

Graduate School of Science and Technology
Department of Mathematics

Diploma Policy

1. The master's program in the Department of Mathematics aims to train researchers and technicians with a high level of expertise and sense of ethics. It also aims to create researchers who are highly professional and hold an international perspective. Successful candidates will have attended school for a specified period and acquired the necessary credits for the Department of Mathematics. Furthermore, those who have passed a final examination on their master's thesis will receive a master's degree (Master of Science).

A graduating student will acquire the following abilities:

- (1) Advanced knowledge related to the area of specialty within the Department of Mathematics.
- (2) The skills to conduct research in the area of specialty within the Department of Mathematics.
- (3) The ability to think logically and critically and to discover, analyze and solve problems based on high level of expertise, research skills and insight acquired in the Department of Mathematics.
- (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 Mathematics.

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 Science) is accredited and awarded to those who have attended courses in the program for a specified period, acquired the necessary credits for the Department of Mathematics, had their doctoral dissertation been 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 related to the area of specialty within the Department of Mathematics.
- (2) The ability to conduct research activities independently as a researcher in fields related to the Department of Mathematics.
- (3) The ability to discover, analyze and solve problems based on flexible thinking, deep insight and the highly sophisticated level of expertise and ability to conduct research acquired in the Department of Mathematics.
- (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 Mathematics.

Curriculum Policy

1. In the master's program, the curriculum is based on courses in the liberal arts, basic academic abilities and expertise in research gained through undergraduate study; and organized for researching mathematics, which is positioned as the foundation of science. In addition, the curriculum fosters highly creative personnel with high cognitive ability that can contribute to the development of society through research guidance and courses in liberal arts.
 - (1) Special lecture and seminars are taught in a focused and effective manner in order to acquire advanced specialist knowledge.
 - (2) Courses in the liberal arts foster the attaining of a broad academic knowledge of the field of study, as well as support the attainment of better communication skills, a deeper understanding of ethics and a greater sense of global literacy.
 - (3) Research guidance helps students acquire the knowledge and experience necessary to conduct research through reviewing the literature and discussions with supervisors. Moreover, research guidance helps students to develop such skills as: the ability to communicate research at workshops; to problem-solve; and to cultivate researchers - or highly skilled professionals- with an international perspective both domestically and abroad.

2. In the doctoral program, the curriculum is founded on the basic academic ability gained up until the master's program for researching mathematics, which is positioned as the foundation of science. In addition, the curriculum fosters highly creative personnel with high cognitive ability that can contribute to the development of society through research guidance and courses in liberal arts.
 - (1) Research guidance helps students acquire the knowledge and experience necessary to conduct research through reviewing literature and discussions with supervisors. Moreover, it helps students develop such skills as: the ability to communicate research at workshops; 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 domestically and abroad.
 - (2) Courses in liberal arts are available which support the acquisition of high degree of academic knowledge and practical abilities necessary for students to carry out research and development as independent researchers or highly skilled professionals.

Admissions Policy

Under the educational research philosophy of the university based on the meritocratic tradition, the university seeks the following person through a range of selection methods.

1. In the master's degree program, one who is willing to discover and solve problems in their fields, one who intends to acquire specialized skills required as a researcher or a professional, one who

is willing to conduct research in collaboration with a diverse range of people, based on the basic academic ability and wide range of liberal arts acquired in the bachelor's degree program.

2. In the doctoral program, one who is willing to independently conduct creative research based on the expertise in research acquired up to the master's program level.
3. One who is motivated to work with an international perspective in society, based on professional knowledge and education.

Evaluation methods and the types of abilities required for admission in differing entrance examinations:

(General entrance examination)

The university seeks those who have professional knowledge, English ability, thinking 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, students will be selected through an examination of submitted documents, a written examination, qualifications / results of certified tests, and interview. In the doctoral program, students will be selected through an examination of submitted documents, a written examination, and 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, who 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 submitted documents, a written examination, qualifications / results of certified tests, and interview. In the doctoral program, students will be selected through an examination of submitted documents, a written examination, and an oral examination of their master's thesis.