College of Fisheries and Ocean Sciences

__Contact Information
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School of Marine Technology

- Department of Power System Engineering
- Department of Aqualife Medicine
- Department of Smart Fisheries Resources Management
- Department of Aqualife Science
- Naval Architecture and Ocean Engineering
- Department of Maritime Police Science
- Department of Marine Bio Food Science
- Marine Production Management
- Department of Ocean Integrated Science
- Department of Fisheries, Marine Areas, Industry, Tourism & Leisure

Department of Power System Engineering

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

■ What is Power System Engineering?

Power System Engineering is an academic field combining the mechanical engineering and the electrical/elctronics engineering. Power System Engineering deals with the design, manufacture, control, and management of power machinery, thermal-fluid machinery, electrical/electronics machinery, etc.

■ Department of Power System Engineering

The Department of Power System Engineering aims for nurturing technical manpower for machinery, electrical, and maritime industries and researching state-of-the-art technology in the field of power system engineering. The Department of Power System Engineering mainly teaches the basic knowledge and technology in the fields of mechanical engineering and electrical/electronics engineering. Students can get 'Third Class Engineer Officier Certificate' and a variety of licenses, such as 'Engineer General Machinery', 'Engineer Machinery Design', 'Engineer Electricity', 'Engineer Mechatronics'.

■ Professors

- Kyong-Uk Yang, Ph.D.
  [Professor, Hydraulic-Pneumatic Control, yangku@jnu.ac.kr]
- Woo-Gyeong Wang, Ph.D.
  [Professor, Internal Combustion Engine, wangwk@jnu.ac.kr]
- Myung-Soo Choi, Ph.D.
  [Professor, Mechanical Vibration, engine@jnu.ac.kr]
- Kyung-Hun Shin, Ph.D.
  [Assistant Professor, Electric Machine. kshin@jnu.ac.kr]

■ Degree Requirements

Major	Liberal Arts	Major Credits			General Electives	Graduation Credits
		Minimum Recognition	Enhancement	Total		
Power System Engineering	30	48	21	69	31	130

Students are required to earn the above credits, as well as demonstrate their foreign language proficiency (e.g., TOEIC score of 550 or higher)

■ 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
Capstone Design 1 & 2

■ Careers

Graduates are able to pursue careers in central and local government organizations (e.g., Ministry of Oceans and Fisheries, Ministry of National Defense, Korea Coast Guard, and Customs), public corporations (e.g., Port Authority, Korea Maritime Transportation Safety Authority, and Korea Electric Power Corporation), and private enterprise (e.g., shipping companies, shipbuilding companies, Korean Register, and automobile companies). Also, some graduates go to graduate school to become experts in the field of power system engineering.

Department of Aqualife Medicine

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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]
- Sung-ju 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.
  [Associate Professor, Clinical diseases, wisky@jnu.ac.kr]

■ Degree Requirements

Major	Liberal Arts	Major Credits			General Electives	Graduation Credits
		Minimum Recognition	Enhancement	Total		
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
Introduction to Aqualife Medicine
General Chemistry and Lab
Medical Biochemistry and Lab 1
Medical Biochemistry and Lab 2
Principles of Aqualife Medicine
Clinical Lecture of Aqualife Medicine
Water Analysis and Lab.
Management of Fish Hospital and Training
Aquatic Animal and Ecology
Introduction to Aquaculture
Aquatic Environment and Disease
Anatomy of Aquatic Animal and Lab.
Fish Parasitology and Lab.
Fish Immunology and Lab.
Molecular Biology and Lab.
Nutrition and Nutritional Diseases of Aquatic Animal
General Histology and Lab.
Virology & Lab
Histology of Fisheries Animal and Lab.
Aquatic Animal Physiology and Lab.
Bacterial Fish Pathogens and Lab.
Microbiology and Lab.
Hematology and Lab.
Developmental Biology and Lab.(Capstone Design)
Fisheries Pharmacology and Lab. 1
Fisheries Pharmacology and Lab. 2(Capstone Design)
Pathology of Fisheries Animal and Lab(Capstone Design)
Pathology of Noninfectious Disease and Lab.
Ecology of Aquatic Disease
Study of Clinical Cases
Field Management of Fish Diseases
Invertebrate Diseases and Lab.
Disease of Seaweeds and Lab.
Aquatic Toxicology and Lab.
Smart fish health care
Virus and Viral Disease
Diseases of Ornamental Fishes and Lab.
Aquatic Laws
Bacteriology and Lab
Aquatic Public Health(Capstone Design)
Organic Chemistry and Lab
Principles of Fisheries

■ Careers

Category	Career Fields
Opening of Business	- Fish Health Center
Government Organizations	- National Fishery Products Quality Management Service(NFQS) and related organizations - Public servants in charge of fishery affairs in the Provincial, Municipal, and County offices - National Institute of Fisheries Science – Korea Ocean & Fisheries Institute - Research institutes under local governments, corporate research centers, etc.

Category	Career Fields
General Corporations	- Pharmaceutical companies - Animal feed manufacturers - Aquarium
Fishery-related Fields	- National Federation of Fisheries Cooperatives - Korea Fisheries Cooperatives - Joint fishery product market - Fishery industry - Fishery product distribution & processing companies - Launch of Fish Disease Control Center - Launch of office in charge of medicines for aquatic organisms

Department of Smart Fisheries Resources Management

Contact Information
Tel: +82-61-659-7410
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URL: https://smartfish.jnu.ac.kr

What is the Smart Fisheries Resources Management?

Smart Fishery Resource Management is the use of information and communication technology (ICT) for research, analysis, evaluation, utilization, and conservation of fishery resources.

Department of Smart Fisheries Resources Management?

The Department of Smart Fisheries Resource Management is a cutting-edge department newly established at College of Fisheries and Maritime Affairs in Chonnam National University in 2021 to educate fisheries science, oceanography, and information and communication technology (ICT) as a single course for the first time in Korea.

The Department of Smart Fisheries Resources Management teaches how to quickly and conveniently analyze various data on major fishery resources using big data, artificial intelligence(AI), and the Internet of Things(IOT). Undergraduate students of the department are nurtured as experts who can predict and continuously manage fishery resource fluctuations based on the systematic curriculum. The curriculum is structured so that students can utilize the latest ICT in the field based on a basic understanding of fisheries science and oceanography. Graduates will have the specialized knowledge and skills needed for future jobs in the fields of fisheries and oceanography.

Professors

- Man-Ki Jeong, Ph.D.
  [Professor, Marine Biodiversity, jmgdeux@jnu.ac.kr]
- In-Yeong Kwon, Ph.D.
  [Professor, Fish behavior inyeong1201@jnu.ac.kr]
- Hee-Teak Ceong, Ph.D.
  [Professor, Distributed Systems and Multimedia, htceong@jnu.ac.kr]
- Soon-Hee Han, Ph.D.
  [Professor, Compiler and Mobile Systems, shhan@jnu.ac.kr]

Degree Requirements

Generally, students must earn 130 credits over a four-year period (average 18 credits per semester).

■ What Do You Study?

Marine Environment and Fishery Resource Management
Introduction of Smart Fisheries Science
Basic Programming and Practice Ⅰ
Basic Programming and Practice Ⅱ
Introduction of Fisheries Resources Biology
Fisheries and Oceanography
Population and community ecology
Data Mining Understanding and Practice
Biodiversity and Image Analysis Practice
Introduction to artificial intelligence and fisheries applications
Smart Fisheries Resources Business Management
Smart Web programming
Biostatistics and Practice
Understanding of Fisheries Resource Management Policy
Introduction to Fishery Resources
Understanding of Computer World
Marine plankton ecology and practice
Understanding of Marine ecosystem models
Ocean survey method and practice
ICT-based fishery resource research practice
International maritime law
Aquatic Animal Behavior
Understanding of Fisheries Resource Management Law
Data Processing for Fishery Resource
Fishery resource research methodology and practice
Understanding Fishery Resources Management Practice 1
Understanding Fishery Resources Management Practice 2
Introduction of fishery stock assessment model
Nekton Biology
Understanding of fisheries resource management based on machine learning
Aquatic animal behavior pattern analysis(Capstone design)
Fishery resource big data analysis and visualization
Fisheries Resource Bioinformatics and Practice
Artificial Intelligence Design and Practice
Maritime International relations theory
Marine Animal Ecology and Practice
Fishery Resources Stock Analysis and Practice I
Fishery Resources Stock Analysis and Practice II
Understanding of global fisheries resource management
Introduction of Smart aquafarm
Marine biotechnology and practice(Capstone design)
Marine Ecosystem-Based Fisheries Resource Model
Ecosystem data pattern analysis and practice
Fisheries Resource Assessment
Introduction of Smart aquafarm operations and practice (Capstone design)
Marine life resources data analysis(Capstone design)
Marine Application Mobile Program Practice

■ Careers

1) Officials in the field of marine and fisheries (Research official of National Fisheries Research & Development Institute(NFRDI) / Korea Hydrographic and Oceanographic Agency(KHOA))
2) Researchers at public institutions and local governments (Korea Fisheries Resources Agency(FIRA), Korea Institute of Ocean Science and Technology(KIOST))
3) IT companies in the fishery and marine sector (Smart Aquaculture Cluster complex, start-ups)
4) Employment-related National License Big Data Analysis Engineer, Data Processing Engineer, Industrial Engineer Office Automation, Industrial Engineer Ocean Survey, Engineer Ocean Environment, Smart Fishery Resource Management License (private license), etc.

Department of Aqualife Science

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What is the Department of Aqualife science?

Aquaculture 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

- Won Kyo Lee, Ph.D.
  [Professor, Reproduction organisms, wklee@jnu.ac.kr, +82-61-659-7161]
- Kyoung Ho Kang, Ph.D.
  [Professor, Invertebrate Culture, mobidic@jnu.ac.kr, +82-61-659-7165]
- Kyeong Ho Han, Ph.D.
  [Professor, Ichthyology Ecology and Taxonomy, aqua05@jnu.ac.kr, +82-61-659-7163]
- Kang Hee Kho, Ph.D.

[Professor, Molecular Physiology, kkh@jnu.ac.kr, +82-61-659-7168]

• Sang Duk Choi, Ph.D.

[Professor, Aquaculture Environment Ecology, choisd@jnu.ac.kr, +82-61-659-7166]

■ 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-Enviroment 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

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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
2020. 3 Abolition Faculty of Marine Technology and Separation Department of Naval Architecture and Ocean Engineering

Professors

- 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]
- Jae-Min Lee, Ph.D.
  [Professor, Applied Mechanics, jae27v@jnu.ac.kr]
- Ok-Sam Kim, Ph.D.

[Professor, Manufacturing Engineering of Ships, 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]

■ 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.

Department of Maritime Police Science

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URL: 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 sea 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. in Law
  [Professor, Criminal Law, Criminal Procedure, Criminal Policy
  dhpark328@jnu.ac.kr]
- Duck-Jong Jang, Ph.D. in Science
  [Professor, Marine Safety, Navigation, Marine Pollution Response,
  jdj@jnu.ac.kr]
- Ho-Sam Bang, Ph.D. in Law
  [Professor, International Law of the Sea, Maritime Law,
  hosamms@jnu.ac.kr]
- Ki-Soo Lee, J.S.D.
  [Professor, Police Science, Maritime 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, 33 credits from electives, and 21 credits from deepening courses. Students must also demonstrate proficiency in a foreign language.

What Do You Study?

Introduction to Police Administration
Maritime Police Science
Police and Human Rights
Theory of Police Investigation
Introduction to Public Administration
Administrative Law

Introduction to Law
Constitutional Law
General Theory of Criminal Law
Criminal Procedure
Criminology
Civil Law
International Law
Law of the Sea and International Maritime Conventions
Marine Laws
Marine Traffic Law
Maritime English
Introduction to Navigation
Geo-Navigation
Radio Navigation and Practice
Celestial Navigation
Nautical Instrument and Practice
Seamanship Control
Seamanship
Ship Handling Simulator Training
GMDSS Communication Training
Embarkation Training
Ship Boarding Training
Leadership And Teamwork
Maritime Safety Training
Marine Accident Management
Ocean Pollution Control
Marine Pollution Response Practice
Principles of Fisheries
Fishery Management in Loading of Ship
Writing for Self-reflection and Communication
Career Plan and Self Understanding
English for Global Communication
Earth Science
Science of Chivalry and Practice
Total Credits: 40

■ 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 Marine Bio Food Science

Contact Information
Tel: +82-61-659-7210
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E-mail: gnahn@jnu.ac.kr
URL: http://marinefs.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

- 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.
  [Professor, Marine Biotechnology, gnahn@jnu.ac.kr]
- Sun-Hee Cheong, Ph.D.
  [Professor, Functional Foods, sunny3843@jnu.ac.kr]

Degree Requirements

Major	Liberal Arts	Major Credits			General Electives	Graduation Credits
		Minimum Recognition	Enhancement	Total		
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
Biochemistry
Analytical Chemistry and Lab.
Food Utilization 1 and Experiment
Food Utilization 2 and Experiment
Food Hazard analysis & Practice
Molecular Nutrition
General fisheries
Fisheries Law
Fisheries Quality Management
IntroductiontoFisheriesScience
Food Bioscience
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
Fishery Products Maintenance
Marine Biomaterials & Lab
Utilization of Fisheries By-Products
Marine Bio-Food and Lab.
Marine toxicology
Seafood Design Technology and Experiment
Seminar in bio-food materials
Canned Sea Food Technology
Fisheries Marketing
Animal Cell Culture and Lab.
Physiology
Food Science
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

- **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.

- **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.

Marine Production Management

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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]

■ 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
Boarding Training2
Boarding Training3
Celestial Navigation
Computer Aided Fishing Gear Design & Practice
Deep-sea Fishing
ECDIS Training
Fisheries hydrography
Fisheries Management
Fisheries Resources Dynamics
Fishery Biology
Fishery Management in Loading of Ship
Fishing Gear Design
Fishing Gear Engineering
Fishing Gear Material
Fishing Information
Fishing Methodology
Geo-Navigation
GMDSS Communication Training
Leadership and Teamwork Training
Leisure Fishing Technology and Practice
Marine Laws
Marine Traffic Law
Maritime English
Maritime Safety Training
Meterology Training
Nautical Instrument and Practice
Numerical Analysis & Practice
Ocean Fisheries Law
Ocean Systems Control Theory & Practice
Oceanography and Practice
Principles of Fisheries
Radar Simulation Training
Radio Navigation and Practice
Seamanship
Seamanship Control
Techniques of Fishing Machinery & Lab.
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).

Department of Ocean Integrated Science

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What is Department of Ocean Integrated Science?

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 Department of Ocean Integrated Science 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

- Yeon Gyu Lee, Ph.D.
  [Professor, Marine Geology, lyg6342@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]
- Ihn-Sil Kwak, Ph.D.
  [Professor, Zoology, iskwak@jnu.ac.kr]
- Ho Young Soh, Ph.D
  [Professor, Zooplankton Systematics and Ecology, hysoh@jnu.ac.kr]

• Yoonja Kang, Ph.D. yoonjakang@jnu.ac.kr]
[Assistant Professor, Phytoplankton Ecology,

■ What Do You Study?

Environmental Oceanography & Lab. 1
Environmental oceanography & Lab. 2
Marine Ecoenvironmentalogy & Lab. 1
Marine Ecoenvironmentalogy & Lab. 2
Marine Integrative Science and Lab.
Marine Geotectonics and Lab.
Marine Geology of korea & Lab.
Marine Sedimentology and Lab.
Marine Micropaleontology
Marine Benthic Ecology and Lab.
Intertidal Ecology and Lab.
Biology of Marine Nekton and Lab.
Marine Chemistry and Lab.
Seawater Analysis and Lab.
Marine Pollution and Lab.
Marine Biodiversity & Lab.
Deep sea Biology
Zooplanktonlogy & Lab.
Ocean-ecotoxicology & training
Estuary Ecology
Ocean Animal Behavior & Lab.
Ocean environment Genetics & Lab.(Capstone Design)
Marine Resources and Lab
Phytoplankton Ecophysiology and Lab
Planktonology and Lab.
Oceanographic Data Analysics And Exercises

■ Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 Years, with 18 credits earned on average per semester.

■ Careers

Category	Career Fields
Opening of Business	- Fish Health Center
Government Organizations	- National Fishery Products Quality Management Service(NFQS) and related organizations - Public servants in charge of fishery affairs in the Provincial, Municipal, and County offices - National Institute of Fisheries Science - Korea Ocean & Fisheries Institute - Research institutes under local governments, corporate research centers, etc.
General Corporations	- Pharmaceutical companies - Animal feed manufacturers - Aquarium
Fishery-related Fields	- National Federation of Fisheries Cooperatives - Korea Fisheries Cooperatives - Joint fishery product market - Fishery industry - Fishery product distribution & processing companies - Launch of Fish Disease Control Center - Launch of office in charge of medicines for aquatic organisms

Department of Fisheries, Marine Areas, Industry, Tourism & Leisure

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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 indusrial 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)