Appended Form 1

Specifications for Major Program

Name of School (Program) School of Engineering Cluster 1 Mechanical Systems, Transportation, Material and Energy)

Program name (Japanese)	
(English)	Program of Energy Transform Engineering

1.Academic degree to be Acquired Bachelor's degree in Engineering

2. Overview

(1) Overview of "English-based Bachelor's Degree Program"

This program aims to foster and produce future members of a global society who have the knowledge to be innovative, creative, take leadership, and possess language abilities that will help them play an important role in the international world.

This program focuses specifically on producing individuals who are capable of addressing various global issues from an engineering perspective and contribute to the creation of new and valuable solutions that are significant to both the industrial and academic societies.

Students enrolled in the program will begin the curriculum from the first semester of their first year.
In the second year, students will set off on their major programs and take the designated courses which are offered at each cluster. Major program overview is as (2).

(2)Program overview of "Program of Energy Transform Engineering".

This Program (Energy Transform Engineering) in Cluster 1 helps students acquire the basic knowledge and perspective needed by engineers through the study of design and drafting, as well as through practical training at the Phoenix Workshop. Also, this program offers education in such fields as thermodynamics, basic physics related to quantum physics, fluid dynamics, combustion engineering, and heat-transfer engineering, all of which are indispensable for engineers.

Through such education, this program aims at nurturing engineers and researchers who, contributing to solving energy and environmental problems from a global perspective, being able to assume cutting-edge design and development roles in engineering. In order for students to develop their perspectives in other related fields with also gaining in-depth expertise, this program will be run not only by specialists from the closely-related program of Energy Transform Engineering, but also by specialists from the other three programs in Cluster 1, as well as by highly-skilled technical personnel from the Phoenix Workshop.

Students are assigned to this program in the second semester of the second year. Then, in the first semester of the fourth year, students are assigned to their respective research laboratories, choose their research topics, and write up their graduation theses. For your reference, as of last year about sixty percent of graduates from Cluster 1 in the School of Engineering had advanced to graduate school. Graduates are employed in the general machinery and automotive fields, as well as in electronics, information & communications, heavy industry, the chemical industry, and a broad range of other industries. Centering on manufacturers in the fields of heavy industry, transportation equipment, machinery, and materials, they work actively in the fields of research, design, production engineering, and engineering marketing.

3.Academic Awards Policy (Goals of the Program and Policy for Awarding DeiTmcac3 T-20DC q40.44 43.8 518.76 1

mechanical/material-related subjects as well as with the fundamentals of engineering associated with energy and of indispensable for such fields of engineering as thermodynamics, basic physics related to quantum physics, fluid dynamics, combustion engineering, and heat-transfer engineering.

The ability to assume roles in the design and development of cutting-edge production technology, while having a broader perspective about human-machine relations and environmental issues.

4. Curriculum Policy (Policy for Preparing and Implementing the Curriculum)

Achievement in learning is measured by performance rating in each subject and by the goals set by the Education Program. To ensure that students are able to achieve the goals of the program, the Program of Energy Transform Engineering develops and puts into practice a curriculum based on the following policy:

In the first year, the students take Liberal Arts Education subjects such as Peace Science Courses, Basic Courses in University Education, common subjects, and Foundation Courses, as well as specialized basic subjects and specialized practical education, such as machine shop training.

In the second year, specialized basic subjects such as “Fluid Dynamics Ⅰ” and “Thermodynamics Ⅰ” become major subjects. The students choose one of four programs in Cluster 1(Mechanical Systems Engineering, Transportation Systems, Material Processing, or Energy Transform Engineering) and are assigned to that program.

In the third year, specialized subjects become major subjects. The students take required classes in accordance with the program they belong to.

In the fourth year, the students are assigned to their respective research laboratories, choose their research topics, and write their graduation theses.

5. Program Timing/Acceptance Conditions

○ When to start the program : The English-based Bachelor’s Degree programs begin in the first semester of the first year. Enrollment in Program of Energy Transform Engineering occurs in the second semester of the second year.

○Additional Requirements : To determine acceptance into the English-based Bachelor’s Degree program, all applicants are required to have an individual consultation with the faculty committee members.

○ Credit Requirements : By the first semester of the second year, students must have acquired the Liberal Arts Education subjects and specialized basic subjects that are commonly specified in Cluster 1.

6. Qualifications to be Acquired

Type-1 High School Teaching License (Industry)

(Students must acquire the required number of credits for the Type-1 High School Teaching License (Industry), in addition to the required number of credits for this program.)

7. Class subjects and course content

* For class subjects, see the Course List table on the attached sheet.

* For course content, see the syllabus for each fiscal year.

* All class subjects are taught in Japanese. Course materials will be written in both Japanese and English or only English.

8 Academic Achievements

At the end of each semester, the evaluation criteria are applied to each academic achievement evaluation item so that the level of attainment is clearly demonstrated.

Students’ grade calculation for each subject, from admission to the current semester, is given in one of three levels: “Excellent,” “Very Good,” and “Good,” based on evaluation criteria calculated by adding the weighted values to the numerically-converted values of their academic achievement in each subject being evaluated (S = 4, A = 3, B = 2, and C= 1).

Academic achievement	Evaluation criteria
Excellent	3.00 4.00
Very Good	2.00 2.99

Evaluation of academic achievement	Converted values
S(Excellent: 90 points or higher)	4
A(Superior:80-89 points)	3
B(Good: 70-79 points)	2
C(Fair: 60-69 points)	1

Good	1.00 1.99

* For the relationship between evaluation items and evaluation criteria, see the attached Sheet 2 .
* For the relationship between evaluation items and class subjects, see the attached Sheet 3.
* For the curriculum map, see the attached Sheet 4.

9. Graduation Thesis (Graduation Research) (Positioning, when and how it is assigned, etc.)

○ Positioning

The graduation thesis is designed to be one component of the overall evaluation of academic achievement.

It is positioned as one of the major subjects to evaluate the following:

Ability/Skills (2) Developing the ability to solve engineering issues on one's own initiative with flexible thinking and creativity

Collective capacity (1) Developing communication skills and the ability to globally collect and dispatch information.

○ When and how it is assigned

When it is assigned: At the start of the fourth year. (Only those who satisfy the conditions for embarking on a graduation thesis will be assigned a thesis.)

○ Conditions for embarking on a graduation thesis

(1) Students must gain 43 credits or more out of 46 credits, the required number for graduation in Liberal Arts Education subjects.

(2) Students must gain 10 credits or more in the first group of specialized basic subjects

(3) Students must gain all of the required credits in Machine Design and Drawing, CAD, Machine Shop Training, Experiments in Mechanical Engineering Ⅰ, Experiments in Mechanical Engineering Ⅱ, and Mechanical Engineering Design and Production.

(4) Students must gain 18 credits or more out of 22 credits, the required number in Liberal Arts Education subjects, in the second group of specialized basic subjects.

(5) Students must gain a total of 68 credits or more in specialized basic subjects and specialized subjects.

○ How it is assigned

The research details of each laboratory to which the students can be assigned are explained by giving out handouts at a briefing held in February, in the second semester of the third year. After the number of students acceptable to each laboratory is given at the start of the fourth year, students who can begin their graduation theses are assigned as requested. In the case that the number of students exceeds the acceptable limit for a laboratory, adjustments may be made.

The graduation thesis must be written in English in "English-based Bachelor's Degree Program".

10. Responsibility-taking System

(1) PDCA Responsibility-taking System ("Plan," "Do," "Check," and "Act")

The cluster leader and program leader are responsible for executing this program. Faculty committee members responsible for this program make plans, while self-check/evaluation committee members responsible for this program make evaluations. The cluster and program teachers committee scrutinize the plans and evaluations from time to time for further improvement. When major issues arise, a working group may be established at the discretion of cluster leader and program leader.

(2) Program assessment

○ Criteria for program assessment

Whether or not each class subject is properly allocated in light of the goals of the program, and whether course content is appropriate

Whether or not, on average, students taking the course have achieved or exceeded the goals

Whether or not the system runs in proper cycles that enable the continuous improvement of the program

○ How the program is assessed

Conducting self-assessment for each subject based on class improvement questionnaires from students who have taken course, and based on performance rating results

Conducting questionnaires (obtained at graduation) in suitable cycles, to evaluate the validity of the goals

○ Position on feedback to students and how it should be conducted

Search records of each student's learning status, prepared by tutors, are kept in the office. Based on these records, study guidance is given to each student. At the same time, requests from students are discussed at teachers' meetings as needed. Furthermore, based on the results of the course improvement questionnaires obtained from students, subject teachers draw up class improvement plans that reflect the questionnaire results.

◎ Nam ena fa lanek kbnace n ekj la ebaa

○ ki l hkn aha e a fa j kb da a fa d lh a nace ana

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Cluster 1　Basic Specialized Subjects

Required subject
○ Compulsory elective subject
Free elective subject
Class Hours/Week

		4th grade							
		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
		1T 2T	3T 4T	1T 2T	3T 4T	1T 2T	3T 4T	1T 2T	3T 4T
Applied Mathematics I	2		4						
Applied Mathematics II	2			4					
Applied Mathematics III	2				4				
Engineering Mathematics A	2					4			
Engineering Mathematics C	2						4		
Probability and Statistics	2			4					
Synthesis of Applied Mathematics	2							4	
Practice of Mechanics	1		4						
Engineering Mechanics	2			4					
Introduction of Mechanical and Transportation Engineering	2		4						
Technical English	1			4					
Basic Engineering Computer Programming	2				4				
Mechanics of Material I	2			4					
Dynamics of Vibrations I	2				4				
Thermodynamics I	2			4					
Fluid Dynamics I	2				4				
Control Engineering I	2				4				
An Introduction to Engineering Materials	2			4					
Fundamentals of Materials Processing	2				4				
Computer Programming	2						4		
Experiments in Mechanical Engineering I	1					3	3		
Experiments in Mechanical Engineering II	1							3	3
Mechanical Engineering Design and Production	1							3	3
Machine Design and Drawing	1		3	3					
Computer Aided Design	1			3	3				
Machine Shop Training (a)	1		3	3					
Machine Shop Training (b)	1			3	3				

Students can select either Machine Shop Training (a) or Machine Shop Training (b)

Cluster 1 Specialized Subjects

Program of Energy Transform Engineering

Required subject
○ Compulsory elective subject
Free elective subject

Class Subjects	Credits	Type of course registration	Class Hours/Week																Note
			1st grade				2nd grade				3ed grade				4th grade				
			Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		
			1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	
Elementary Electromagnetism	2								4										
Introduction to Quantum Physics	2									4									
Introduction to chemical physics	2	○										4							
Fluid Dynamics II	2									4									
Compressible Fluid Dynamics	2	○									4								
Computational Fluid Dynamics	2	○											4						
Fluid Machinery	2	○												4					
Thermodynamics II	2	○								4									
Statistical and Thermal Physics	2	○											4						
Heat Transfer I	2								4										
Heat Transfer II	2	○									4								
Combustion Engineering Fundamentals	2	○									4								
Basic Chemical Kinetics	2	○										4							
Internal Combustion Engines	2	○											4						
Steam Power	2	○											4						
Plasma Engineering	2	○										4							
Data Processing and Numerical Analysis	2	○							4										
Radiation Engineering	2	○												4					
Nuclear Engineering	2	○												4					
Theory of Elasticity and Plasticity	2	○									4								
Computational Solid Mechanics	2	○												4					
Electrical and Electronic Engineering	2	○									4								
Instrumentation Engineering	2									4									
Optical Measurement Techniques	2	○												4					
Machine Elements Design I	2	○							4										
Natural-Energy Utilization Engineering	2	○												4					
Internship	1												3	3					
Mechanism and Kinematics	2									4									
Systems Engineering	2									4									
Mechanics of Materials II	2								4										
Transportation	2								4										
Control Engineering II	2								4										
Materials Science	2									4									
Machine Elements Design II	2										4								
Mechanical Materials I	2											4							
Dynamics of Vibrations II	2										4								
Machining	2											4							
Reliability Engineering	2											4							
Manufacturing System	2											4							
Fusion and Solidification Processings I	2											4							
Plastic Working and Powder Metallurgy II	2												4						
Mechanical System Control	2										4								
Machine Design	2												4						
Mechanical Materials II	2													4					
Fracture Mechanics	2													4					
Mechatronics	2												4						
Graduation Thesis	5																		

Academic Achievement in Educational Program for Energy Transform Engineer

The Relationship between Evaluation Items and Evaluation Criteria

Academic Achievements			Evaluation Criteria		
Evaluation Items			Excellent	Very Good	Good
Knowledge and Understanding	(1)	To develop the ability to work positively and independently on the development of local societies, international society, and business and industries.	To be able to be sufficiently engaged in the development of local societies, international society, and business and industry.	To be able to be engaged in the development of local societies, international society, and business and industry at the standard level.	To be able to be engaged in the development of local societies, international society, and business and industry at the minimum level.
	(2)	Acquiring necessary basic knowledge for an engineer and developing the ability to consider logically.	Acquiring necessary basic knowledge for an engineer and being able to sufficiently and logically consider it.	Acquiring necessary basic knowledge for an engineer and being able to logically consider it at the standard level.	Acquiring necessary basic knowledge for an engineer and being able to logically consider it at the minimum level.
Abilities and Skills	(1)	Acquring basis of mechanical system engineering steadily and developing the applied skill.	Acquring basis of mechanical system engineering steadily, and being able to apply it sufficiently.	Acquring basis of mechanical system engineering steadily, and being able to apply it at the standard level.	Acquring basis of mechanical system engineering steadily, and being able to apply it at the minimum level.
	(2)	Developing the ability of solving the technological issues with flexible ideas and creativity.	Based on flexible ideas and creativity, to be able to sufficiently solve problems related to engineering.	Based on flexible ideas and creativity, to be able to independently solve problems related to engineering to the standard level.	Based on flexible ideas and creativity, to be able to independently solve problems related to engineering at the minimum level.
Overall Abilities	(1)	Cultivating abilities of communication and of internationally collecting information and releasing it	To be able to communicate sufficiently with others, collect and release information internationally.	To be able to communicate with others, collect and release information internationally at the standard level	To be able to communicate with others, collect and release information internationally at the minimum level.

Placement of the Liberal Arts Education in the Major Program

We aim to cultivate a well-rounded character, backed up by a broad range of basic knowledge and an understanding of global environmental issues and problems in the social environment. Furthermore, we aim to cultivate the ability to consider ways to solve problems in the context of the multifaceted relations between people and society, and between nature and engineering. To that end, the following are offered: (1) The acquisition of the necessary abilities and attitudes to see various social issues multilaterally and to understand the complete picture (2) The acquisition of a broader perspective after being exposed to fields outside of one's area of expertise (3) Through sports, the acquisition of knowledge of health and physical strength that form basis of human living (4) The cultivation of the ability to

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aNWQO e Q	/ M aNWQO	OQPU	e Q R Oa Q QSU MU	QUP	1 bMaMU UQY										M c QUST QP bMaQ R QbMaMU UQY U TQ aNWQO
					7 c QPSQMPA PQ MPUS				- NUUUQ MP WU				/ Y QTQ UbQ- NUUUQ		
					C QUST QP bMaQ R QbMaMU UQY U TQ aNWQO	C QUST QP bMaQ R QbMaMU UQY	C QUST QP bMaQ R QbMaMU UQY U TQ aNWQO	C QUST QP bMaQ R QbMaMU UQY	C QUST QP bMaQ R QbMaMU UQY U TQ aNWQO	C QUST QP bMaQ R QbMaMU UQY	C QUST QP bMaQ R QbMaMU UQY U TQ aNWQO	C QUST QP bMaQ R QbMaMU UQY	C QUST QP bMaQ R QbMaMU UQY U TQ aNWQO	C QUST QP bMaQ R QbMaMU UQY	
8UNQM- 1PaOMU	5 PaOU A UbQ Ue 1PaOMU		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	5 PaO e QYUMR 2U EQM aPQ		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	QMOQ OUQ OQ/ a Q		1 QOUbQ	QY Q Q											
8UNQM- 1PaOMU	MUO1 SUTA MSQ5		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	MUO1 SUTA MSQ55		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	/ YYa UOMU 5A		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	/ YYa UOMU 5B		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	/ YYa UOMU 55A		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	/ YYa UOMU 55B		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	MUO MSaMSQ5		1 QOUbQ	QY Q Q											
8UNQM- 1PaOMU	MUO MSaMSQ55		1 QOUbQ	QY Q Q											
8UNQM- 1PaOMU	- QM/ a Q(/ a QU- MP4aYMUUQ OOM O		1 QOUbQ	QY Q Q											
8UNQM- 1PaOMU	- QM/ a Q(/ a QU MaM OUQOQ)		1 QOUbQ	QY Q Q											
8UNQM- 1PaOMU	4QMTMP / a Q		1 QOUbQ	QY Q Q											
8UNQM- 1PaOMU	1QYQ R5R YMU 8UQMe 1dQOUQU5R YMU 8UQMe		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	/ MOa a 5		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	/ MOa a 55		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	8UQM- SQNM5		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	8UQM- SQNM55		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	QYUMU MUO9 MTQYMUO 5		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	QYUMU MUO9 MTQYMUO 55		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	3QQM 9 QOTMUO 5		Q aUQP	QY Q Q											
8UNQM- 1PaOMU	3QQM 9 QOTMUO 55		Q aUQP	QY Q Q											
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QOUMUfQP 1PaOMU	1 SUQQUS9 MTQYMUO -		1 QOUbQ	QY Q Q											
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QOUMUfQP 1PaOMU	0e MYUO RBUNMU 5		Q aUQP	QY Q Q											
QOUMUfQP 1PaOMU	/ 1 SUQQUS5		Q aUQP	QY Q Q											
QOUMUfQP 1PaOMU	2 aUP0e MYUO 5		Q aUQP	QY Q Q											
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QDMUQP 1 PaOMU	5 Q M/ YNa U 1 SUQ		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	0MM OQ USMP aYQUM- Me U		1 QDUQ	QY Q Q											
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QDMUQP 1 PaOMU	/ Y a MU M UP9 QDTMUO		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	9 QDTMUO R9 MQUM 55		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	9 QDTMUY MP7 UQYMUO		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	0e MYUO RBUN MU 55		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	/ 1 SUQQUS 55		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	1 QD UMMP1 QD U01 SUQQUS		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	9 QDTM UO		1 QDUQ	QY Q Q											
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QDMUQP 1 PaOMU	9 QDTMUM e QY /		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	9 MaRMOa US e QY		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	9 MOTUQ1 QYQ 0QUS 55		1 QDUQ	QY Q Q											
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QDMUQP 1 PaOMU	9 MOTUQ1 QYQ 0QUS 5		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	5 Q TU		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	1 QYQ Me 1 QD YMS QUY		Q aUQP	QY Q Q											
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QDMUQP 1 PaOMU	5 PaOU OTQYUM Te UO		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	/ Y Q UNQ2 aUP0e MYUO		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	/ Y a MU M2 aUP0e MYUO		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	2 aUP9 MOTUQe		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	TQY Pe MYUO 55		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	MU UMMP TQYM Te UO		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	4 QM M RQ 55		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	MUO/ TQYUM7 UQUO		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	QMY c Q		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	MYM1 SUQQUS		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	MPUMU 1 SUQQUS		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	aOQM1 SUQQUS		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	UM9 QMa QYQ QDT UaQ		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	Ma M1 QSe A UUMU 1 SUQQUS		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	M MU		1 QDUQ	QY Q Q											
QDMUQP 1 PaOMU	3 MPaMU TQU		Q aUQP	QY Q Q											

Curriculum Map of Energy Transform Engineering Sheet

Academic achievements		1st grade		2nd grade		3rd grade		4th grade	
Evaluation Items		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
Knowledge and Understanding	To develop the ability to work positively and independently on the development of local societies, international society, and business and industries.	Introduction to University Education	Area Courses	Area Courses	Area Courses	Reliability Engineering	Internship		
		Peace Science Courses	Health and Sports Courses						
		Area Courses							
		Health and Sports Courses							
	Acquiring necessary basic knowledge for an engineer and developing the ability to consider logically.	Exercise in Information Literacy	CalculusII	Basic Electromagnetism		Computer Programming			
		Elements of Information Literacy	Linear AlgebraII	General Chemistry					
		CalculusI	Seminar in Basic Mathematics II	Basic Engineering Computer Programming					
		Linear AlgebraI	General Mechanics II						
		Seminar in Basic Mathematics I	Experimental Methods and Laboratory Work in Physics I						
		General Mechanics I	Experimental Methods and Laboratory Work in Chemistry I						
Abilities and Skills	Acquring basis of mechanical system engineering and materials processing steadily and developing the applied skill.		Applied Mathematics I	Applied Mathematics II	Applied Mathematics III	Engineering Mathematics A	Synthesis of Applied Mathematics		
			Practice of Mechani	Probability and Statistics	Engineering Mathematics C	Mechanical Materials I	Dynamics of Vibrations II		
			Engineering Mechanics	Mechanics of Material I	Dynamics of Vibrations I	Fusion and Solidification Processings I	Fracture Mechanics		
			Introduction of Mechanical and Transportation Engineering	Thermodynamics I	Materials Science	Machining	Plastic Working and Powder Metallurgy II		
			Machine Design and Drawing	Fluid Dynamics I	Elementary Electromagnetism	Introduction to chemical physics	Statistical and Thermal Physics		
				Control Engineering I	Introduction to Quantum Physics	Heat Transfer II	Internal Combustion Engines		
				An Introduction to Engineering Materials	Fluid Dynamics II	Combustion Engineering Fundamentals	Computational Solid Mechanics		
				Fundamentals of Materials Processing	Thermodynamics II	Plasma Engineering	Mechatronics		
					Heat Transfer I	Theory of Elasticity and Plasticity	Optical Measurement Techniques		
					Data Processing and Numerical Analysis	Dynamics of Vibrations II	Computational Fluid Dynamics		
					Mechanics of Materials II	Electrical and Electronic Engineering	Machine Design		
					Mechanism and Kinematics	Mechanical System Control	Fluid Machinery		
					Control Engineering II	Manufacturing System	Internal Combustion Engines		
					Instrumentation Engineering	Machine Elements Design II	Steam Power		
					Machine Elements Design I	Reliability Engineering	Radiation Engineering		
					Systems Engineering	Compressible Fluid Dynamics	Nuclear Engineering		
					Transportation	Basic Chemical Kinetics			
						Natural-Energy Utilization Engineering			
	Developing the ability of solving the technological issues with flexible ideas and creativity.	Introductory Seminar for First-Year Students	Machine Shop Training (a)	Machine Shop Training (b)	Systems Engineering	Experiments in Mechanical Engineering I	Experiments in Mechanical Engineering II	Graduation Thesis	Graduation Thesis
				Computer Aided Design			Mechanical Engineering Design and Production		
							Internship		
Comprehensive Abilities	Cultivating abilities of communication and of internationally collecting information and releasing it	Introductory Seminar for First-Year Students	Basic English UsageII			Experiments in Mechanical Engineering I	Experiments in Mechanical Engineering II	Graduation Thesis	Graduation Thesis
		Basic English UsageI	Communication II	Technical English			Internship		
		CommunicationI	Communication II						
		Communication I							
		Basic language I							
		Basic language II							

Color code: Common subjects | Foundation Courses | Basic Specialized Subjects The first group | Basic Specialized Subjects The second group | Specialized Subjects

Symbol: Required subject | Compulsory elective subject | Free elective subject