For entrants in AY 2023

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 Material Processing

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 Material Processing".

The Program of Material Processing in Cluster 1 aims at nurturing engineers and researchers who, having a broader perspective on human-machine relations such as general machinery, automobiles, electrical machinery, information communication, heavy industry, chemical industry, etc., energy, and environmental issues, are able to assume cutting-edge design and development roles in production engineering. In order for students to develop their perspectives in other related fields, while also gaining in-depth expertise, the program will be run not only by specialists from the closely-related Materials and Processing Program, but also by specialists from the other three programs in Cluster 1, as well as by highly-skilled technical personnel from the Phoenix Workshop.

In particular, this program helps students acquire basic knowledge as mechanical engineers through the learning of basic mechanical subjects, drafting and design, and machine shop training at the Phoenix Workshop. Also, this program offers such materials-related specialized subjects as machine materials and materials science; specialized subjects related to the deformation and destruction of materials, such as material strength and elastic-plastic engineering; and specialized subjects that deal with the technology of forming processes, such as forming processes and machine processes. The program provides students with highly specialized education in the design, development, and use of functional materials, and in the principles of production and processing. 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. Around sixty percent of graduates from this program will advance 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 R&D, design, production engineering, and engineering marketing.

3. Academic Awards Policy (Goals of the Program and Policy for Awarding Degrees)

The Program of Material Processing develops professionals capable of taking action and displaying great humanity and rationality, who can contribute to the peace, development, and survival of humankind, and to the realization of

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

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

Search records of each student's learning status, prepared by tutors, are kept.

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.

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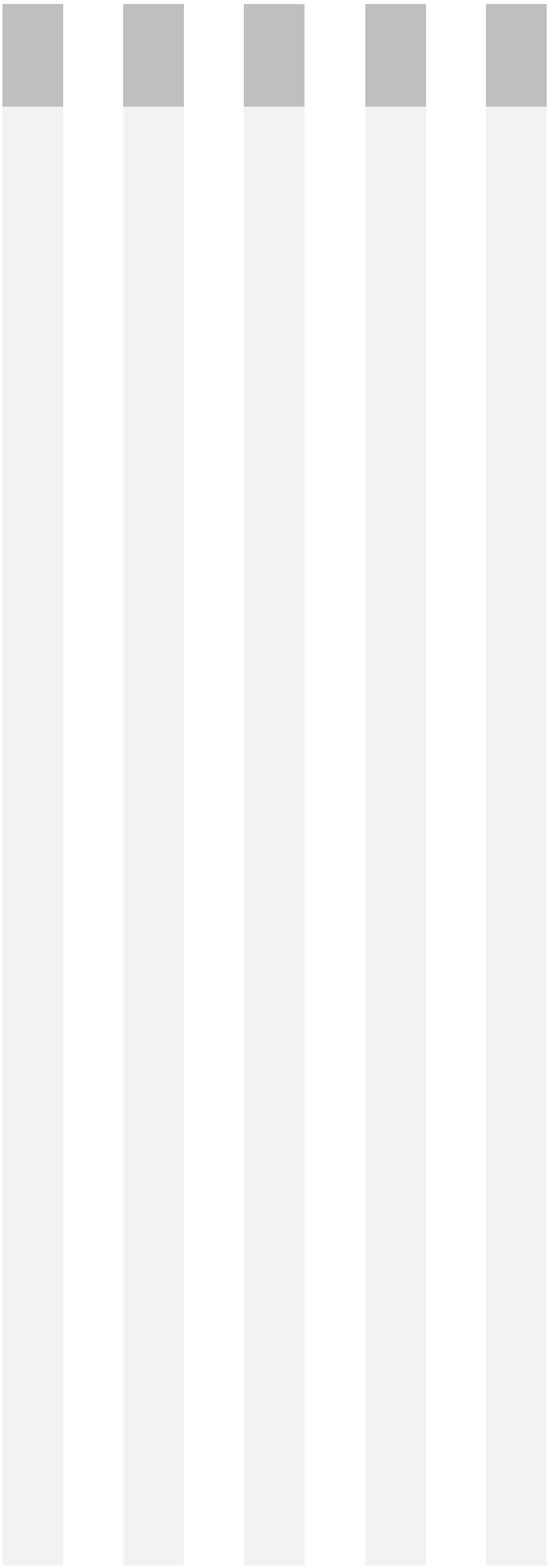
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