Curriculum Policy of the Faculty of Engineering

The Faculty of Engineering:

Several specific study goals have been established based on the Degree Awarding Policy of the Faculty of Engineering, so that the students can cultivate "humanity", "creativity", "internationality", and "expertise". The following curricula have been organized in order to achieve those goals.

Department name: Architecture
Faculty name: Faculty of Engineering

Curriculum organization and implementation system where the students can reach the study goals set in the Degree Awarding Policy of the Faculty of Engineering by taking the provided courses

Degree Awarding Policy of the Faculty of Engineering	Study goals	1st year		2nd year		3rd year		4th year	
		1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester
Enriched Humanity	To acquire high ethical standards	◎Introduction to Computer Literacy ◎Primary Seminar of Architecture				◎Law and Regulation of Building, Urban Regional Development and Environmental Conservation	◎Urban and Building Safety Theory		
	To acquire a solid understanding of the impact of science and technology on society	◎Liberal Arts Core Course (Social Sciences) ◎Liberal Arts Core Course (Comprehensive) ○Introduction to Computer Literacy	◎Liberal Arts Core Course (Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course (Social Sciences) ◎Liberal Arts Core Course (Comprehensive) ○Urban Planning		○Theory of Built Environment	○Theory of Community Development	
	To acquire the ability to take appropriate actions	◎Liberal Arts Core Course (Cultural Sciences) ◎Health Sciences ◎Sports and Fitness Course Ⅰ		◎Liberal Arts Core Course (Cultural Sciences)	◎Sports and Fitness Course Ⅱ				
Creativity	To maintain the liberal and open-minded culture	◎Drawing and Painting Ⅰ	○Drawing and Painting Ⅱ						
	To acquire the ability to solve issues in a creative manner	○Primary Seminar of Architecture ○Drawing and Painting Ⅰ	◎Liberal Arts Core Course (Natural Sciences) ◎Drawing and Painting Ⅱ ◎Introduction to Building Structural Systems	◎Liberal Arts Core Course (Natural Sciences) ◎Exercise of Architectural Design & Planning Ⅰ	◎Liberal Arts Core Course (Natural Sciences) ◎Exercise of Architectural Design & Planning Ⅱ ○Structural Exercises Ⅰ	○Exercise of Architectural Design & Planning Ⅲ ○Structural Mechanics Ⅲ ○Structural Exercises Ⅱ	◎Advanced Exercise of Architectural Design & Planning Ⅰ ○Structural Planning ○Exercises of Structural Design Ⅰ	○Advanced Exercise of Architectural Design & Planning Ⅱ ○Landscape Design ○Exercises of Structural Design Ⅱ ○Composite Structure for Buildings	
International Awareness	To acquire the ability to conduct exchanges with overseas partners	◎Foreign Language Ⅰ	◎Foreign Language Ⅰ	◎Foreign Language Ⅰ			○Architectural history and theory for the modern built environment		
	To acquire a deep understanding of other cultures	◎Foreign Language Ⅱ	◎Foreign Language Ⅱ	◎Foreign Language Ⅱ ○History of Japanese Architecture	◎Foreign Language Ⅱ	◎Foreign Language Ⅱ ○Architecture Design Theory ○History of Houses and cities ◎History of Western Architecture	◎Foreign Language Ⅱ		
	To acquire the ability to exhibit individuality			◎Foreign LanguageⅢ	◎Foreign LanguageⅢ			○Life-cycle Management	

Expertise	To acquire highly specialized knowledge		○Architectural Planning	◎General Building Planning Methodorogy ◎History of Japanese Architecture ◎Architectural Environmental Engineering I	◎Urban Planning ○Residential Design ◎Architectural Environmental Engineering II ◎Architectural Environmental Engineering III	○Law and Regulation of Building, Urban Regional Development and Environmental Conservation ◎Architecture Design Theory ○History of Western Architecture ◎Thermal Design in Architectural Environment ◎Acoustical Design in Architectural Environment ◎Structural Mechanics III ◎Structural Exercises II ◎Steel Structure for Buildings ◎Reinforced Concrete Structure for Buildings	◎Theory of Built Environment ◎Urban Design Theory ○Urban and Building Safety Theory ◎Urban Environmental Planning ◎System of Building Services ◎Lighting and Color Design in Architectural Environment ○Structural Design ◎Earthquake Resistant Design for Buildings ◎Structural Planning ◎Exercises of Structural Design I ◎Applied Construction Engineering of Building Structure ○Laboratory of Architeture Engineering	◎Landscape Design ◎Exercises of Structural Design II ◎Analysis of Structural Systems ◎Composite Structure for Buildings ◎Life-cycle Management	
	To acquire wide-ranging insights	○Architecture Introduction	◎Introduction to Computer Science ◎Architectural Planning ○Building Materials	○General Building Planning Methodorogy ○Architectural Environmental Engineering I ○Structural Materials	◎Graphic Information Processing ◎Residential Design ○Architectural Environmental Engineering II ○Architectural Environmental Engineering III	◎History of Houses and cities ○Thermal Design in Architectural Environment ○Acoustical Design in Architectural Environment ◎Construction Engineering and Management	○Urban Environmental Planning ○System of Building Services ○Lighting and Color Design in Architectural Environment ◎Structural Design ○Applied Construction Engineering of Building Structure ◎Laboratory of Architeture Engineering	○Life-cycle Management	
	To acquire basic academic abilities to resolve issues from a broad perspective	◎Calculus B1 ◎Linear Algebra B1 ◎Physics C1 ◎Material Chemistry I ◎Descriptive Geometry ◎Architecture Introduction	◎Calculus B2 ◎Linear Algebra B2 ◎Physics C2 ◎Exercises in Descriptive Geometry ◎Vector Analysis ○Introduction to Building Structural Systems ◎Building Materials	◎Mathematical Statistics ◎Complex Analysis ◎Theory of Ordinary Differential Equations ◎Structural Dynamics ○Exercise of Architectural Design & Planning I ○Architectural Environmental Engineering I ◎Structural Mechanics I ◎Structural Materials	◎Physics B2 ◎Fourier Analysis ○Exercise of Architectural Design & Planning II ○Architectural Environmental Engineering II ○Architectural Environmental Engineering III ◎Structural Mechanics II ◎Structural Exercises I ◎Disaster Prevention in Structural Engineering	◎Exercise of Architectural Design & Planning III ○Steel Structure for Buildings		◎Statistical Approach to Thermodynamics	
	To acquire practical skills and creativity to resolve issues from a broad perspective					○Thermal Design in Architectural Environment ○Acoustical Design in Architectural Environment	○Advanced Exercise of Architectural Design & Planning I ◎Architectural history and theory for the modern built environment ○Urban Design Theory ○Urban Environmental Planning ○System of Building Services ○Lighting and Color Design in Architectural Environment	◎Advanced Exercise of Architectural Design & Planning II ◎Theory of Community Development ◎Research Works	◎Research Works

Department name:Civil Engineering
Faculty name: Faculty of Engineering

Curriculum organization and implementation system where the students can reach the study goals set in the Degree Awarding Policy of the Faculty of Engineering by taking the provided courses

Degree Awarding Policy of the Faculty of Engineering	Learning goals	1st year		2nd year		3rd year		4th year	
		1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester
Enriched Humanity	To acquire high ethical standards	◎Introduction to Computer Literacy					○Landform Engineering ○Geo-Environmental Engineering ◎Ethics for Civil Engineers ○Conflict Management:Theory and Practice		
	To acquire a solid understanding of the impact of science and technology on society	◎Liberal Arts Core Course (Social Sciences) ◎Liberal Arts Core Course (Comprehensive) ○Introduction to Computer Literacy ○Seminar for Creative Thinking I ○Introduction to Civil Engineering ◎Introduction to Global Environment	◎Liberal Arts Core Course (Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course (Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course (Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	○Environmental Limnology ○River and Watershed Engineering ○Urban and Regional Planning ○Transportation Engineering	○Ethics for Civil Engineers ○Infrastructure Design and Management ○Coastal and Harbor Engineering ○Conflict Management:Theory and Practice ◎Civic Design		
	To acquire the ability to take appropriate action	◎Liberal Arts Core Course (Cultural Sciences) ◎Health Sciences ◎Sports and Fitness Course Ⅰ ○Seminar for Creative Thinking I	◎Sports and Fitness Course Ⅱ	◎Liberal Arts Core Course (Cultural Sciences) ○Surveying ○Survey (Field Training)	○Infrastructure Planning: Mathematical Programming and Practice	◎Practice in Civil Engineering and Safety Guidance ○Civil Engineering Practice	○Seminar for Creative Thinking Ⅱ ○Ethics for Civil Engineers		
Creativity	To maintain the liberal and open-minded culture						○Seminar for Creative Thinking Ⅱ		
	To acquire the ability to resolve problems in a creative manner	◎Seminar for Creative Thinking I	◎Liberal Arts Core Course (Natural Sciences) ○Materials Science and Engineering	◎Liberal Arts Core Course (Natural Sciences) ○Surveying ○Survey (Field Training)	◎Liberal Arts Core Course (Natural Sciences) ◎CAD Drawing in Civil Engineering	○Structural Dynamics ○Hydrology ○Practice in Civil Engineering and Safety Guidance ○Infrastructure Planning Ⅱ ◎Civil Engineering Practice	◎Numerical Simulation Exercise ◎Bridge Engineering ○Environmental Fluid Mechanics ○Civic Design		
International Awareness	To acquire the ability to conduct exchanges with overseas partners	◎Foreign Language Ⅰ	◎Foreign Language Ⅰ	◎Foreign Language Ⅰ		○International Relations in Civil Engineering			
	To acquire an understanding different cultures	◎Foreign Language Ⅱ ○Introduction to Civil Engineering	◎Foreign Language Ⅱ	◎Foreign Language Ⅱ	◎Foreign Language Ⅱ	◎Foreign Language Ⅱ ○International Relations in Civil Engineering ○Urban Disaster Prevention Engineering	◎Foreign Language Ⅱ ○Landform Engineering ○Ground Investigation and Execution Method ○Project Management ○Civic Design		
	To acquire the ability to exhibit individuality			○Foreign LanguageⅢ	○Foreign LanguageⅢ	○International Relations in Civil Engineering			

Expertise	To acquire highly specialized knowledge		◎aterials Science and Engineering	◎Surveying ◎Survey (Field Training) ◎Soil Mechanics I and Practice ◎Structural Mechanics II and Exercise in Civil Engineering ◎Basic Hydraulics and Practice	◎Soil Mechanics II and Practice ◎Hydraulics and Practice ◎Structural Mechanics III in Civil Engineering ○Mathematical Statistics for Civil Engineering ○Infrastructure Planning: Mathematical Programming and Practice	◎International Relations in Civil Engineering ◎Foundation Engineering ◎Urban Disaster Prevention Engineering ◎Concrete Structures ◎Environmental Limnology ◎River and Watershed Engineering ◎Urban and Regional Planning ◎Transportation Engineering ○Practice in Civil Engineering and Safety Guidance ◎Hydrology	◎Introduction to Continuum Mechanics ◎Landform Engineering ◎Ground Investigation and Execution Method ◎Geo-Environmental Engineering ○Numerical Simulation Exercise ◎Earthquake Engineering and Structural Reliability ◎Environmental Fluid Mechanics ◎Infrastructure Design and Management ◎Coastal and Harbor Engineering ◎Project Management ○Water Supply and Sewerage	○Research Works	○Research Works
	To acquire wide-ranging insights	◎Introduction to Civil Engineering ○Introduction to Global Environment	◎Introduction to Computer Science	○Soil Mechanics I and Practice ○Structural Mechanics II and Exercise in Civil Engineering	○Structural Mechanics III in Civil Engineering	○Foundation Engineering ○River and Watershed Engineering ○Urban and Regional Planning ○Urban Environment Engineering	◎Seminar for Creative Thinking II ○Ground Investigation and Execution Method ○Geo-Environmental Engineering ○Earthquake Engineering and Structural Reliability ○Environmental Fluid Mechanics ○Infrastructure Design and Management	○Research Works	○Research Works
	To acquire basic academic abilities to resolve issues from a broad perspective	◎Calculus 1 ◎Linear Algebra B1 ◎Physics C1 ◎Material Chemistry I ◎Descriptive Geometry ○Introduction to Global Environment ◎Exercise on Basic Mathematics	◎Calculus 2 ◎Linear Algebra 2 ◎Physics C2 ◎Exercises in Descriptive Geometry ○Materials Science and Engineering ◎Structural Mechanics I	◎Mathematical Statistics ◎Complex Analysis ◎Theory of Ordinary Differential Equations ○Soil Mechanics I and Practice ○Basic Hydraulics and Practice	◎Physics B2 ◎Fourier Analysis ○CAD Drawing in Civil Engineering ○Soil Mechanics II and Practice ○Hydraulics and Practice ◎Mathematical Statistics for Civil Engineering ◎Infrastructure Planning: Mathematical Programming and Practice	○Concrete Structures ○Foundation Engineering ◎Infrastructure Planning II ○Urban Environment Engineering	◎Statistical Approach to Thermodynamics ○Numerical Simulation Exercise ○Landform Engineering ◎Conflict Management:Theory and Practice ◎Water Supply and Sewerage		
	To acquire practical skills and creativity to resolve issues from a broad perspective	○Exercise on Basic Mathematics	○Structural Mechanics I	○Basic Hydraulics and Practice	○CAD Drawing in Civil Engineering ○Soil Mechanics II and Practice ○Mathematical Statistics for Civil Engineering	○Urban Disaster Prevention Engineering ◎Structural Dynamics ○Hydrology ○Transportation Engineering ○Infrastructure Planning II ○Civil Engineering Practice ◎Urban Environment Engineering	○Bridge Engineering ○Project Management ○Coastal and Harbor Engineering ○Water Supply and Sewerage	◎Research Works	◎Research Works

Department name: Electrical and Electronic Engineering

Faculty name: Faculty of Engineering

Curriculum organization and implementation system where the students can reach the study goals set in the Degree Awarding Policy of the Faculty of Engineering by taking the provided courses

Degree Awarding Policy of the Faculty of Engineering	Study goals	1st year		2nd year		3rd year		4th year	
		1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester
Enriched Humanity	To acquire high ethical standards	◎Introduction to Computer Literacy ○Introductory Seminar of Electrical and Electronic Engineering							
	To acquire a solid understanding of the impact of science and technology on society	◎Liberal Arts Core Course(Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course(Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course(Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course(Social Sciences) ◎Liberal Arts Core Course (Comprehensive)			○Electricity Act	○Inductrial Property Law
	To acquire the ability to take appropriate actions	◎Liberal Arts Core Course(Cultural Sciences) ◎Sports and Fitness Course I ◎Health Sciences	◎Sports and Fitness Course II	◎Liberal Arts Core Course(Cultural Sciences)					
Creativity	To maintain the liberal and open-minded culture	◎Introductory Seminar of Electrical and Electronic Engineering						○Graduate Research	○Graduate Research
	To acquire the ability to solve issues in a creative manner	○Introductory Seminar of Electrical and Electronic Engineering			○Electrical and Electronic Engineering Laboratory I and Safety Guidance	○Electrical and Electronic Engineering Laboratory II	○Electrical and Electronic Engineering Laboratory III	○Electrical and Electronic Engineering Laboratory IV ○Graduate Research	○Graduate Research
International Awareness	To acquire the ability to conduct exchanges with overseas partners	◎Foreign Language I	◎Foreign Language I	◎Foreign Language I					
	To acquire a deep understanding of other cultures	◎Foreign Language II	◎Foreign Language II						
	To acquire the ability to exhibit individuality	○Foreign Language I ○Foreign Language II	○Foreign Language I ○Foreign Language II ◎Foreign Language III	○Foreign Language I ○Foreign Language II ◎Foreign Language III	○Foreign Language II ◎Foreign Language III	◎Foreign Language III	◎Foreign Language III		
Expertise	To acquire highly specialized knowledge			◎Quantum Physics and Electronics I ◎Logic for Computer Engineering ◎Data Structures and Algorighms I ◎Electric Machine I	◎Quantum Physics and Electronics II ◎Solid State Physical Engineering I ◎Computer Engineering I ◎Electric Machine II ◎Control Engineering I	◎Engineering Course of Mathematical Physics ◎Solid State Physical Engineering II ◎Semiconductor Electronics I ◎Computer Engineering II ◎Digital Information Circuits ◎Data Structures and Algorighms II ◎Information Transmission I ◎Information Theory ◎Control Engineering II ◎Electric Power Engineering I	◎Electromagnetic Wave Theory ◎Electrical and Electronic Material Science ◎Semiconductor Electronics II ◎Integrated Circuit Engineering ◎Formal Languages and Finite Automata ◎Information Transmission II ◎Applied Communication Engineering ◎Electric Power Engineering II ◎High Voltage and Discharge Engineering ◎Electric Power Application		
	To acquire wide-ranging insights		◎Current Issues I ◎Current Issues II ◎Introduction to Computer Science	◎Current Issues II	○Electrical and Electronic Engineering Laboratory I and Safety Guidance	○Electrical and Electronic Engineering Laboratory II	○Electrical and Electronic Engineering Laboratory III	◎Applied Radio Engineering ◎Design of Electric Machine ◎Design of Electric Systems and Equipments ◎Electricity Act	◎Inductrial Property Law
	To acquire basic academic abilities to resolve issues from a broad perspective	◎Calculus 1 ◎Linear Algebra 1 ◎Physics C1 ◎Material Chemistry I ◎Descriptive Geometry ◎Discrete Mathematics	◎Calculus 2 ◎Linear Algebra 2 ◎Physics C2 ◎Physics Laboratory ◎Material Chemistry II ◎Vector Analysis ◎Electric Circuit Theory I ◎Information Mathematics	◎Mathematical Statistics ◎Complex Analysis ◎Theory of Ordinary Differential Equations ◎Electric Circuit Theory II ◎Electromagnetic Fields and Waves I	◎Fourier Analysis ◎Electronic Circuits ◎Electromagnetic Fields and Waves II ◎Electrical Instrumentation	◎Theory of Partial Differential Equations	◎Numerical Analysis		
	To acquire practical skills and creativity to resolve issues from a broad perspective		◎Computer Programming Practice ◎Electric Circuit Theory Practice	◎Exercises on Complex Functions ◎Exercises on Differential Equations ◎Practice on Electromagnetic Fields and Waves	◎Electrical and Electronic Engineering Laboratory I and Safety Guidance	◎Electrical and Electronic Engineering Laboratory II	◎Electrical and Electronic Engineering Laboratory III	◎Graduate Research ◎Electrical and Electronic Engineering Laboratory IV	◎Graduate Research

Department name: Mechanical Engineering
Faculty name: Faculty of Engineering
Curriculum organization and implementation system where the students can reach the study goals set in the Degree Awarding Policy of the Faculty of Engineering by taking the provided courses

Degree Awarding Policy of the Faculty of Engineering	Study goals	1st year		2nd year		3rd year		4th year	
		1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester
Enriched Humanity	To acquire high ethical standards	○Liberal Arts Core Course(Cultural Sciences) ○Liberal Arts Core Course(Social Sciences) ○Introduction to Computer Literacy	○Liberal Arts Core Course(Cultural Sciences) ○Liberal Arts Core Course(Social Sciences)	○Liberal Arts Core Course(Cultural Sciences) ○Liberal Arts Core Course(Social Sciences)	○Liberal Arts Core Course(Cultural Sciences) ○Liberal Arts Core Course(Social Sciences)		◯ Industrial Property Law ◎Education for Mechanical safety and Engineering ethics		
	To acquire a solid understanding of the impact of science and technology on society	○Liberal Arts Core Course(Cultural Sciences) ◎Liberal Arts Core Course(Social Sciences)	○Liberal Arts Core Course(Cultural Sciences) ◎Liberal Arts Core Course(Social Sciences)	○Liberal Arts Core Course(Cultural Sciences) ◎Liberal Arts Core Course(Social Sciences)	○Liberal Arts Core Course(Cultural Sciences) ◎Liberal Arts Core Course(Social Sciences)		◎ Industrial Property Law ○Education for Mechanical safety and Engineering ethics ○Industrial Economics		
	To acquire the ability to take appropriate actions	○Liberal Arts Core Course(Natural Sciences) ◎Introduction to Computer Literacy ◎ Health Sciences ◎Sports and Fitness Course I ◯ Exercise on Basic Mathematics ○ Fundamental Mechanical Engineering	○Liberal Arts Core Course(Natural Sciences) ○Introduction to Computer Science ◎Sports and Fitness Course II ○Physics Laboratory	○Liberal Arts Core Course(Natural Sciences) ◯ Exercises on Complex Variables ◯ Exercises on Differential Equations ○Manufacturing Engineering Practice ○ Machine Drawing	○Liberal Arts Core Course(Natural Sciences) ○Manufacturing Engineering Practice ○ Machine Drawing	○Mechanical Engineering Laboratory	◯ Industrial Property Law ○Education for Mechanical safety and Engineering ethics ◎Industrial Economics ○Mechanical Engineering Laboratory		
Creativity	To maintain the liberal and open-minded culture	○Liberal Arts Core Course(Natural Sciences) ○Sports and Fitness Course I ◎ Fundamental Mechanical Engineering	○Liberal Arts Core Course(Natural Sciences) ○Sports and Fitness Course II	○Liberal Arts Core Course(Natural Sciences)	○Liberal Arts Core Course(Natural Sciences)	○Machine Design and Training I	○Machine Design and Training II ○ Practice of Applied Mechanical Engineering		
	To acquire the ability to solve issues in a creative manner	○ Health Sciences ○Sports and Fitness Course I ◯ Exercise on Basic Mathematics ○ Fundamental Mechanical Engineering	○Sports and Fitness Course II ○Physics Laboratory	◯ Exercises on Complex Variables ◯ Exercises on Differential Equations ○Manufacturing Engineering Practice ○ Machine Drawing	○Manufacturing Engineering Practice ○ Machine Drawing	○Mechanical Engineering Laboratory ◎Machine Design and Training I	○Mechanical Engineering Laboratory ◎Machine Design and Training II ○ Practice of Applied Mechanical Engineering		
International Awareness	To acquire the ability to conduct exchanges with overseas partners	◎Foreign Language I ○Introduction to Computer Literacy	◎Foreign Language I	◎Foreign Language I				◎Seminar in English	◎Seminar in English
	To acquire a deep understanding of other cultures	◎Liberal Arts Core Course(Cultural Sciences) ◎Foreign Language II ○Liberal Arts Core Course(Social Sciences) ○Foreign Language I	◎Liberal Arts Core Course(Cultural Sciences) ◎Foreign Language II ○Liberal Arts Core Course(Social Sciences) ○Foreign Language I	◎Liberal Arts Core Course(Cultural Sciences) ◎Foreign Language II ○Liberal Arts Core Course(Social Sciences) ○Foreign Language I	◎Liberal Arts Core Course(Cultural Sciences) ◎Foreign Language II ○Liberal Arts Core Course(Social Sciences)			○Seminar in English	○Seminar in English
	To acquire the ability to exhibit individuality	○Foreign Language I ○Foreign Language II	○Foreign Language I ○Foreign Language II	○Foreign Language I ○Foreign Language II ◎Foreign Language III	○Foreign Language II ◎Foreign Language III	◎Foreign Language III	◎Foreign Language III	○Seminar in English	○Seminar in English

Expertise	To acquire highly specialized knowledge	○Mechanics I ○Fundamental Mathematics for Mechanical Engineering ◎ Atomic Physics in Engineering	◎ Introduction to Electronics ◎Mechanics II ○Strength of Materials ○Thermodynamics I	○Machine Dynamics I ○ Fluid Engineering ◎Materials Science ◎ Mechanism and Mechatronics ◎Thermodynamics II	○Manufacturing Process Engineering ◎Engineering Materials ◎Machine Dynamics II ◎Control Engineering I ◎Hydrodynamics I ◎ Continuum Mechanics ◎Heat Transfer ◎Introduction to Instrumentation Engineering ○Data Analysis	◎System Synthesis ◎Quantum Mechanics ◎ Strength and Fracture of Materials ◎Theory of Elasticity ◎Control Engineering II ◎Hydrodynamics II ◎Computatinal Mechanics ◎Energy Conversion Technology ◎Micro Process Engineering ○Special lectures of Advanced Mechanical Engineering I	◎Statistical Mechanics ◎Mechanics of Solids ◎Fluid Machinary ◎ Simulation Engineering ◎Manufacturing System Theory ◎Systems Engineering ○Special lectures of Advanced Mechanical Engineering II ○Review of Advanced Mechanical Engineering	○Special lectures of Advanced Mechanical Engineering III ○ Research Works	○Special lectures of Advanced Mechanical Engineering IV ○ Research Works
	To acquire wide-ranging insights	○ Atomic Physics in Engineering	○ Introduction to Electronics ○Mechanics II	○Materials Science ○ Mechanism and Mechatronics ○Thermodynamics II	○Engineering Materials ○Machine Dynamics II ○Control Engineering I ○Hydrodynamics I ○ Continuum Mechanics ○Heat Transfer ○Introduction to Instrumentation Engineering	○System Synthesis ○Quantum Mechanics ○ Strength and Fracture of Materials ○Theory of Elasticity ○Control Engineering II ○Hydrodynamics II ○Computatinal Mechanics ○Energy Conversion Technology ○Micro Process Engineering ◎Special lectures of Advanced Mechanical Engineering I	○Statistical Mechanics ○Mechanics of Solids ○Fluid Machinary ○ Simulation Engineering ○Manufacturing System Theory ○Systems Engineering ○Industrial Economics ◎Special lectures of Advanced Mechanical Engineering II ◎Review of Advanced Mechanical Engineering	◎Special lectures of Advanced Mechanical Engineering III	◎Special lectures of Advanced Mechanical Engineering IV
	To acquire basic academic abilities to resolve issues from a broad perspective	◎Liberal Arts Core Course(Natural Sciences) ◎Linear Algebra B1 ◎Calculus B1 ◎Mathematical Statistics ◎ Exercise on Basic Mathematics ◎Mechanics I ◎Fundamental Mathematics for Mechanical Engineering	◎Liberal Arts Core Course(Natural Sciences) ◎Linear Algebra B2 ◎Calculus B2 ◎Introduction to Computer Science ◎Physics Laboratory ◎Vector Analysis ◎Strength of Materials ◎Thermodynamics I	◎Liberal Arts Core Course(Natural Sciences) ◎Complex Analysis ◎Theory of Ordinary Differential Equations ◎ Exercises on Complex Variables ◎ Exercises on Differential Equations ◎Machine Dynamics I ◎ Fluid Engineering ◎Manufacturing Engineering Practice ◎ Machine Drawing	◎Liberal Arts Core Course(Natural Sciences) ◎Physics C3 ◎ Fourier Analysis ◎Manufacturing Process Engineering ◎Data Analysis ◎Manufacturing Engineering Practice ◎ Machine Drawing	◎Theory of Partial Differential Equations ◎Mechanical Engineering Laboratory	◎Mechanical Engineering Laboratory	○ Research Works	○ Research Works
	To acquire practical skills and creativity to resolve issues from a broad perspective	○Mechanics I ○Fundamental Mathematics for Mechanical Engineering ○ Atomic Physics in Engineering	○ Introduction to Electronics ○Mechanics II ○Strength of Materials ○Thermodynamics I	○Machine Dynamics I ○ Fluid Engineering ○Materials Science ○ Mechanism and Mechatronics ○Thermodynamics II	○Manufacturing Process Engineering ○Engineering Materials ○Machine Dynamics II ○Control Engineering I ○Hydrodynamics I ○ Continuum Mechanics ○Heat Transfer ○Introduction to Instrumentation Engineering ○Data Analysis	○System Synthesis ○Quantum Mechanics ○ Strength and Fracture of Materials ○Theory of Elasticity ○Control Engineering II ○Hydrodynamics II ○Computatinal Mechanics ○Energy Conversion Technology ○Micro Process Engineering ○Machine Design and Training I	○Statistical Mechanics ○Mechanics of Solids ○Fluid Machinary ○ Simulation Engineering ○Manufacturing System Theory ○Systems Engineering ○Machine Design and Training II ◎ Practice of Applied Mechanical Engineering	◎ Research Works	◎ Research Works

Department name: Chemical Science and Engineering

Faculty name: Faculty of Engineering

Curriculum organization and implementation system where the students can reach the study goals set in the Degree Awarding Policy of the Faculty of Engineering by taking the provided courses

Degree Awarding Policy of the Faculty of Engineering	Study goals	1st year		2nd year		3rd year		4th year	
		1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester
Enriched Humanity	To acquire high ethical standards	◎Seminar (Introduction) ○ Liberal Arts Core Course (Cultural Sciences) ○ Liberal Arts Core Course (Social Sciences) ○ Liberal Arts Core Course (Natural Sciences) ◎ Introduction to Computer Literacy	○ Liberal Arts Core Course (Cultural Sciences) ○ Liberal Arts Core Course (Social Sciences) ○ Liberal Arts Core Course (Natural Sciences)	○ Liberal Arts Core Course (Cultural Sciences) ○ Liberal Arts Core Course (Social Sciences) ○ Liberal Arts Core Course (Natural Sciences)	○ Safety Instruction for Chemical Experiments ○ Liberal Arts Core Course (Cultural Sciences) ○ Liberal Arts Core Course (Social Sciences) ○ Liberal Arts Core Course (Natural Sciences)		○ Engineering for Environmental Safety ○ Environmental and Energy Chemistry	○ Special Lecture Ⅰ ○ Special Lecture Ⅱ ○ Special Lecture Ⅲ ○ Special Lecture Ⅳ	
	To acquire a solid understanding of the impact of science and technology on society	◎ Liberal Arts Core Course (Cultural Sciences) ◎ Liberal Arts Core Course (Social Sciences) ◎ Liberal Arts Core Course (Comprehensive) ○ Seminar (Introduction) ○ Introduction to Computer Literacy	◎ Liberal Arts Core Course (Cultural Sciences) ◎ Liberal Arts Core Course (Social Sciences) ◎ Liberal Arts Core Course (Comprehensive)	◎ Liberal Arts Core Course (Cultural Sciences) ◎ Liberal Arts Core Course (Social Sciences) ◎ Liberal Arts Core Course (Comprehensive)	◎ Liberal Arts Core Course (Cultural Sciences) ◎ Liberal Arts Core Course (Social Sciences) ◎ Liberal Arts Core Course (Comprehensive)		○ Engineering for Environmental Safety ○ Environmental and Energy Chemistry		
	To acquire the ability to take appropriate actions	○ Seminar (Introduction) ○ Introduction to Computer Literacy ◎ Health Sciences ◎ Sports and Fitness Course Ⅰ	◎ Sports and Fitness Course Ⅱ		○ Safety Instruction for Chemical Experiments				
Creativity	To maintain the liberal and open-minded culture	○ Health Sciences ○ Sports and Fitness Course Ⅰ	○ Sports and Fitness Course Ⅱ	○ Seminar (advance course)					
	To acquire the ability to solve issues in a creative manner	○ Health Sciences ○ Sports and Fitness Course Ⅰ	○ Exercises for Physical Chemistry Ⅰ ○ Sports and Fitness Course Ⅱ	◎ Seminar (advance course)		○ Exercises for Physical Chemistry Ⅱ ○ Exercises for Organic Chemistry and Polymer Chemistry ○ Chemical Science and Engineering Laboratory Ⅰ ○ Chemical Science and Engineering Laboratory Ⅱ	○ Exercises for Inorganic Chemistry and Analytical Chemistry ○ Exercises for Transport Science and Separation Engineering ○ Exercises for Chemical Reaction Engineering ○ Exercises for Biochemical Engineering ○ Chemical Science and Engineering Laboratory Ⅲ ○ Chemical Science and Engineering Laboratory Ⅳ	○ Graduate Research	○ Graduate Research
International Awareness	To acquire the ability to conduct exchanges with overseas partners	◎ Foreign Language Course Ⅰ	◎ Foreign Language Course Ⅰ	◎ Foreign Language Course Ⅰ	◎ Foreign Language Course Ⅰ			○ Reading of Scientific Papers	
	To acquire a deep understanding of other cultures	◎ Foreign Language Course Ⅱ	◎ Foreign Language Course Ⅱ	◎ Foreign Language Course Ⅱ	◎ Foreign Language Course Ⅱ				
	To acquire the ability to exhibit individuality	○ Foreign Language Course Ⅰ ○ Foreign Language Course Ⅱ	○ Foreign Language Course Ⅰ ○ Foreign Language Course Ⅱ	○ Foreign Language Course Ⅰ ○ Foreign Language Course Ⅱ	○ Foreign Language Course Ⅰ ○ Foreign Language Course Ⅱ	○ Foreign Language Course Ⅱ	○ Foreign Language Course Ⅱ		

Expertise	To acquire highly specialized knowledge	○ Calculus B1 ○ Linear Algebra B1 ○ Physics B1 ○ Physical Chemistry I ○ Physical Chemistry II ○ Exercise on Basic Mathematics	○ Calculus B2 ○ Linear Algebra B2 ○ Physics B2 ○ Physics B3 ○ Chemistry Laboratory ○ Applied Inorganic Chemistry I ○ Organic Chemistry I	○ Materials Chemistry ○ Complex Analysis ○ Theory of Ordinary Differential Equations ○ Physical Chemistry III ○ Applied Inorganic Chemistry II ○ Organic Chemistry II ○ Polymer Chemistry I ○ Basic Principles in Chemical Engineering	○ Fourier Analysis ○ Physical Chemistry IV ○ Applied Inorganic Chemistry III ○ Analytical Chemistry ○ Organic Chemistry III ○ Polymer Chemistry II ○ Transport Science ○ Biochemistry	○ Instrumental Analytical Chemistry ○ Sepration Engineering ○ Proceaa System Engineering ○ Chemical Reaction Engineering ○ Biochemical Engineering ○ Biomaterials ○ Fluid and Particle Engineering	○ Polymer Colloid Chemistry ○ Prosess Design ○ Biomolecular Chemistry and Engineering	○ Special Lecture Ⅰ ○ Special Lecture Ⅱ ○ Special Lecture Ⅲ ○ Special Lecture Ⅳ ○ Reading of Scientific Papers	
	To acquire wide-ranging insights	◎ Liberal Arts Core Course (Natural Sciences) ◎ Introduction of Computer Applications ○ Calculus B1 ○ Linear Algebra B1 ○ Physics B1 ○ Physical Chemistry I ○ Physical Chemistry II ○ Exercise on Basic Mathematics	◎ Liberal Arts Core Course (Natural Sciences) ○ Calculus B2 ○ Linear Algebra B2 ○ Physics B2 ○ Physics B3 ○ Chemistry Laboratory ○ Applied Inorganic Chemistry I ○ Organic Chemistry I	◎ Liberal Arts Core Course (Natural Sciences) ○ Materials Chemistry ○ Complex Analysis ○ Theory of Ordinary Differential Equations ○ Physical Chemistry III ○ Applied Inorganic Chemistry II ○ Organic Chemistry II ○ Polymer Chemistry I ○ Basic Principles in Chemical Engineering	◎ Liberal Arts Core Course (Natural Sciences) ◎ Safety Instruction for Chemical Experiments ○ Fourier Analysis ○ Physical Chemistry IV ○ Applied Inorganic Chemistry III ○ Analytical Chemistry ○ Organic Chemistry III ○ Polymer Chemistry II ○ Transport Science ○ Biochemistry	○ Instrumental Analytical Chemistry ○ Sepration Engineering ○ Proceaa System Engineering ○ Chemical Reaction Engineering ○ Biochemical Engineering ○ Biomaterials ○ Fluid and Particle Engineering	◎ Engineering for Environmental Safety ◎ Environmental and Energy Chemistry ○ Polymer Colloid Chemistry ○ Prosess Design ○ Biomolecular Chemistry and Engineering	◎ Special Lecture Ⅰ ◎ Special Lecture Ⅱ ◎ Special Lecture Ⅲ ◎ Special Lecture Ⅳ ◎ Reading of Scientific Papers	
	To acquire basic academic abilities to resolve issues from a broad perspective	◎ Calculus B1 ◎ Linear Algebra B1 ◎ Physics B1 ◎ Physical Chemistry I ◎ Physical Chemistry II ◎ Exercise on Basic Mathematics	◎ Calculus B2 ◎ Linear Algebra B2 ◎ Physics B2 ◎ Physics B3 ◎ Chemistry Laboratory ◎ Applied Inorganic Chemistry I ◎ Organic Chemistry I ○ Exercises for Physical Chemistry I	◎ Materials Chemistry ◎ Complex Analysis ◎ Theory of Ordinary Differential Equations ◎ Physical Chemistry III ◎ Applied Inorganic Chemistry II ◎ Organic Chemistry II ◎ Polymer Chemistry I ◎ Basic Principles in Chemical Engineering	◎ Fourier Analysis ◎ Physical Chemistry IV ◎ Applied Inorganic Chemistry III ◎ Analytical Chemistry ◎ Organic Chemistry III ◎ Polymer Chemistry II ◎ Transport Science ◎ Biochemistry	◎ Instrumental Analytical Chemistry ◎ Sepration Engineering ◎ Proceaa System Engineering ◎ Chemical Reaction Engineering ◎ Biochemical Engineering ◎ Biomaterials ◎ Fluid and Particle Engineering ○ Exercises for Physical Chemistry II ○ Exercises for Organic Chemistry and Polymer Chemistry ○ Chemical Science and Engineering Laboratory I ○ Chemical Science and Engineering Laboratory II	◎ Polymer Colloid Chemistry ◎ Prosess Design ◎ Biomolecular Chemistry and Engineering ○ Exercises for Inorganic Chemistry and Analytical Chemistry ○ Exercises for Transport Science and Separation Engineering ○ Exercises for Chemical Reaction Engineering ○ Exercises for Biochemical Engineering ○ Chemical Science and Engineering Laboratory III ○ Chemical Science and Engineering Laboratory IV	○ Graduate Research	○ Graduate Research
	To acquire practical skills and creativity to resolve issues from a broad perspective		◎ Exercises for Physical Chemistry I			◎ Exercises for Physical Chemistry II ◎ Exercises for Organic Chemistry and Polymer Chemistry ◎ Chemical Science and Engineering Laboratory I ◎ Chemical Science and Engineering Laboratory II	◎ Exercises for Inorganic Chemistry and Analytical Chemistry ◎ Exercises for Transport Science and Separation Engineering ◎ Exercises for Chemical Reaction Engineering ◎ Exercises for Biochemical Engineering ◎ Chemical Science and Engineering Laboratory III ◎ Chemical Science and Engineering Laboratory IV	◎ Graduate Research	◎ Graduate Research

Department name:Department of Computer and Systems Engineering

Faculty name: Faculty of Engineering

Curriculum organization and implementation system where the students can reach the study goals set in the Degree Awarding Policy of the Faculty of Engineering by taking the provided courses

Degree Awarding Policy of the Faculty of Engineering	Study goals	1st year		2nd year		3rd year		4th year	
		1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester
Enriched Humanity	To acquire high ethical standards	◎Introduction to Computer Literacy							
	To acquire a solid understanding of the impact of science and technology on society	◎Liberal Arts Core Course(Cultural Sciences) ◎Liberal Arts Core Course(Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course(Cultural Sciences) ◎Liberal Arts Core Course(Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course(Cultural Sciences) ◎Liberal Arts Core Course(Social Sciences) ◎Liberal Arts Core Course (Comprehensive)	◎Liberal Arts Core Course(Cultural Sciences) ◎Liberal Arts Core Course(Social Sciences) ◎Liberal Arts Core Course (Comprehensive)				
	To acquire the ability to take appropriate actions	◎Health Sciences ◎Sports and Fitness Course I	◎Sports and Fitness Course II	○Computer and Systems Engineering Practice III					
Creativity	To maintain the liberal and open-minded culture			○System Plannning and Its Practice					
	To acquire the ability to solve issues in a creative manner			○System Plannning and Its Practice ○Computer and Systems Engineering Practice III	◎Automaton and Formal languages ○Spectrum analysis and practice ○Circuit Theory ○Computer and Systems Engineering Practice IV		○Artificial Intelligence		
International Awareness	To acquire the ability to conduct exchanges with overseas partners	◎Foreign Language I	◎Foreign Language I	◎Foreign Language I	◎Foreign Language I				
	To acquire a deep understanding of other cultures	◎Foreign Language II	◎Foreign Language II	◎Foreign Language II	◎Foreign Language II				
	To acquire the ability to exhibit individuality	○Foreign Language I ○Foreign Language II	○Foreign Language I ○Foreign Language II	○Foreign Language I ○Foreign Language II	○Foreign Language I ○Foreign Language II				
	To acquire highly specialized knowledge	○Graph Theory ○Logic Circuits		○Algorithms and Data Structures ○Electric Circuit Theory	◎Spectrum analysis and practice ◎System Analysis and Its Practice ◎Circuit Theory ◎Electronic Circuits ○Analytical Dynamics ○Paradigm of Programming Languages and Practice	◎Database Systems	◎Artificial Intelligence ◎Computer Architecture ◎Sensing Technology ◎Control Systems Theory II ◎Robotics ◎Computer Applications in Engineering ◎Information and Communication Engineering ◎Optical Information Processing ◎Image Processing ◎Digital Signal Processing ◎Theory of System Identification ○Software Engineering	◎Research Works	◎Research Works

Expertise	To acquire wide-ranging insights	○Discrete Mathematics ○Graph Theory ◎Introduction to Computer and Systems Engineering and Safety Engineering		○Theory of Ordinary Differential Equations	○Computer and Systems Engineering Laboratory I	◎Theory of Programming Languages ○Introduction to Optics ○Mathematical Logic ○Systems Design ○Digital Circuits ○System Program ○Signal Analysis ○Control Systems Theory I ○Intelligent Mechatronics Theory ○Computer and Systems Engineering Laboratory II	○Software Engineering ○Optical Information Processing ○Image Processing ○Digital Signal Processing ○Theory of System Identification ○Computer Architecture ○Sensing Technology ○Control Systems Theory II ○Robotics ○Computer Applications in Engineering		
	To acquire basic academic abilities to resolve issues from a broad perspective	◎Linear Algebra 1 ◎Calculus 1 ◎Discrete Mathematics ◎Physics C1 ◎Graph Theory ◎Logic Circuits ◎Computer Engineering ◎Computer and Systems Engineering Practice I	◎Linear Algebra 2 ◎Calculus 2 ◎Mathematical Statistics ◎Vector Analysis ◎Physics C2 ◎Physics C3 ◎Physics Laboratory ◎Computer and Systems Engineering Practice II	◎Complex Analysis ◎Theory of Ordinary Differential Equations ◎Foundations of Probability and Statistics ◎Exercises Applied Analysis ◎Physics C4 ◎Algorithms and Data Structures ◎Electric Circuit Theory ◎System Plannning and Its Practice	◎Fourier Analysis ◎Analytical Dynamics ◎Paradigm of Programming Languages and Practice ◎Electromagnetism ◎Operations Research ◎Computer and Systems Engineering Practice IV ◎Computer and Systems Engineering Laboratory I ○Spectrum analysis and practice ○System Analysis and Its Practice ○Circuit Theory ○Electronic Circuits ○Automaton and Formal languages	◎Introduction to Optics ◎Mathematical Logic ◎Systems Design ◎Digital Circuits ◎System Program ◎Signal Analysis ◎Control Systems Theory I ◎Intelligent Mechatronics Theory ◎Theory of stochastic process ◎Computer and Systems Engineering Practice V ◎Computer and Systems Engineering Laboratory II ○Theory of Programming Languages	◎Numerical Analysis ○Optical Information Processing ○Image Processing ◎Computer and Systems Engineering Project	○Research Works	○Research Works
	To acquire practical skills and creativity to resolve issues from a broad perspective	○Discrete Mathematics ○Computer and Systems Engineering Practice I	○Computer and Systems Engineering Practice II	○System Plannning and Its Practice ◎Computer and Systems Engineering Practice III ○Theory of Ordinary Differential Equations ○Foundations of Probability and Statistics ○Exercises Applied Analysis	○Analytical Dynamics ○Paradigm of Programming Languages and Practice ○Automaton and Formal languages ○Electromagnetism ○Operations Research ○Computer and Systems Engineering Practice IV ○Computer and Systems Engineering Laboratory I	○Computer and Systems Engineering Practice V ○Computer and Systems Engineering Laboratory II	◎Software Engineering ○Digital Signal Processing ○Computer and Systems Engineering Project	○Research Works	○Research Works