

## **Graduate School of Science and Technology Department of Mechanical Engineering**

### **Diploma Policy**

1. The master's program aims to train researchers to conduct research in fields related to Mechanical Aerospace Engineering; and to do so with a high level of expertise and knowledge of ethics. It also aims to create researchers who are highly professional and hold an international perspective. Successful candidates will have attended courses for a specified period and have acquired the necessary credits for the Department of Mechanical Engineering. Those who have passed a final examination on their master's degree thesis or specified research results will receive a master's degree (Master of Engineering).

A graduating student will acquire the following abilities:

- (1) Advanced expertise relating to the specialist field of Mechanical aerospace engineering.
  - (2) The expertise to conduct research in the field of Mechanical aerospace engineering.
  - (3) The ability to think logically and critically based on the high level of expertise, research skills and insight acquired and to discover, analyze and solve problems.
  - (4) The ability to be active with an international perspective based on the high level of specialist knowledge, research skills and knowledge of the liberal arts.
2. The doctoral program aims to train researchers who have excellent creativity in research and development; and play a central role in research and educational institutions. A doctoral degree (Doctor of Engineering) is accredited and awarded to those students in the department of mechanical engineering who have attended courses in the program for a specified period, who have acquired the necessary credits for the major to which they belong, had their doctoral dissertation recognized as having reached the standard required, passed a consequent examination, and an examination of general academic ability.

A graduating student will acquire the following abilities:

- (1) A highly sophisticated expertise according to research area in Mechanical Aerospace Engineering.
- (2) The ability to conduct research activities independently as a researcher in Mechanical Aerospace Engineering and related fields.
- (3) The ability to discover, analyze and solve issues based on flexible thinking, deep insight and the highly sophisticated level of expertise and ability to conduct research.
- (4) The ability to be active with an international perspective in fields requiring specialization based on the highly sophisticated level of expertise and research skills acquired.

### **Curriculum Policy**

1. In the master's program, the curriculum is based on courses in the liberal arts, basic academic ability and expertise in research gained in undergraduate study; and organized so as to realize the purpose set for the Department of Mechanical Engineering, through Specialist Courses, Courses in the liberal arts, and Research Guidance for science and engineering majors.
  - (1) In order to acquire more advanced specialist knowledge; special lectures, experiments and seminars are taught in a focused and effective manner.
  - (2) Courses in the liberal arts not only foster the purpose of attaining of a broad academic knowledge of the field of study, but also support, the attainment of better communication skills, a deeper understanding of ethics, and a greater sense of global literacies.
  - (3) Research Guidance helps the acquisition of the knowledge and experience necessary to conduct research through understanding of the literature and discussions with supervisors. Moreover, research guidance

helps students to develop such skills as: the ability to communicate research; to problem-solve; and to foster researchers, or similar advanced professionals, with an international perspective both at home and abroad.

2. The doctoral program in mechanical engineering is based on the advanced ability to expand on the knowledge about research and development that was acquired up to master's program level not only through Research Guidance but also Courses in the liberal arts. In addition, the curriculum is organized so as to realize the purpose set for science and engineering majors.
  - (1) Research Guidance helps students acquire the knowledge and experience necessary to conduct research through understanding of the literature and discussions with supervisors. Moreover, it helps students to develop such skills as: the ability to communicate research; to problem-solve; and to foster the ability of researchers, or similar advanced professionals, to become independent and active in the field, with an international perspective, both at home and abroad.
  - (2) Courses in the liberal arts support the high degree of academic knowledge and practical ability necessary for students to carry out research and development as independent researchers, or highly skilled professionals.

## Admissions Policy

The educational research philosophy of the university is based on the meritocratic tradition.

1. The master's degree program is based on the basic academic ability and wide range of liberal arts acquired in the bachelor's degree program. The aim is to acquire the necessary skills for those with the intent to discover and solve problems through research in their specialist field. The master's degree program seeks those who are willing to work in collaboration with a diverse range of people.
2. In the doctoral program, people who are willing to independently conduct creative research based on the expertise and research skills acquired by the master's program.
3. The university seeks those who are motivated to work with an international perspective in society, based on professional knowledge and education; and does so through a range of selection methods.

Evaluation methods for the types of abilities required for the admissions policy in differing entrance examinations:

(General entrance examination)

The university seeks those who have the professional knowledge, English ability, thinking skills and communication skills commensurate with the characteristics of the major; and those who have the determination to conduct independent research. In the master's program, candidates will be selected through an examination of documents submitted, written examinations, qualifications / results of certified tests and interview. In the doctoral program, candidates will be selected through an examination of documents submitted, written examinations. Candidates are further chosen on the basis of an oral examination of their master's thesis.

(Special selection for working people, foreign student entrance examination)

The university seeks those who have acquired experience in research institutes or companies, have a positive attitude toward learning, and/or have skills acquired abroad. In the master's program, candidates will be selected through an examination of documents submitted, written examinations, qualifications / results of certified tests, and interview. In the doctoral program, candidates will be selected through an examination of documents submitted, written examination, and an oral examination of their master's thesis.