

## Graduate School of Advanced Engineering

### Diploma Policy

1. The Graduate School of Advanced Engineering master's program “enables students to conduct interdisciplinary research and education across majors, provide the research skills and academic knowledge necessary for work requiring diverse specialties; and develop researchers who can play creative and leadership roles in their workplace.” The Graduate School of Advanced Engineering master's program grants credits and awards a master's degree (Master of Engineering) to those who have attended courses in the program for a specified period, who have the requisite knowledge and skills determined by their major, and have passed the master's thesis examination and final exam.

A graduating student will acquire the following abilities:

- (1) Ability to effectively acquire the high level of expertise and skills as well as high ethical standards required for controlling research and development
- (2) Ability to contribute to society by carrying out and leading original research and development in the specialized fields of each major.
- (3) Ability to discover, analyze and solve problems in the specialized fields of research and development, based on the advanced level of expertise in conducting research and the knowledge of liberal arts.
- (4) Ability to become an active member of the international research community, based on the advanced level of expertise in conducting research and the knowledge of liberal arts.
- (5) Ability to independently evaluate science and technology from the perspective of the interdependence of human beings, society and the global environment, based on the advanced level of expertise in conducting research and the knowledge of liberal arts.

2. The doctoral program aims for students “to acquire the research skills and rich academic knowledge necessary to engage in highly specialist work as a researcher; and to foster people who can conduct research activities independently”. The award of doctoral degree (Doctor of Engineering) is accredited and awarded to those who have attended courses in the program for a specified period, who have acquired the necessary credits for each major, 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) Ability to effectively acquire the extremely sophisticated level of expertise and skills as well as high ethical standards relating to the highly specialized field of the major to which you belong.
- (2) Ability to contribute to society by carrying out and leading independent and original research and development in the highly specialized field of the major to which you belong.
- (3) Ability to discover, analyze and solve problems in the highly specialized fields of research and development, based on flexible thinking and deep insight, as well as the extremely advanced level of expertise in conducting research and the knowledge of liberal arts.
- (4) Ability to become an active member of the international research community and to explore cutting-edge research, based on the extremely advanced level of expertise in conducting research and the knowledge of liberal arts.

### Curriculum Policy

1. The master's program curriculum is arranged for advanced courses of specialized subjects, courses in the liberal arts, and research guidance, based on the undergraduate study. The program “cross-disciplinary research and education that transcends the boundaries of majors, acquire the research skills and academic knowledge

necessary for work that requires diverse expertise, and develop human resources who can play creative and leadership roles.”

- (1) To effectively acquire the higher level of expertise and diverse skills required to work, courses of specialized subjects are mainly taught intensively with a variety of special lectures on advanced science and technologies, experiments and seminars are taught in a focused and effective manner.
  - (2) Courses in the liberal arts foster the attainment: of a broad academic knowledge of the field of study, better communication skills, a deeper understanding of ethics, and a greater sense of global literacies.
  - (3) Research guidance helps students acquire the knowledge and experience necessary to conduct research through understanding the domestic and international literature; and discussions with supervisors. Students will acquire the diverse expertise and research skills to analyze, evaluate and communicate research; necessary for the workplace. Thereby, helping students become members of not only the domestic but also the international research community.
2. The Graduate School of Advanced Engineering doctoral program “will conduct interdisciplinary research and education across majors, acquire the research skills and academic knowledge necessary for work requiring specialties, and develop researchers who can play creative and leadership roles in their workplace.” Namely, research guidance and courses in the liberal arts, which are based on the research gained in master’s study.
- (1) Research guidance helps students acquire the knowledge and experience necessary to conduct research through an understanding of the domestic and international literature and discussions with supervisors. Students will acquire the high level of research skills to analyze, evaluate and communicate research, necessary for the workplace. Thereby, helping students become independently active members of not only the domestic but also the international research community.
  - (2) Courses in the liberal arts support the high degree of academic knowledge, high ethical standards and practical ability necessary for students to carry out research and development as independent researchers or highly skilled professionals.

## Admissions Policy

The education and research philosophy is realized by “creating interdisciplinary science and technology based on new perspectives that are not captured by traditional thinking, in the field of advanced, specialist and integrated academic fields”.

1. The master's program is based on the basic academic skills acquired in the bachelor's program and a wide range of liberal arts, the ability necessary for research motivated persons, researchers or advanced professionals to find and solve their own problems beyond the boundaries of the field of study. People who are aiming to acquire knowledge and who are willing to conduct research in cooperation 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 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 admissions in differing entrance examinations:

(General entrance examination)

The university seeks those who have 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, a written examination, qualifications held, and interview. In the doctoral program, candidates will be selected through

an examination of documents submitted, a written examination. Candidates are further chosen on the basis of an oral examination of their master's thesis.

(Recommendation entrance examination)

In the master's program, students who: have 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 beyond the scope of specialization; 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, students will be selected through an examination of documents submitted, written examination and qualifications / results of officially recognized qualification and through interview. In the doctoral program, students will be selected through an examination of documents submitted, written examinations, and an oral examination of their master's thesis / research plans.