

Graduate School of Engineering

Department of Industrial Chemistry

Diploma Policy

1. The master's program in the Department of Industrial Chemistry aims to train researchers and technicians 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 Industrial Chemistry. 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 field of industrial chemistry.
- (2) The ability to conduct research in the field of industrial chemistry.
- (3) The ability to think logically and critically based on the high level of expertise, research skills and insight acquired in the Department of Industrial Chemistry; 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 Industrial Chemistry.

2. The doctoral program in Industrial Chemistry 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 Industrial Chemistry 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 industrial chemistry.
- (2) The ability to conduct research activities independently as a researcher in the field of industrial chemistry.
- (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 Industrial Chemistry.
- (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 Industrial Chemistry.
- (5) The ability to conduct research activities based on the premise of contributing to cultural progress and adding new knowledge and to the field of industrial chemistry.

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 graduate school of engineering and the department of industrial chemistry, 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 industrial chemistry, special lectures 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 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, technicians, or designers in the field of industrial chemistry, with an international perspective both at home and abroad.
2. The doctoral program is based on the advanced ability to expand on the knowledge about research and development in industrial chemistry that was acquired up to master's program level. The doctoral program develops graduates with the high level of research skills in industrial chemistry necessary for the workplace.
- (1) Doctoral research helps the acquisition the knowledge and experience necessary to conduct research in the field of industrial chemistry 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 or technicians 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 conduct 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 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 industrial chemistry. The master's degree program seeks those who are willing to conduct research or become technicians, working 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 university 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 interview. In the doctoral program, candidates will be selected through an examination of documents submitted, written examinations (specialist subject, foreign language). Candidates are further selected 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 their 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 university seeks those who have acquired experience in research institutes or companies, have a positive attitude toward learning, and/or have knowledge 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.