

## Graduate School of Engineering

### Department of Mechanical Engineering

#### Diploma Policy

The master's program in the Department of Mechanical Engineering aims to train researchers and engineers with a high level of expertise and knowledge of ethics. It also aims to create researchers, engineers, or designers, 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 dissertation will receive a master's degree (Master of Engineering).

A graduating student will acquire the following abilities:

- (1) Advanced expertise relating to the specialist fields of mechanical engineering
- (2) 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 acquired in the Department of Mechanical Engineering, proactively.
- (3) 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 acquired in the Department of Mechanical Engineering.

The doctoral program in Mechanical Engineering 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 who have attended courses in the mechanical engineering 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) Advanced expertise relating to the specialist fields of mechanical engineering.
- (2) The ability to conduct research activities independently as a researcher in mechanical 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 acquired in the department of mechanical engineering and related fields.
- (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 in the Department of Mechanical Engineering and related fields.
- (5) The ability to conduct research activities based on the premise of adding new knowledge to the field of mechanical engineering and contributing to the progress of culture.

#### Curriculum Policy

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 Graduate School of Engineering, 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 advanced specialist knowledge in the field of mechanical engineering, 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) Master's research helps the acquisition of the knowledge and experience necessary to conduct research through understanding of the literature and discussions with supervisors. Moreover, master's research helps students to develop such skills as: the ability to communicate research; to problem-solve; and to foster researchers, engineers, or designers, with an international perspective both at home and abroad.

The doctoral program is based on the advanced ability to expand on the knowledge about research and development that was acquired in the field of mechanical engineering up to master's program level. The curriculum is organized to help students develop the ability to play a leading role in the carrying out of independent research.

- (1) Doctoral research helps the acquisition of the knowledge and experience necessary to conduct research in the field of mechanical engineering through understanding of the literature and discussions with supervisors. Moreover, doctoral research helps students to develop such skills as: the ability to communicate research; to problem-solve; and to foster independent researchers, engineers, or designers, with an international perspective both at home and abroad.
- (2) Courses in the liberal arts are available which support the high degree of academic knowledge and practical ability necessary for students to carry out research and development as independent researchers, engineers, or designers.

## Admissions Policy

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

The master's 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 the specialist field of mechanical engineering. The master's program seeks those who are willing to conduct research; become engineers, or designers who are able to work in collaboration with a diverse range of people.

The doctoral program is based on the advanced ability to expand on the knowledge about research and development in engineering that was acquired up to master's program level. The doctoral program seeks those who are willing to independently conduct creative research both at domestically and overseas.

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 in specialist subject and English; and through interview. In the doctoral program, candidates will be selected through an examination of documents submitted, written examinations in specialist subject and English. Candidates are further chosen on the basis of an oral examination of their master's thesis.

### (Recommendation entrance examination)

In the master's program, the university seeks those who have the professional knowledge, English ability, thinking and communication skills commensurate with the characteristics of each major, and those who have the determination to conduct independent research. Candidates for the master's program will be selected through an examination of documents submitted, essay and interview.

(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 in specialist subject and English; and interview. In the doctoral program, candidates will be selected through an examination of documents submitted, examinations specialist subject and English; and an oral examination of their master's thesis.