Experiment 1 (2) Seminar in Special Topics 1 (1) Colloquium in Physics 1 (1) Advanced Electro-Optics Laboratory (2)

Applied Optics (3) Particle Physics (3) Nuclear Physics (3) Advanced Physics Experiment 2 (2) Seminar In Special Topics 2 (1) Colloquium In Physics 2 (1) Fundamentals of Optoelectronics (3)

#### **General Courses**

General Physics 1 (3) General Physics 2 (3) General Physics Laboratory 1 (1) General Physics Laboratory 2 (1)

#### **Teaching Profession Courses**

Physics Education (2)Research of Physics Teaching Materials andTeaching Methods (2)A course on Physics Logic and Essay Writing (2)

#### Careers

Graduates often continue their study of physics in graduate school, both domestically and at foreign universities, and pursue careers as researchers at institutes or in academia. Other positions they may qualify for including government officers, science teachers, and employees in photonics-related industries, semiconductor firms, Korea Electric Power, nuclear power plants, and the Center of Aviation and Space Technology.

# Chemistry

\_\_*Contact Information* Tel: +82-62-530-3370 Fax: +82-62-530-3389 URL: http://chem.jnu.ac.kr/

## What is Chemistry?

Chemistry is an experiment-based science. Thousands of scientists have made millions of experimental observations over several hundred years. From these observations, fundamental principles have been deduced regarding the properties and reactivity of matter. Skills and methods used by chemists are applicable to other facets of life, and can help to solve practical problems.

## School of Chemistry at Chonnam National University

The Department of Chemistry consists of a prominent group of scientists, both faculty and students, who engage in a broad range of chemical, educational, and research activities. The faculty is dedicated to chemical education and prides itself on its graduate and undergraduate programs, which are designed to prepare students for active careers in industry and academia. Knowledge of chemistry is developed through intensive coursework, laboratory experiments, literature, and individual research efforts. This increases the chances for students to demonstrate their abilities for creative and innovative studies in various industries and research institutes after graduation. The Department is open to everyone who has a passion for chemistry.

#### Professors

- Hyoung-Ryun Park, Ph.D.
   [Professor, Inorganic Chemistry, hrpark@jnu.ac.kr]
- Kye-Chun Nam, Ph.D.
   [Professor, Organic Chemistry, kcnam@jnu.ac.kr]
- Seong-Keun Kook, Ph.D.
   [Professor, Physical Chemistry, skkook@jnu.ac.kr]
- Seung-Won Jeon, Ph.D.
   [Professor, Analytical Chemistry, swjeon@jnu.ac.kr]
- Jae-Nyoung Kim, Ph.D.
   [Professor, Organic Chemistry, kimjn@jnu.ac.kr]
- Jong-Hoon Oh, Ph.D.
   [Professor, Organic Chemistry, jnoh@jnu.ac.kr]

- Che-Hun Jung, Ph.D. [Professor, Biochemistry, jungch@jnu.ac.kr]
- Sun-Woo Lee, Ph.D.
   [Professor, Organic Chemistry, sunwoo@jnu.ac.kr]
- Jeong-Sun Kim, Ph.D. [Professor, Biochemistry, jsunkim@jnu.ac.kr]
- Hyun-Dam Jeong, Ph.D.
   [Associate Professor, Physical Chemistry, hdjeong@jnu.ac.kr]
- Hyun-Chul Choi, Ph.D. [Associate Professor, Analytical Chemistry, chc12@jnu.ac.kr]
- Jun-seong Lee, Ph.D. [Associate Professor, Inorganic Chemistry, leespy@jnu.ac.kr]

- Cheol-Won Lee, Ph.D. [Assistant Professor, Biochemistry, cwlee@jnu.ac.kr]
- Sung Cho, Ph.D.
   [Assistant Professor, Physical Chemistry, scho@jnu.ac.kr]
- Jimin Kim, Ph.D.
   [Assistant Professor, Organic Chemistry, jiminkim@jnu.ac.kr]
- Kyungsu Na, Ph.D. [Assistant Professor, Physical Chemistry, kyungsu\_na@jnu.ac.kr]
  Hyungseob Lim, Ph.D.
- [Assistant Professor, Inorganic Chemistry, hslim17@jnu.ac.kr]

## Degree Requirements

Students are required to earn 130 credits, with 36 credits from core courses, and 19 credits from general courses. Students must also demonstrate proficiency with computers and in a foreign language (English).

## What Do You Study?

## **Core Courses**

Physical Chemistry 1 (3) Analytical Chemistry 1 (3) Analytical Chemistry Lab 1 (1) Physical Chemistry Lab 1 (1) Organic Chemistry 1 (3) Analytical Chemistry Lab 2 (1) Physical Chemistry Lab 2 (1) Biochemistry 1 (3) Inorganic Chemistry 1 (3) Inorganic Chemistry Lab 1 (1) Biochemistry Lab 1 (1) Organic Chemistry Lab 1 (1) Organic Chemistry Lab 2 (1) Inorganic Chemistry Lab 2 (1) General Chemistry 1 (3) Organic Chemistry 3 (3) Quantum Chemistry 1 (3) Organic Reaction Mechanisms (3) Biochemistry 2 (3) Biochemistry Lab 2 (1) Coordination Chemistry (3) Inorganic Chemistry 2 (3) Quantum Chemistry 2 (3) Instrumental Analysis Lab (2) Advanced Physical Chemistry 1 (3) Inorganic Materials Chemistry (3) Organic Spectroscopy (3) Advanced Biochemistry (3) Instrumental Analytical Methods (3) Enzymology (3) General Biology 1 (3) Chemistry Laboratory 1 (1) Biology Laboratory 1 (1) General Chemistry 2 (3) General Biology 2 (3) Chemistry Laboratory 2 (1) Biology Laboratory 2 (1)

#### Electives

Physical Chemistry 2 (3) Analytical Chemistry 2 (3) History of Science (2) Organic Chemistry 2 (3) Advanced Physical Chemistry 2 (3) Organic Synthesis (3) Environmental Analytical Chemistry (3)

#### **Minor Courses**

Physical Chemistry 1 (3) Organic Chemistry 1 (3) Inorganic Chemistry 1 (3) Teaching Profession Courses Chemistry Education (2) Research of Chemical Teaching Materials and Teaching Methods (2)

#### Careers

Most chemistry majors go on to jobs in precision chemistry, semiconductor chemistry, heavy industries, the petrochemical industry, and pharmaceutics.

All major chemical companies send requests for the Department's students throughout the year. Many smaller companies and academic institutions also contact individual faculty members when positions become available.

Such openings are made known to all students, and every effort is made to find suitable jobs for graduates. Strong ties exist between the Department and the chemical industry. Graduates hold industrial or academic positions, or they are employed by the government or research institutes.

# Biological Sciences

\_\_*Contact Information* Phone: +82-62-530-3390 Fax: +82-62-530-3409 JRL: http://biology.jnu.ac.kr

#### What is Biological Sciences?

Biological Sciences (Biology) is the science studying the fundamental phenomena of life. Biology encompasses a broad spectrum of research areas with emphasis on the diversity of life. The fields studied in biology include ecology, taxonomy, physiology, genetics, cell biology, developmental biology, molecular biology, genomics, proteomics and bio-informatics. Comprehensive understanding and analytical minds are required to study biological sciences. Our department offers comprehensive and strong education in the fields of biological sciences to undergraduate students with a background in mathematics, chemistry, and physics. In addition to the standard biology program, our faculty provide academically-motivated undergraduate students the opportunity to participate cutting-edge research projects. Students who successfully complete our excellent curriculum will have knowledge in biology for a graduate or professional career in applied biological sciences, such as biomedical sciences and agriculture. Biology is certainly the leading science in the 21st century!

## Department of Biological Sciences

The Department of Biological Sciences offers competitive training programs for undergraduate and graduate students in biological sciences. The department's faculty members (12 professors, 2 adjunct professor, and teaching faculty) are responsible for over 60 courses in modern biology and play leading roles in teaching and research. Interests of the faculty include biochemistry, biotechnology, mycology, molecular immunology, cell and molecular biology, plant physiology, taxonomy, toxicology, ecology, restoration ecology, economic botany and ecotoxicology.

Twelve research laboratories are fully equipped for the pursuit of developing practical knowledge of these fields.

The Department's goal is to provide the practical experience required for a career in the biological sciences by applying these research tools with our students.

## Professors

- Suk Bai, Ph.D.
   [Professor, Microbiology (Mycology) sukbai@jnu.ac.kr]
- Hyoung Tak Im, Ph.D. [Professor, Plant Taxonomy, ihtplant@jnu.ac.kr]
- Suhn-Young Im, Ph.D.
   [Professor, Immunology,syim@jnu.ac.kr]
- Hwang Hee Lee, Ph.D. [Professor, Molecular Cell Physiology, blaise@jnu.ac.kr]
- Hak Young Lee, Ph.D. [Professor, Phycology, haklee@jnu.ac.kr]
- Eungseok Kim, Ph.D. [Professor, Molecular Physiology,

ekim@jnu.ac.kr]

- Geun-Joong Kim, Ph.D.
   [Professor, Molecular Microbiology, gjkim@jnu.ac.kr]
- Il-Chul Kim, Ph.D. [Professor, Functional Genomics, ickim@jnu.ac.kr]
- Ha-Cheol Sung, Ph.D. [Associate Professor, Animal Ecology, shcol2002@jnu.ac.kr]
- Dong-Ha Nam, Ph.D. [Associate Professor, Ecobiochemistry, dongha@jnu.ac.kr]
- Dong-Hyun Lee, Ph.D. [Associate Professor, Genomic Stability, donghyunlee73@jnu.ac.kr]
- Eung-Sam Kim, Ph.D.
   [Associate Professor, Applied Nano Biotechnology, eungsam.kim@jnu.ac.kr]

## Degree Requirements

Students are required to earn 130 credits, with 11 credits from general courses, 15 credits from core courses, and 33 credits from electives. Students are also required to write a graduation thesis.

## What Do You Study?

#### **Core Courses**

Cell Biology (3) General Microbiology (3) Introduction to Ecology (3) Bioinformatics & Experiment (3) Molecular Biology (3)

#### Electives

Biodiversity and evolution (3) Introduction to Systems Biology (3) Aquatic Biology (3) Toxicobiology (3) Wildlife Conservation and Management and Exp. (3) Ecological modeling and Exp. (3) Ecological census methods and Exp. (3) Phycology (3) Animal Taxonomy (3) Plant Morphology (3) Plant Taxonomy (3) Entomology (3) Microbial Physiology (3) Molecular Physiology (3) Plant Physiology (3) Animal Physiology (3) Immunology (3)

Molecular Genetics Lab. (2) Experimental Biology 1 (3) Experimental Biology 2 (3) Molecular Biotechnology (3) Developmental Biology (3) Fungal biology (3) Restoration Ecology and Exp. (3) Food Microbiology and Practice (3) Nanobiology and Design of Nanobiosystems (3) Phylogenetic Systematics and Practice (3) Environmental Biology (3) Resource Biology (Capstone Design) (3) Comparative Genomics (3) Methods in Biostatistics and Exp. (3) Biomimetics (3) Organic Chemistry (3) Biological Chemistry 1 (3) Biological Chemistry 2 (3) Genetics (3) Biology Education (3) A Research Of Biology Teaching Materials & Teaching Method (3) A Course on Biology Logic and Essay Writing (2) Field Practice 2 (15)

## **General Courses**

General Chemistry 1 (3) Biology Laboratory 1 (1) Biology Laboratory 2 (1) General Biology 1 (3) General Biology 2 (3)

## Careers

## **Minor Courses**

Cell Biology (3)

Minor Electives

21 credits must be chosen

Graduates may pursue careers in bioindustries, education, biotechnology firms, natural history museums, and research institutes.

# Geological Sciences

*Contact Information* Phone: +82-62-530-3450 Fax: +82-62-530-3459 JRL: http://geology.jnu.ac.kr

## What is Geology?

Geology is the scientific study that aims to understand the origin, structure, physical, biological and chemical processes, and history of the Earth and its surface features using diverse scientific and engineering methods. The sustainable use of natural resources and the preservation of the Earth's environment require a sound knowledge of geology and geological processes. In order to solve these problems, geologists study a broad range of issues such as the origin and genesis of rocks constituting the Earth, the structural process and evolutional history of the Earth, the exploration of Earth's resources, and the mitigation of natural hazards. The studies of modern geology are not restricted to traditional topics because the origin, migration, and quality of ground-water, and soil contamination and remediation are also topics in geology. Therefore, geology is more of an applied science than a simple one, which requires basic knowledge of physics, chemistry, biology, and mathematics.

Throughout history, geology has provided practical information for bettering our lives and is believed to play a key role in the development of a sustainable society that is in harmony with the Earth.

## Department of Geology

The Department of Geology provides an outstanding environment for studies of the Earth and planetary processes, as revealed by their composition, structure, and history. The department seeks to understand the fundamental processes defining the origin, evolution, and current state of Earth systems and to use this understanding to predict future states to solve environmental problems. The department is composed of the following three major research areas:

1) Pure/Basic Geology: conducting broad investigations on Solid Earth: rocks, minerals, and fossils of past and present geological environments and predicting the future.

2) Applied Geology: geological and seismological studies of practical issues related with the geological stability of a critical structure, such as a nuclear power plant or nuclear waste disposal.

3) Environmental Geology: practical application of the principles of geology in solving environmental problems, such as soil and ground water contaminations and their remediation.

Specific research encompasses igneous/metamorphic petrology, economic mineral deposits, paleontology, sedimentary environments, environmental hydrogeology, biogeochemistry, geophysics computational geodynamics and Earth materials science including classical mineralogy. The department's programs include interdisciplinary research and teaching that bring the unique perspective of geology to scientific problems at diverse spatial and temporal scales. The department currently has 8 faculty members.

In recognition of the revolutionary changes in geology, the department recruited a new faculty member in a relatively new area: computational geodynamics studying the evolution of subduction and mantle convection using computational modeling. Currently, the department has 23 graduate students; 140 undergraduate students are majoring in geology.

The department's programs offer courses leading to Bachelor's, Master's, and Doctoral degrees in geology. The department's faculty members, graduate students, and undergraduate students are involved in field, laboratory, experimental, and modeling studies to solve geological and environmental problems.

#### Professors

- Sang-Eun Shin, Ph.D.
   [Professor, Mineralogy and Economic Mineral Deposits sesshin@jnu.ac.kr]
- Min Huh, Ph.D.
   [Professor, Paleontology, minhuh@jnu.ac.kr]
- Seung-Soo Chun, Ph.D. [Professor, Sedimentary, Environments, sschun@jnu.ac.kr]
- In-Wook Yeo, Ph.D.
   [Professor, Environmental Hydrogeology, iwyeo@jnu.ac.kr]

- Yul Roh, Ph.D.
   [Professor, Soil Environment and Biogeochemistry, rohy@jnu.ac.kr]
- Dong-Hoon Sheen, Ph.D.
   [Professor, Seismology & Geophysics, dhsheen@jnu.ac.kr]
- Donghoon Seoung, Ph.D.
   [Assistant Professor, Earth Materials Science, dseoung@jnu.ac.kr]

## Degree Requirements

Students are required to earn 130 credits, with 21 credits from core courses. Students must also submit a thesis and demonstrate proficiency with computers and in a foreign language (English).

## What Do You Study?

#### **General Courses**

General Chemistry 1 (3) Mathematics 1 (3) General Physics 1 (3) General Biology 1 (3) English for Global Communication (3)

#### **Core Courses**

Mineralogy and Lab (3) Igneous Petrology and Lab (3) Sedimentation and Stratigraphy and Lab (3) Geological Survey and Lab (3) Metamorphic Petrology and Lab (3)

#### **Electives**

Data Analysis in Geology and Practice (3) Soil Environmentology and Lab (3) Applied Mathematics for Geologists (3) Earth History and Lab (3) Element of Geology and Lab (3) Geophysics and Lab (3) Paleontology and Lab (3) Geomorphology and Lab (3) Field Geology and Lab (3) Optical Crystallography and Lab (3) Seismology and Lab (3) Micropaleontology and Lab (3) Hydrogeology and Lab (3)

- Environmental Geochemistry and Lab (3) Economic Geology and Lab (3) Engineering Geology and Lab (3) Sedimentary Environments and Lab (3) Geometric Techniques of Structural Geology and Exercise (3) Meteorology and Lab (3) Contaminant Hydrogeology and Lab (3) Geochemistry and Lab (3) Geochemistry and Lab (3) Exploration Geophysics and Lab (3) Geochemical Prospecting and Lab (3) Petroleum Geology and Lab (3)
- Meteorological Observation and Lab (3) Applied Mechanics in Geology and Lab (3) Paleoenvironmentology and Lab (3) Micrometeorology and Lab (3) Cultural Heritage Geology (3) Geomicrobiology and Lab (3) Resource Geology and Lab (3) Earth Data Processing and Lab (3)

#### **Teaching Profession Courses**

Earth Science Education (2) Material Evaluation and Teaching Method in Earth Science (2)

## Careers

Graduates may seek careers with the Korea Institute of Geoscience and Mineral Resources, Korea Ocean Research and Development Institute, Korea Agricultural and Rural Infrastructure Corporation, Korea Water Resources Corporation, Natural Science Museum, Korea National Oil Corporation, Korea Resources Corporation, and Korea Meteorological Administration.

Graduates may find positions as curators, educators, and researchers.

# Oceanography

\_\_*Contact Information* Phone: +82-62-530-3460 Fax: +82-62-530-3469 E-mail: seungha@jnu.ac.kr URL: http://oceanography.jnu.ac.kr

## What is a Major in Oceanography?

The Department of Oceanography has 9 full-time faculty members and several part-time lecturers engaged in teaching and research at both postgraduate and undergraduate levels. The Department conducts interdisciplinary research in coastal marine environments, maintains advanced laboratories, seeks public and private research funds, and recruits and retains qualified faculty, staff, and students. It provides an effective learning environment for students who are interested in careers in marine science or related fields, and also for students who are interested in science-based management of contaminated and coastal environments impacted by human development. Faculty research interests range from the ecology of phytoplankton, macro-alga zooplankton and nekton to the biogeochemical cycle of elements and numerical modeling of coastal processes. Graduates from the Department of Oceanography hold many faculty positions in universities and colleges, as well as research positions in industry, private research institutions, national laboratories, and regulatory agencies.

### Professors

- Joo-Yong Kim, Ph.D.
   [Professor, Geological Oceanography, jykim@jnu.ac.kr]
- Seong-Sig Cha, Ph.D.
   [Professor, Fish Ecology, sscha@jnu.ac.kr]
- Hae-Lip Suh, Ph.D. [Professor, Planktology, suhhl@jnu.ac.kr]
- Kwang Young Kim, Ph.D.
   [Professor, Marine Ecology, kykim@jnu.ac.kr]
- Byeong-Gweon Lee, Ph.D. [Professor, Chemical Oceanography, blee@jnu.ac.kr]

- Myung Gil Park, Ph.D.
   [Professor, Biological Oceanography, mpark@jnu.ac.kr]
- Jee-Hoon Jeong, Ph.D.
   [Associate Professor, Atmospheric Science, jjeehoon@jnu.ac.kr]
- Yoo-Geun Ham, Ph.D.
   [Associate Professor, Atmospheric Science, ygham@jnu.ac.kr]
- Byoung-Ju Choi, Ph.D.
   [Associate Professor, Physical Oceanography, bchoi@jnu.ac.kr]

## Degree Requirements

Students are required to earn 130 credits, with 24 credits from general courses, and 36 credits from core courses. Students must also take the following courses:

Biological Oceanography & lab 1 Physical Oceanography & lab 1 Chemical Oceanography & lab 1 Marine Eco-technology & lab Climate-Oceanological Big data Process & Lab To graduate, students must submit a thesis or a certificate.

#### What Do You Study?

#### **General Courses**

Mathematics 1 General Chemistry 1 Writing English for Global Communication General Physics 1 General Biology 1

#### **Core Courses**

Biological Oceanography & lab 1 (3) Physical Oceanography & lab 1 (3) Chemical Oceanography & lab 1 (3) Marine Eco-technology & lab (3) Climate-Oceanological Big data Process & Lab (3)

#### **Electives**

Differential Equation (3) Physical Oceanography and Lab 1 (3) Biological Oceanography and Lab 1 (3) Geological Oceanography and Lab 1 (3) Chemical Oceanography and Lab 1 (3) Physical Oceanography and Lab 2 (3) Biological Oceanography and Lab 2 (3) Geological Oceanography and Lab 2 (3) Chemical Oceanography and Lab 2 (3) Chemical Oceanography and Lab 2 (3) Chemical Oceanography and Lab 2 (3) Climate-Oceanological Big data Process & Lab (3) Sedimentology and Lab (3) Marine Ecology and Lab (3) Marine Zoology & Lab. (3) Marine Sedimentology and Lab. (3) Ecology of Marine Fishes and Lab. (3) Marine Paleontology & Lab. (3) Seawater Analysis and Lab. (3) Marine Phycology and Lab. (3) Population Ecology and Lab. (3) Benthos Ecology and Lab. (3) Marine Pollution and Lab (3) Deep-Sea Geology and Lab. (3) Tide and Waves (3) Marine Microbiology and Lab. (3) Fundamentals of Ecotoxicology (3) Marine Geochemistry (3) Marine Planktology & Lab 1 (3) Marine Planktology & Lab 2 (3) Marine Observational Methods & Shipboard (3) Training for Oceanography (3) Atmosphere-Ocean Dynamics and Lab. (3) Atmosphere-Ocean Numerical Forecasting and Lab. (3) Climate Dynamics & Climate Change modeling (3) Coastal Conservation Ecology and Lab (3) Limnological Ecology and Lab. (3) Marine Eco-technology & lab (3) Advanced Ocean Science (3) Atmosphere-Oceanic data Analysis & Practice (3) Atmospheric Physics Lab (3) Oceangraophic Meteorology and Climate Dynamics & Lab (3) Marine Ecosystem Modeling and Lab (3) Climate Big Data Programing & Practice (3) Climate time-series analysis & practice (3)

### Careers

Graduates from the Department of Oceanography hold research positions in industry, private research institutions, and laboratories connected to marine sciences.

School of Biological Sciences and Technology <u>Contact Information</u> Tel: +82 62 530 1035 Fax: +82 62 530 2199 URL: http://sbst.inu.ac.kr

## What is Biological Sciences and Technology?

Biological Sciences and Technology is the field of study which explores the principles of life phenomena and applies the results of scientific research to high-tech industries. It is a cutting-edge technology field which strives to promote the health and welfare of humankind, focusing on such diverse fields as medicine, health, pharmaceuticals, food, environment, agriculture, and energy. As a future-oriented industrial field, it promises to create numerous high-value-added industries in the knowledge-based society of the 21st century.

## School of Biological Sciences and Technology

Key aspects of the School include:

- · Cutting-edge research facilities to support its students' studies and research
- Varied programs to provide BT-related specialization and the possibility to conduct advanced experimentation
- · Scholarship programs and a generous system of incentives
- · Scholarships made available through the New University Regional Innovation project
- Excellent education delivered by distinguished faculty members, as well as an industry/academia/research collaboration system
- A renowned graduate school
- It is Korea's first independent faculty combining biological science, a basic science, as well as biological engineering, an applied science.

## Professors

## Major of Biological Science/ Major of Systems Biology

- SangJin Oh, Ph.D.
   [Professor, Microbial Genetics, sjo@jnu.ac.kr]
- SangYoung Chun, Ph.D.
   [Professor, Reproductive Biology, sychun@jnu.ac.kr]
- Ho Zoon Chae, Ph.D. [Professor, Biochemistry, hzchae@jnu.ac.kr]
- · Jaemog Soh, Ph.D.

[Professor, Genetics, jaemsoh@gmail.com]

- Chul-Ho Yun, Ph.D.
   [Professor, Functional Proteomics, chyun@jnu.ac.kr]
- Hueng-Sik Choi, Ph.D.
   [Professor, Molecular Endocrinology, hsc@jnu.ac.kr]
- KeeSook Lee, Ph.D.
   [Professor, Developmental Genetics, klee@jnu.ac.kr]
- YoungChul Lee, Ph.D.

[Professor, Microbial Genetics, yclee@jnu.ac.kr]

- ChangSoo Kim, Ph.D.
   [Professor, Molecular Neurogenetics, changgk@jnu.ac.kr]
- Hee-Sae Park, Ph.D.
   [Professor, Molecular Cell Biology, proteome@jnu.ac.kr]
- Hyung Sik Kang, Ph.D. [Professor, Immunology, kanghs@jnu.ac.kr]
- YoungHee Joung, Ph.D.

[Professor, Plant Molecular Biology, yhjoung@jnu.ac.kr]Won-Seok Choi, Ph.D.

- [Associate Professor, Neurobiology, choiw@jnu.ac.kr]
- Chungoo Park, Ph.D.
   [Associate Professor, Bioinformatics, chungoo@jnu.ac.kr]
- Geupil Jang, Ph.D.
   [Assistant Professor, Plant Developmental and Molecular Physiology, yk3@jnu.ac.kr]

## Degree Requirements

Students in the major of Biological Science or major of Systems Biology are required to earn 130 credits, with 32 credits from general courses and 48 credits from core courses.

## What Do You Study?

# School of Biological Sciences and Technology

General Studies General Chemistry 1 (3) General Chemistry 2 (3) Chemistry Laboratory 1 (1) Biology Laboratory 1 (1) Biology Laboratory 2 (1) General Biology 1 (3) General Biology 2 (3) Total Credits 15

#### **Major Electives**

Introduction to Biological Science and Technology (3) English for Biological Sciences and Technology (3)

#### Major of Biological Science

Molecular Biology 1 (3) Introduction to Ecology (3) Plant Physiology (3) Molecular Biology 2 (3) Virology (3) Animal Physiology (3) Developmental Biology (3) Immunology (3) Cell Biology 1 (3) Life Science Fundamental Experiments 1 (2) Cell Biology 2 (3) General Microbiology 1 (3) Life Science Fundamental Experiments 2 (2) Genetics (3) General Microbiology 2 (3) Biological Sciences Research 1 (3) Biological Sciences Research 2 (3) Cancer Biology (3) Bioinformatics (3) Endocrinology (3) Metabolic Engineering (3) Cellular Signal Transduction (3) Introduction to Biomedical Science (3) Neurobiology (3) Plant Molecular Biology (3) Introduction to Brain disease (3) Bioethics (3) Methods in Cell Biology (3) Independent Research 1 (3)

Independent Research 2 (3) Biotechnology and Biological Sciences Capstone Design 1(3)Biotechnology and Biological Sciences Capstone Design 2(3)Biochemistry 1 (3) Organic Chemistry (3) Biochemistry 2 (3) Biology Education (3) A Research of Biology Teaching Materials & Teaching Method (3) A Course on Biology Logic and Essay Writing (2) Molecular Genetics (3) Methods in Biochemistry and Molecular Biology (3) Human Physiology (3)

#### Major of Systems Biology

Molecular Biology 1 (3) Molecular Biology 2 (3) Biostatistics (3) Immunology (3) Cell Biology 1 (3) Life Science Fundamental Experiments 1 (2) Cell Biology 2 (3) General Microbiology 1 (3) Life Science Fundamental Experiments 2 (2) Genetics (3)

General Microbiology 2 (3) Systems Biotechnology Research 1 (3) Systems Biotechnology Research 2 (3) Biology of Sexuality (3) **Bioinformatics** (3) Genomics (3) Introduction to Systems Biology (3) Systems Cell Biology (3) Protein and Enzyme Engineering (3) Bioethics (3) Neuro-Biochemistry (3) Introduction to History of Biological Sciences (3) Independent Research 1 (3) Independent Research 2 (3) Stem Cell Biology (3) Mechanism of Hormone Action (3) Molecular Evolution (3) Biochemistry 1 (3) Organic Chemistry (3) Biochemistry 2 (3) Molecular Genetics (3) Plant Genetic Engineering (3) Cell Differentiation (3) Biotechnology and Biological Sciences Capstone Design 1 (3) Biotechnology and Biological Sciences Capstone Design 2 (3)

#### Careers

- · graduate school (overseas and domestic)
- medical or dental school
- college of pharmacy
- research institutes: Korea Research Institute of Bioscience and Biotechnology (KRIBB), and Institute for Basic Sciences, etc.
- biotech industry: Samsung Bioepis, Samsung BioLogics, LG Life Sciences Ltd., CJ Bio & Pharma, and Mogam Biotechnology Research Institute, etc.
- bioventures
- · pharmaceuticals, cosmetics or food industry
- · civil service: medical, pharmaceutical or environmental fields
- teaching (middle & high school): the teacher training course is offered in the major of Biological Sciences

# College of AI Convergence

<u>Contact Information</u> Phone: +82-62-530-4202~4 Fax: +82-62-530-4209 URL: http://cvg.jnu.ac.kr

- Major in Robotics Engineering Convergence
- Major in Future Energy Engineering Convergence
- Major in Bigdata Financial Engineering Convergence
- Major in IoT Artificial Intelligence Convergence

Major in Robotics Engineering Convergence

*Contact Information* Phone: +82-62-530-4205 Fax: +82-62-530-4208 URL: http://cvg.inu.ac.kr

## What is Major in Robotics Engineering Convergence?

The Major in Robotics Engineering Convergence aims for fostering talent to apply robotics, the leading technology of the 4th industrial revolution, to future industries and life where a new paradigm is required and to answer various engineering problems.

The Major in Robotics Engineering Convergence offers students a multidisciplinary education, allowing them to develop convergent systems by learning the fundamentals of robotics such as mechanical, electrical, electronic, and computer systems, and non-engineering disciplines such as design, marketing, and cultural contents.

## Professors

- Jong-Oh Park, Ph.D.
   [Professor, Service Robotics, Micro/Nano Robotics, jop@jnu.ac.kr]
- Chang-Sei Kim, Ph.D. [Assistant Professor, Dynamics and Control, Biomedical System, ckim@jnu.ac.kr]
- Seong-Yong Ko, Ph.D. [Associate Professor, Medical Robotics, Service Robotics, sko@jnu.ac.kr]
- Moon, Chang-bae, Ph.D.
  [Assistant Professor, Mobile Robot / Autonomous Vehicle, cbmoon@jnu.ac.kr]

- Eunpyo Choi, Ph.D.
   [Assistant Professor, Medical micro/nano robotics, eunpyochoi@jnu.ac.kr]
- Lee, Jae Yeol, Ph.D. [Professor, HCI Design, jaeyeol@jnu.ac.kr]
- Hyoung Il Son, Ph.D. [Associate Professor, Human-Centered Robotics and Automation, hison@jnu.ac.kr]
- Ayoung Hong, Ph.D.
   [Associate Professor, Human-Centered Robotics and Automation, hison@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

## What Do You Study?

#### Core Courses

Writing in the Natural Sciences and Engineering College Physics 1 English for Global Communication 1 C Programming Electives Mechanical drawing Kinematics of Mechanisms Logic Circuits C Programming & Practice Object-Oriented Programming Engineering Mathematics 2 Measurement Engineering Machine Learning Biosystems Modeling and Practice Mechanical Vibrations Computer Graphics Robotics Practice 1 Mechatronics Application Biosystems Robotics Intelligent Vehicle Human Interface Engineering Digital Design and Applications Robotics Practice 2 Microprocessor Basic Biosystem Measurements Microrobot Service Robotics Introduction to MEMS (MicroElectroMechanical Systems)

## Minor Courses

Applied Calculus Introduction of Electricity and Electronics Dynamics System Dynamics and Signal Processing Control Engineering Robot Engineering Major in Future Energy Engineering Convergence

*Contact Information* Phone: +82-62-530-4205 Fax: +82-62-530-4208 URL: http://cvg.jnu.ac.kr

## What is Major in Future Energy Engineering Convergence?

As directly linked to the survival of humankind, future energy is one of the most important issues in the 21st century. Since the future energy industry evolves from the facility-centered to the knowledge-based industry, the Major in Future Energy Engineering Convergence fosters talent to lead industrial sites where the convergence between disciplines rapidly proceeds.

The Major in Future Energy Engineering Convergence aims for answering field problems beyond basic studies, broadening its horizons into practical energy and in-depth technology studies, and exploring global energy technologies encompassing different disciplines and regions.

## Professors

- Sung-Yong Cho, Ph.D.
   [Professor, Eco-Energy and Air Pollution Engineering, syc@jnu.ac.kr]
- Ho-Young Jung, Ph.D. [Associate Professor, Environmental Energy Materials, jungho@jnu.ac.kr]
- Seung-Shik Park, Ph.D.
   [Professor, Air Quality Management, park8162@jnu.ac.kr]
- Sung-June Cho, Ph.D.
   [Professor, Production and Storage of Methane and Hydrogen, sjcho@jnu.ac.kr]
- Chang-Hyun Ko, Ph.D.
   [Professor, Synthesis and Catalytic, Application of Inorganic Materials, chko@jnu.ac.kr]
- Young-Si Jun, Ph.D. [Assistant Professor, Photocatalysis, Polymer semiconductors

- Seung-Hoon Han, Ph.D.
   [Professor, Architectural Planning & Design, hshoon@jnu.ac.kr]
- Uk Sim, Ph.D.
   [Synthesis and characterization of multi-functional low-dimensional nanostructured materials, usim@jnu.ac.kr]
- Sang-Yun Yun, Ph.D.
   [Associate Professor, Power System, drk9034@jnu.ac.kr]
- Dong-Hee Kim, Ph.D.
   [Assistant Professor, Energy Mechatronics, kimdonghee@jnu.ac.kr]
- In-Ho Park, LL.M. [Associate Prof. Commercial Law, ihpark12@jnu.ac.kr]
- Eun-Hee Kim, Ph.D [Associate Professor, Technology Management, eheekim@jnu.ac.kr]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

## What Do You Study?

#### Core Courses

Understanding of Science History English for Global Communication 1 General Physics 1 General Chemistry 1

#### Electives

Crystal Structures and Defects Renewable Energy Energy Science and Technology Organic Chemistry 1 Materials Science MATLAB Programing Chemical Process Calculation 2 Physical Chemistry 2 Organic Chemistry 2 Environmental Reaction and Design Engineering Introduction to IT Convergence Engineering Solid State Chemistry Coping Engineering with Air Pollution and Climate Change Design of Combustion Facilities Electrochemistry Chemistry of Interface Inorganic Materials

Energy Storage System Engineering Convergence Materials Testing Electrical Energy Storage Systems Management of Technology and Innovation Special lectures of industries, institutes and schools for future energy 1 Recent technical trends in Smart Grid Environmental Electrochemistry Technology Management Special lectures of industries, institutes and schools for future energy 2 Power Distribution System Engineering Energy Materials Materials Electrochemistry Power System Operation Practice

### Minor Courses

Chemical Process Calculation 1 Physical Chemistry 1 The next-generation electricity system engineering 1 The next-generation electricity system engineering 2 Smart Power System Engineering1 Environmental Energy Engineering and Practice Major in Bigdata Financial Engineering Convergence

*Contact Information* Phone: +82-62-530-4206 Fax: +82-62-530-4208 URL: http://cvg.jnu.ac.kr

## What is Major in Bigdata Financial Engineering Convergence?

Students learn breadth of knowledge that data scientists should have: (1) learn how to handle and how to analyse financial bigdata (2) learn to understand complex financial problem in the context of financial engineering (3) learn how to solve the complex problem (4) learn to predict contemporary financial risk beforehand and to provide corresponding solution.

## Professors

· Jaesik Jeong, Ph.D.

[Associate Professor, Bioinformatics (Metabolomics, Genomics), Biostatistics (clinical trials), Bayesian analysis, jjs3098@jnu.ac.kr]

- MinSoo Kim, Ph.D.
   [Professor, Multivariate Analysis, Image Partition or Searching, Financial Statistics. kimms@jnu.ac.kr]
- JangSun Baek, Ph.D.
   [Professor, Nonparametric Function Estimation, Multivariate Analysis, Bioinformatics, jbaek@jnu.ac.kr]
- IlSu Choi, Ph.D.
   [Professor, Bayesian Statistics (MCMC), Mathematical Biology, Environmental Ecology Statistics, ichoi@jnu.ac.kr]
- BongGyun Ko, Ph.D.
   [Assistant Professor, interpretative public intelligence, bonggyun.ko@jnu.ac.kr]
- SungHo Choi, Ph.D. [Professor, Finance, shchoi@jnu.ac.kr]
- SangHo Lee, Ph.D. [Professor, Industrial Organization, sangho@jnu.ac.kr]

## Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

## What Do You Study?

#### Core Courses

Scientific thinking with big data Understanding of Practical Finance Introduction to Statistics and Practice

#### Electives

Management Information and Big Data Financial Statistics and Practice Financial Mathematics for beginner Bigdata programming and practice Exploratory Data Analysis C Programming & Practice JAVA Programing and Lab. Econometrics Quantitative Analysis for beginning Big Data Process and Lab Money and Banking C++ Programing and Lab. Finance and Banking Economics Financial Derivatives Modeling Data Base Systems Bigdata Financial Modeling 1 Regression Analysis and Lab. International Finance International Finance Management Financial Market Analysis Machine Learning Introduction Multiplicate Statistical Analysis and Lab. Data Mining and Lab. **Digital Economics** Economics of Insurance Insurance Bigdata Financial Modeling 2 Big Data Analysis and Lab Big Data Statistical Analysis Web Programing and Lab. Advanced Artificial Intelligence

Financial Institution Management Financial practice Finance Programming Deep Learning Principles and Exercises Big data Capstone design Time Series Analysis and Lab. Market risk management Artificial Intelligence Exploratory Bigdata Analysis Financial Practice Capstone Design Credit risk management Stock Market Statistical Analysis Options, Futures, And Other Derivatives

#### Minor Courses

Macroeconomic Theory Microeconomic Theory Mathematical Statistics 1 Mathematical Statistics 2 Financial Management Investment Theory

# Major in IoT Artificial Intelligence Convergence

*Contact Information* Phone: +82-62-530-4206 Fax: +82-62-530-4208 URL: http://cvg.jnu.ac.kr

## What is Major in IoT Artificial Intelligence Convergence?

For the purpose of training students as AI convergence talents, this major provides the fundamentals of Artificial Intelligence(AI) in the era of the fourth industrial revolution such as Deep learning and the applied AI technologies specialized for various industries including Internet of Things (IoT).

#### Professors

- Hyungjeong Yang, Ph.D.
   [Professor, hjyang@jnu.ac.kr]
   (Application software)
- Kyungbaek Kim, Ph.D.
   [Professor, kyungbaekkim@jnu.ac.kr]
   (Distributed Network System)
- Soohyung Kim, Ph.D.
   [Professor, shkim@jnu.ac.kr]
   (Artificial intelligence)
- Kwanghoon Choi, Ph.D.
   [Professor, kwanghoon.choi@jnu.ac.kr]
   (Programing Language & compiler)

- DongHan Ham, Ph.D.
   [Professor, dhham@jnu.ac.kr]
   (Knowledge Service Engineering & Human Computer Interaction)
- Hieyong Jeong, Ph.D.
   [Professor, h.jeong@jnu.ac.kr (Intelligence Robotics & Signal Processing)
- InSeon Kim, Ph.D.
  [Professor, mindzero@jnu.ac.kr]
  (Environmental Pesticide Science)
- WanHyun Cho, Ph.D.
  [Professor, whcho@jnu.ac.kr]
  (Data Mining, Image Partition or Searching)

## Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

## What Do You Study?

#### Core Courses

Computational Thinking for Engineering Intellectual Property Right Introduction to Statistics and Practice

#### Electives

Linux System Discrete Mathematics Artificial Intelligence based projects Artificial Intelligence Mathematics 1 JAVA Programing and Lab. Seminar1 Artificial Intelligence design project Artificial Intelligence Mathematics 2 Information Systems Analysis and Design C++ Programing and Lab. Data Base Systems Design Engineering Problem Solving Project Seminar2 Operating System Network Programming Big Data Statistical Analysis Algorithms Web Programing and Lab. Cognitive science and system IoT Stream Data Analysis Advanced Artificial Intelligence Digital Image Processing Deep Learning Principles and Exercises Computer & Networks Security IoT Case Study Mobile Application Software Smart Grid Pattern Recognition Field Practice

## Minor Courses

C Programming & Practice Open Source SW Development Theory Data Structures Theory of Software Engineering Machine Learning Introduction Artificial Intelligence Convergence Project(Capstone Design)

# Faculty of Interdisciplinary Studies School

<u>Contact Information</u> Tel: +82 62 530 1047, 5065 Fax: +82 62 530 1049 E-mail: sdis@jnu.ac.kr URL: http://sdis.jnu.ac.kr/ Faculty of Interdisciplinary Studies School *Contact Information* Phone: +82-62-530-1047, 5065 Fax: +82-62-530-1049 E-mail: sdis@jnu.ac.kr JRL: http://sdis.jnu.ac.kr

## ■ What is the Faculty of Interdisciplinary Studies?

FIS(Faculty of Interdisciplinary Studies) was founded to educate talented people to be logical and critical as well as help them to learn creative problem-solving skills in this knowledge based area with the following aims:

- To specialize in interdisciplinary educational programs
- To focus on educating the future's global leaders
- To create a challenging, creative and cooperative college culture

Educational Goals

- · To cultivate students with critical thinking and rational communication skills
- · To educate students to use interdisciplinary studying skills
- · To train future leaders who can cooperate and create new social values

## School of Faculty of Interdisciplinary Studies at Chonnam National University

FIS has two course tracks: the Self-designed Studies Track and General Studies Track. Students who choose the Self-designed Studies Track will remain in FIS until they graduate. Those who choose the General Studies Track will have to choose a major after their first year of curriculum.

## Professors

• Seong-Won Lee Ph.D.	• In-gaK Hwang Ph.D.
[Professor History, luxlee68@naver.com]	[Professor physical, ikhwang@chonnam.ac.kr]
• Su-Jin Lee Ph.D.	• In-Sul Kim Ph.D.
[Professor business administration,	[Professor Arts Administration, Education &

#### Degree Requirements

soojinlee@jnu.ac.kr]

Students who choose the Self-designed Studies Track in the major of FIS are required to earn 130 credits to graduate.

Policy, snow@chonnam.ac.kr]

## Self-designed Studies Track

Students will double major in various major tracks, along with their self-designed majors. For these majors, they can choose one of several fields of study or create a self-designed major(Science and Life,

Public Interest and Society, Culture and Arts, Future Society and Lifelong Learning, Leadership in International Affairs, Health and Welfare, Fusion Engineering, Economy and Society, Social science, Convergence of Humanities).

# Careers

Graduates generally choose one of two career paths upon graduation. The first is to continue with graduate studies to serve eventually as researchers or professors. The other is to work in the fields of consulting companies, journalism, social welfare services, politics and business, governmental positions.



# XI. Admissions and Campus Life



# 1. Admissions

# **Application Period**

Stages	Undergraduate	Graduate
First semester(Spring semester)	September to November	September to November
Second semester(Fall semester)	March to May	March to May

# Eligibility

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# Undergraduate

Classification	Language Proficiency	Nationality	Educational Qualifications
Freshman	<ul> <li>more than Level 3 on Test of Proficiency in Korean (TOPIK)</li> </ul>		Those who completed or are expected to complete elementary and secondary education
Transfer (Sophomore, Junior)	or 550 on TOEFL PBT 210 on TOEFL CBT 80 on TOEFL iBT 700 on TOEIC 550 on TEPS 5.5 on IELTS	Applicant and the applicant's parents are foreign nationals	<ul> <li>Those who completed elementary and secondary education and have completed or are expected to complete 2 years at a 4-year university or to graduate from a 2 or 3-year junior college</li> <li>Students who have completed 2 years at a 3-year junior college are not eligible.</li> </ul>

\* Those who completed Korean Language Course level 3,4,5 and 6 at CNU Language Education Center are regarded as the equivalent of achieving level 3-6 on TOPIK.

# Graduate

Program	Nationality	Educational Qualifications
Master's Degrees		<ul> <li>Those who have, or are expected to complete</li> </ul>
Master's & Doctoral Degrees integrated	<ul> <li>Applicant and the applicant's parents are foreign nationals</li> </ul>	a Bachelor's degree or its equivalent as stipulated by regulations.
Ph. D.	<ul> <li>Overseas Koreans or international students who have completed courses equivalent to elementary, secondary, and college education in Korea</li> </ul>	<ul> <li>Those who have or are expected to complete a Master's degree or its equivalent as stipulated by regulations.</li> <li>Applicants who have a Master's degree in a special or different field have to receive a recommendation from the head professor of the department for which they are applying</li> </ul>

\* Applicants with no nationality or dual Korean citizenship are not eligible.

\* No certificate for language skills are required in general. However, certain departments may require language test scores related to Korean or English.

# Admissions Website: http://international.jnu.ac.kr

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# 2. International Affairs

# International Exchanges & Education

As of April 2019, CNU promotes academic and cultural exchanges with 330 overseas partner universities and institutions from 57 countries around the world.

More than 600 CNU students each year go abroad as international exchange students. CNU also promotes and operates faculty exchanges and joint study projects with overseas partner universities.

#### 1.1 Study Abroad Programs

To enhance international competitiveness and to nurture a global mindset in students, CNU offered a wide variety of short and long-term study abroad programs as follows:

- 1) Exchange programs
- 2) Double degree programs
- 3) Global internship programs
- 4) Foreign language learning programs

#### 1.2 On Campus Programs

The Office of International Affairs provides students with well-organized international programs on the campus of CNU. By participating in these programs, students can learn foreign languages and make lifelong friendships with international students.

#### Programs

- International Summer Session: Professors from partner universities conduct classes in English. There
  are various cultural excursions available for both Korean and international students throughout this
  program.
- Buddy Program: Matching international students with CNU students has proven to help them improve academic achievement and adapt to the local culture easily.

#### **International Student Recruitment**

The Office of International Affairs annually participates in international education fairs held in various countries. In order to recruit excellent students, the international office endeavors to build strong cooperation with overseas partner universities. The international admission process is conducted every April-June for the Fall semester and October-December for the Spring semester. Applications are accepted on-line thoughout the year.

Office of International Affairs Phone: +82-62-530-1275(Undergraduate Admission Inquiry) +82-62-530-5950(Graduate Admission Inquiry) Fax: +82-62-530-1269 E-mail: internia@jnu.ac.kr(Graduate), underia@jnu.ac.kr(Undergraduate) URL: http://international.jnu.ac.kr

# 3. International Student Support Program

# **Scholarships**

Scholarships may be granted to international students according to CNU scholarship regulations as follows:

- Graduate School / Post-graduate studies
  - 1. Academic Excellence Scholarships are granted to those who have achieved a high academic status. Partial waiving of tuition is offered to selected students.
  - 2. Global Scholarships are granted to new graduate students who meet the criteria set by the college to which they belong. Selected recipients receive a tuition waiver for their first semester.
  - 3. SRS(Strategic Researchers Scholarship) Scholarships are granted to new graduate students who are selected as research assistants by their prospective academic advisors in CNU. In order to be considered as a candidate for this scholarship, students must be recommended by their prospective academic advisors in CNU. Selected recipients receive a tuition waiver for their first semester.
  - 4. TOPIK(Test Of Proficiency in Korea) Scholarships are granted to new graduate students who have a TOPIK Level 6 Certificate. Selected recipients receive a tuition waiver for their first semester.
  - Housing support is granted to new international students by the end of the first semester.
     \* Housing support is offered by each department. Therefore, students may not be able to get the benefit depending on the department to which they belong.
  - Undergraduate Studies
  - 1. Academic Excellence Scholarships are granted to those who have achieved a high academic status. Partial waiving of tuitions fees is offered to selected students.
  - 2. Need-Based Scholarships are awarded after fully taking into account the financial situation and the academic status of the students. Full or partial waiving of tuition fees is offered to selected students.

# Free Korean Language Courses

Special sessions of Korean language classes are provided for exchange, and graduate students for free of charge. Classes range from seven to ten weeks in length. International students may take the chance to learn basic expressions for daily conversations and broaden their understanding of Korean culture by participating in such classes.

# **Buddy Program**

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The CNU buddy program aims to promote academic achievement and adaptation to university life for new incoming overseas students (exchange, undergraduate students only) who can overcome difficulties by being matched with a CNU student partner.

# **Medical Support**

CNU has its own medicare center in student union building and international students may receive general medical treatment there. The medicare center is equipped with a general diagnosis room, oral health room, medicine dispensing room, clinical lab/inspection room, X-ray facilities, a dental unit, and other medical equipment e.g. automatic analysis system; diagnoses available every day from full-time qualified doctors and medical professionals.

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• Inquiries: Medicare Center **2** 062-530-3606(Gwangju) **2** 061-659-6235(Yeosu)

# Visa Information

After an international student is admitted to CNU, the Office of International Affairs will provide all documents necessary for visa issuance, such as a certificate of admission and other certificates required. In addition, international students will be notified about their visa matters (e.g. alien registration, extension of sojourn period, change of status of sojourn etc.) during the study period.

# 4. Academic Affairs

# Registration

Each student of a degree program must enroll as follows within the designated period of time each semester. The due date will be announced on campus bulletin boards, and an information e-mail will be sent to the student. The enrollment fee is stipulated at the end of each school year; the average amount is approximately US \$2,500.

- Tuition for spring semester: due in mid-February
- Tuition for fall semester: due in mid-August

# **Class Registration**

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How to register for classes

Students should check their class schedule and syllabus of each course under the guidance of their advisor professors and sign up for the classes online during the designated period.

- Credits for Each Semester:
  - Departments (divisions) that require 120 credits for graduation: 16 credits
  - Departments (divisions) that require 130 credits for graduation: 17 credits
  - Departments (divisions) that require 140 credits for graduation: 18 credits
  - Departments (divisions) that require 150 credits for graduation: 20 credits
  - Departments (divisions) that require 160 credits for graduation: 24 credits (Note that students majoring in architecture need 18 credits.)
  - Pre-veterinary, pre-med, pre-dentistry students: 21 credits
  - Department of Medicine (yearly): 51 credits
- \* When necessary, students can be allowed to take one extra credit.

# **General Curriculum**

School days

Every school year is composed of 30 weeks (15 weeks in each semester).

- School year and semester
  - The School year is from March 1st to February 28th of the following year.
  - There are two semesters a year: Spring and Fall semesters. Classes may start 2 weeks before the

Fall semester begins.

- Spring semester: from March 1st to the end of August
- Fall semester: from September 1st to February of the following year
- Each semester has classes for at least 15 weeks
- Summer and winter session: 4 weeks

# **Evaluation**

#### Examination

All tests are administered at the instructor's discretion.

Evaluation

All courses are evaluated based on criteria set by the instructor. Students whose attendance rate is below 75% will get an F.

Grades

Grades range from an F (0) to an A+ (4.5).

• Warning for poor GPA

A warning is given to a student whose average point for each semester is below 1.75 or who failed to register for a new semester. A student is dismissed from school if he or she is warned three times due to a poor average.

(For students at the Yeosu campus, the rule has been applied from 2006.)

Academic Failure (Holdover)

Each department may apply its own rules on academic failure when its student fails to meet academic criteria the department sets as below:

Department of Medicine

- When the student's average point score is below C(2.0)
- $\cdot$  When the student gets a grade of F in any subject
- Students subjected to holdover must retake the subject in which they got C+ or below in the corresponding school year.

#### Department of Veterinary Medicine

- · When the student's average point of the corresponding school year is below 1.75
- When the student receives two or more F grades in a major subject (mandatory/elective) during one school year
- · When the student fails to take mandatory classes designated for the school year
- Students who are subjected to holdover must retake all courses in which they got C+ or below in the corresponding school year.

Law School

- · When the student's GPA is below 2.0.
- If a student gets probation, his or her credit gained in the corresponding school year (2 semesters) of which grade is recorded under Bo or below is not subjected to recognition.

Master's program in Graduate School of Dentistry

- · When the student's GPA is below 70
- · When the student gets score below 60 in any courses
- Students who get academic probation are supposed to repeat all the courses provided in the corresponding school year.

Master's program in Graduate School of Medicine

- . When the student's GPA is below C(2.0)
- $\cdot$  When the student gets an F grade in any courses
- Students who get probation must retake all courses in which they got C+ or below in the corresponding school year.

# Graduation

Degrees are conferred to students who complete the required courses and obtain credits for graduation according to the rules of academic affairs within a given period of school years.

- Requirements for graduation
  - Completion of school years (Statute 20)
  - Completion within a term (Statute 21)
  - Acquisition of required credits (120-160 credits)
  - Completion of mandatory courses/optional courses based on the school year schedule
  - Minimum G.P.A. of 1.75 for all semesters (including summer/ winter session)
  - Passing grade in mandatory courses (major, foreign language, computing) (This doesn't apply to students who were admitted before the class of 1999)

Early graduation

Students who obtain required credits within the 6th or 7th semester with a minimum G.P.A. of 4.0 (except students who transferred from other institutions) can graduate early. However, students who violate a school regulation or give up on early graduation are not subjected to graduate early.

# **Scholarships**

- University Scholarships
- Merit scholarship: This scholarship is awarded to model students who obtain at least 12 credits in the previous semester with outstanding academic performance (undergraduate minimum G.P.A of 2.5, graduate minimum G.P.A of 3.0)

- Financial scholarship: This scholarship is awarded to underprivileged students who obtain at least 12 credits with a minimum G.P.A. of 1.75.
- Types of scholarships: Some scholarships are given from school tuition and others come from outside sources (School Fund Foundation, Dongwon Scholarship Foundation, and Daeshin Scholarship).
- On-campus Scholarships
- Tuition Fees Aid/Financial Assistance
- Merit-based Scholarships: Scholarship for students of outstanding record in admission procedure or during coursework.
- Scholarship with legal condition: Scholarship for National Meritorious Person and his or her descendent, Scholarship for North Korean Defectors and their descendent
- Welfare Scholarships: Children Welfare and Youths (as the head of a household) Scholarship, Academic Excellence Scholarship(for students from lower-income classes), Scholarship for students subjected to Basic Livelihood Security Assistance, Scholarship for Students with disabilities, Scholarship for Students admitted through Rural Area Admissions, Scholarship for students from fishing and farming communities.
- Special Scholarships: Young/Ho Nam cultural exchange program scholarship, Scholarship for Outstanding Athlete, Family Scholarship (undergraduate/graduate program), Undergraduate/graduate school combination scholarship(graduate program)
- · Assistant Scholarships: Teaching Assistant (graduate program)
- Scholarships from Development Funds: Yong-bong Scholarship, Dae-shin Scholarship, Don-won Scholarship, and 80 other scholarships (of designated/undesignated grantee).
- College Scholarships: Scholarships assigned by each college
- Specialized Research Foundation Scholarships: LG innoTek Scholarship, NRF(National Research Foundation of Korea) Scholarship of Fostering Core Leaders of the Future Basic Science Program

#### Off-campus Scholarships

- Scholarships from Governmental Institutes

- Korea Student Aid Foundation: National Student Aid (two types), National Science and Engineering Scholarship, National Next Century Humanities Scholarship, Graduate Research Scholarship for Humanities and Social Sciences, National Scholarship for Love and Dreams, National Work-Study Program
- RHF (Rural Hope Foundation) Scholarship sponsored by KRA: Scholarship for fostering succeeding generations in Rural Area, Scholarship for the Students from Farming or Fishing Family
- Scholarship Foundations: Kumho-Asiana Scholarship, Kwangju Bank Scholarship, Mirae-asset Scholarship, Scholarship from Alumni Association, Mirae-international Foundation Scholarship, and other 80 scholarships.
- Life support scholarships
- Passion Scholarships
- work-study scholarships for those who are undergraduate students serving at the school institution who have completed 12 or more credits and have been recommended by the head of the institution
- Companion Scholarships

- Undergraduate scholarships for financially disadvantaged students to provide the opportunity to concentrate on academic incentives and job readiness and to help them realize their dreams and ideals
- Challenge Scholarships
- Undergraduate students who have a challenging, enterprising spirit and sincerely strive for their future are selected
- Excellence Scholarships for Admission
- Undergraduate students are selected as first-time applicants of outstanding students for admission by department unit

# 5. Facilities and Services

#### Library

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The Chonnam National University Library (CNUL) was established in 1953 with the aim of building comprehensive collections in all research areas. Having established the digital library system in 1991, the Library provides support to university members and local residents.

Today, the CNUL comprises the main Yongbong campus library, the annex library, the Yeosu campus library, and three branch libraries (Legal, Dental, & medical). The entire combined floor space of the library facilities totals an area of 34,097 m<sup>3</sup>. It currently holds more than 4,600 seats, 1,900,000 books, and 87,000 journals and periodicals. In addition to its strong domestic and overseas multimedia resources, online databases, e-journals and eBooks, CNUL also provides access to other organizations' resources for its users.

As a world-class university, CNUL is now making strides towards becoming a global research-oriented university library.

- Services
  - Book Loan / Return / Renewal / Reservation
  - Inquiry Ill-DDS: As a service to users, CNUL will provide upon request materials not currently in possession, from domestic or overseas other university libraries or institutions.
  - Book requests\* Please refer to the library website for further details.
- Opening Hours
- Central Yongbong library Weekdays: 09:00~20:00
   Saturdays: 09:00~18:00 [09:00~13:00 during vacations (Jan, Feb, Jul, Aug)]
- Yeosu campus & branch libraries: 09:00~18:00 on weekdays
- Websites: http://lib.jnu.ac.kr/ (Central Yongbong library) http://yosulib.jnu.ac.kr/ (Yeosu campus library)
- Contact: (062)530 3571~2 (Central library), (061)659-6601 (Yeosu campus library)

#### Student Residence Halls

Gwang-ju Campus

Seven student residence halls can accommodate up to 4,101 people with single and double rooms. Housing is assigned at the beginning of each academic semester (also including the summer and winter sessions). Existing residents always have priority for each following semester over the course of the year. 833

Each unit of student residence halls is equipped with shower rooms, laundry rooms, reading rooms, lounges, and a central heating system. Each room also has desks, chairs, bookshelves, beds and wardrobes. International students can also reside in the halls along with domestic students. International students will be given priority over Korean students in the CNU Gwang-ju campus dormitories.

#### Yeo-su Campus

Three student residence halls at CNU Yeosu campus can accommodate up to 968 persons with double occupancy cells (three cells per one room, 536 male and 432 female students). Housing is assigned at the start of each semester (including summer and winter school). Students who are assigned housing in the spring semester have priority each of the following semesters over the course of the year. Housing units in the dormitory are equipped with desks, chairs, bookshelves, beds, wardrobes, and shower rooms. The halls have communal

facilities such as laundry rooms (with washing machines), reading rooms, stores, lounges (with cable TVs, vending machines, hot-cold water purifiers, and a refrigerator), heating systems, and fitness rooms. International students will be given a priority over Korean students in the CNU Yeosu campus dormitories, too.

### Language Education Center

The Language Education Center (LEC) is located on the main campus of Chonnam National University (CNU) in the north of Gwangju. It is one of the leading institutes in the field of language education and research in Korea. For over fifty years, the center has worked towards developing the foreign language abilities of university students, as well as the general public, by providing a broad range of language courses and conducting comprehensive research in the field of second language acquisition.

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The Language Education Center provides practical English language courses and programs, offers Korean language teacher training programs, and administers a variety of language proficiency examinations for a number of major languages. Among its broad range of facilities for students are multimedia rooms, a recording studio, seminar rooms, several student lounges, and an auditorium.

*\_\_Language Education Center* Phone: +82-62-530-3632, 3633 Fax: +82-62-530-3629 E-mail: language@jnu.ac.kr URL: http://lec.jnu.ac.kr

# **Oh! Yes Center (Transcripts)**

- Services: Certificate and ID issuance
  - For students: Official Certificates of Graduation (Expected), Certificates of Studentship(enrollment), Transcripts, Proof of Tuition Payments, Copies of College Register, Self-development Activity Record, Issuance of other certifications
  - For faculty: Certificates of Employment, Certificates of Career Report, Proof of Earned Income Tax Payment, Various certificates for Part-time instructors
  - Other administrative services: Student ID, Faculty ID, International Student ID
  - Administrative Q&A regarding school affairs and issues
- These services are offered through mail, fax, or in-person requests
- Office hours
  - Weekdays: 9 AM to 6 PM (Mon. Fri.)
- Automatic Issuance Machine in the Headquarters Building: 7 AM to 10 PM (available throughout

the year)