

## **Graduate School of Engineering**

### **Department of Electrical Engineering**

#### **Diploma Policy**

1. The master's program in the Department of Electrical Engineering aims to train researchers, engineers, or designers 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 Electrical Engineering. Those who have passed a final examination on their master's degree thesis 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 electrical engineering.
- (2) The ability to research in the fields of electrical engineering.
- (3) The ability to think logically and critically based on the high level of expertise, research skills, and insight acquired in the Department of Electrical Engineering; 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 acquired in the Department of Electrical Engineering.

2. The doctoral program in Electrical 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 department of electrical engineering 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) Highly sophisticated expertise relating to the specialist field of electrical engineering.
- (2) The ability to conduct research activities independently as a researcher in the specialist fields of electrical engineering
- (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 and add knowledge to the field research acquired in the Department of Electrical Engineering.
- (4) The ability to be active with an international perspective based on the research skills and highly sophisticated specialist knowledge acquired in the Department of Electrical Engineering.
- (5) The ability to conduct research activities based on the premise of adding new knowledge to the academic field and contributing to the progress of culture.

#### **Curriculum Policy**

1. In the master's program, the curriculum is based on acquiring a broader outlook and more in-depth knowledge on the content of courses in the liberal arts, basic academic ability, and expertise in research undertaken in undergraduate study. It is also organized, so as to realize the purpose set for the graduate school of engineering and the department of electrical engineering through specialist courses, courses in the liberal arts, and master's research.

- (1) In order to acquire more advanced specialist knowledge in the field of electrical 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.
  - (4) It is possible to take part in courses of other graduate schools or other majors; and even some postgraduate courses in other universities. In this way, the curriculum provides opportunities for interdisciplinary exchange.
2. The doctoral program is based on the advanced ability to expand on the knowledge about research and development in electrical engineering that was acquired up to master's program level. The doctoral program in the Graduate School of Engineering in tandem with the Department of Electrical Engineering, develops graduates with the high level of research skills necessary for the workplace.
- (1) Doctoral research helps the acquisition of the knowledge and experience necessary to conduct research in the field of electrical 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.

1. 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 for those with the intent to discover and solve problems through research in the specialist field of in the fields of electrical engineering such as energy systems, communication and information networks, smart systems and smart electronics, and data engineering; to conduct research, become engineers, or designers who are able to work in collaboration with a diverse range of people.
2. The doctoral program is based on the expertise in research acquired up to master's program level. The doctoral program seeks those who are willing to independently conduct creative research.
3. The department of electrical engineering seeks those who are motivated to use their specialist knowledge for the betterment of society from an international perspective.

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 (specialist subject), English proficiency test results by an external organization, and on interview. In the doctoral program, candidates will be selected through an examination of documents submitted, written examinations (specialist subject, foreign language). Candidates are further chosen on the basis of an oral examination of their master's thesis, etc.

(Recommendation entrance examination)

In the master's program the department of electrical engineering 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 will be selected through an examination of documents submitted, and interview.

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

The department of electrical engineering 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 (specialist subject / foreign language) and interview. In the doctoral program, candidates will be selected through an examination of documents submitted, written examinations (specialist subject / foreign language), and an oral examination of their master's thesis.