

Graduate School Of Industry and Technology

—Contact Information

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■ 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 13 master's degree programs and 1 non-degree program, the AISP (Advanced Industrial Strategy Program)

The 13 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
- Food Science & Technology
- Rural Resources & Environmental Engineering
 - Rural Engineering
 - Rural Tourism & Local Development
 - Biosystem Engineering
 - Forest Resource
 - Landscape Architecture
- Electronics & Computer Engineering
- Department of Food Technology

■ 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

Advanced Course In Steel Structures
Theory Of Architectural Planning
Project Control On Building Construction
Theory Of Architecture
Theory Of Architectural Design 1
Theory Of Architectural Design 2
Advanced Theory Of Urban Planning
Principles Of Noise Control
Advanced Theory Of Contemporary Architecture
Advanced Theory of History of Oriental Architecture
Advanced Theory Of History of Korean Architecture
Principles of Building Facilities
Theory of Architectural Space
Advanced Theory of Contemporary Architecture
Theory of Urban Design
Computet Aided Advanced Estimation
Advanced Course in Steel Structure Design
Principles and Applications of Architectural Acou
Advanced Theory of History of Western Architecture
Theory of Environmental Psychology
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
Socio-Spatial Theory of Architecture
Construction Information Technology
Zero Energy Building Design and Project Management
Building Renewable Energy Systems
Building Energy Technologies: State of the Art
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 Manufacturing 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 Machinery
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
Reliability & Maintenance Policy
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

High Voltage Power Apparatus
Power System Protection
Power IT Engineering
High Voltage Insulation Theory
Photo-Electric Energy Conversion
Alternative Energy Conversion Theory
Advanced Digital Control
Advanced Electrical Applications
Electric Materials Engineering
Advanced Power Electronics
Electromagnetic Field Theory
Electric Network Theory

Power Transformation Theory
Advanced Power System Analysis
Power System Operation Theory
Lighting System Design and Applications
EMC/EMI
Switching Power Supply Design
Special Electric Machinery
Automatic Measurement System
Automation of Industrial Process
Power System Dynamic Modeling
Topics in Renewable Energy Systems
Energy Storage System Engineering
Power System Control
Introduction to Artificial Intelligence
Electric Machine Control System
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

Data Base
Data Communication
Digital System Design
Digital communications and channel coding
Deep Learning and IT Convergence
Multimedia And Application
Biomedical Artificial Intelligence
Practical Thesis Seminar
Study for Industrial Thesis
System Software
Signals And Systems Theory
Operating System
Mobile Communication Engineering
Artificial Intelligence
Embedded Hardware
Data Structure
Computer Architecture Principles
Computer Network
Computer Security
Computer Image Processing
Communication System Engineering
Communication Theory
Project Design and Seminar
Theory of Probability and Statistics
VLSI Design
Special Topics in Semiconductor Testing

■ Materials Engineering

X-Ray Diffraction
Advanced Metallurgical Thermodynamics
Special Topics In Metals And Alloys
Sintering And Crystal Growth
Advanced Foundry 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 Animal Population Genetics
Advanced Animal Biotechnology
Advanced Germ Cells
Advanced Animal experiment design
Advanced Animal Hygiene
Industrial Paper Seminar

Food Science & Technology

Special topics in Fermentation Sitology
Practical Thesis Seminar
Food Processing and Preservation
Food Functional Chemistry
Metabolic engineering in Food
Advanced Food Microbiology
Food Virology
Advanced Food Biotechnology
Food and Biostatistics
Advanced Food Biochemistry
Food Ingredient Technology

Advanced Food Ingredient Utilization
Advanced Food System Engineering
New product development
Advanced Food Hygiene
Advanced Food Packaging
Food Flavor Chemistry
Advanced Food Chemistry
Nutritional Physiology
Advanced Nutrition Chemistry
Advanced Food Lipids
Recent Technology for Food Processing
Carbohydrate Foods
Special Topics in Nutritions
Advanced enzyme biotechnology

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 Marketing
Rural Development Planning
Rural Economy Development
Rural Tourism/ Development Seminar
Rural Tourism Planning and Management
Rural Villages Improvement
Rural Development Theory

Practical Thesis Seminar
Forestry Tourism Planning
Place Marketing Theory
Rural Community Development
Soil Environment Remediation
Topics

■ Biosystem Engineering

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

■ 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 Protection
Lignocellulosic biorefinery
Mechanics of Materials
Practical Thesis Seminar
Topics
Wood Anatomy & LAD
Wood Chemistry
Wood Construction Mechanics
Wood Engineering

Wood Machining and Drying
Wood Physics

■ Landscape Architecture

Advanced Environmental Openspace Design/Planning
Advanced Theories On Landscape Maintenance
Advanced Rural Landscape Planning
Advanced Site Planning
Advanced Landscape Structural Mechanics
Advanced Landscape Construction Materials
Advanced Theory of Regional Community
Advanced Landscape Architecture Planning
Integrated Approach for Rural Landscape Design
Advanced Landscape Gardening
Urban Place and Landscape Architecture
Practical Thesis Seminar

■ 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

Department of Food Technology

Introduction to Food Technology
Convergent Technologies for Food Technology
Law and Regulations in Food Technology
Automation of Food Processing
New Food Product Development
Business in Food Technology
Field studies of Food Technology
Capstone Design