

Graduate School of Science
Department of Applied Physics

Diploma Policy

1. The master's program in the Department of Applied Physics 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 Applied Physics. 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) The ability to solve issues related with fundamental and applied physics. Solution is given through logical and critical manner of reasoning based on the high level of technical knowledge and skills as well as cultural literacy.
 - (2) The ability to influence and guide society to show the relevance of fundamental and applied physics. A high level of cultural literacy and a strong sense of ethics will support to lead society in general.
 - (3) The ability to communicate with people based on international perspectives. This ability will help to deal with the issues related to one's field of specialization.
2. The doctoral program aims to train researchers who have excellent creativity in research and development to 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 Applied Physics, had their doctoral dissertation been recognized as having reached the required standard, passed a consequent examination and an examination of general academic ability.

A graduating student will acquire the following abilities:

- (1) The ability to solve issues related with fundamental and applied physics, and to create innovative outcomes to society in general. The issues are raised and analyzed independently based on the high level of technical knowledge and skills as an independent researcher. With the raised issue, one would be expected to lead and train researchers/technicians in the same professional fields
- (2) The ability to influence and guide society to provide the fruits of fundamental and applied physics. Communication skills confluent with the strong sense of ethics will help to objectively account for science and technology to society in general. With leadership as a professional scientist, the ability should be used to realize a sustainable society, and/or to build innovative industries.
- (3) The ability to communicate with people based on international perspective. This ability will help to deal with the global issues related to one's field of specialization.

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 that

major, through Specialist Courses, Courses in the liberal arts, and Research Guidance.

- (1) In order to acquire more advanced specialist knowledge, special lectures, experiments and seminars are taught in a focused and effective manner.
 - (2) Courses in the liberal arts not only foster the attainment 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. With this aim, the department offers a wide range of classes by experts from other organizations in order to develop perspectives based on interdisciplinary fields.
 - (3) Research guidance helps students acquire the knowledge and experience necessary to conduct research through an understanding of the literature and discussions with supervisors. Moreover, Research Guidance helps students to develop such skills as conducting presentations of research and academic papers at domestic and foreign academic societies. In addition, students will be guided to increase their ability to express themselves effectively, to acquire a mastery of both research and development skills and problem-solving skills. Students will also be given guidance on becoming active as a researcher or highly skilled professional with an international perspective, either at home or abroad. A student writes the thesis based on the study for two years under the guidance of the thesis supervisor.
2. The doctoral program is based on the advanced ability to expand on the knowledge about research and development that was acquired up to master's program level. The curriculum is organized on the premise of achieving the purpose set for that major, through Research Guidance and Courses in the liberal arts.

- (1) Research guidance helps students acquire the knowledge and experience necessary to conduct research through an understanding of the literature and discussions with supervisors. Moreover, Research Guidance helps students to develop such skills as how to conduct presentations of research and academic papers at domestic and foreign academic societies. In addition, students will be guided to increase their ability to express themselves effectively, and to acquire a mastery of both research and development skills and problem-solving skills. Students will be given guidance on how to start becoming active as a researcher or highly skilled professional in their field of study, either at home or abroad.
- (2) Courses in the liberal arts not only foster the training of future personnel involved in researchers and development, but also support, the attainment of better communication skills, a deeper understanding of ethics, and a greater sense of internationality. In order to develop an interdisciplinary perspective, wide ranges of classes are available from a variety of experts.

Admissions Policy

The department recognizes innovative academic fields in physics as applied physics. The department provides education and research opportunities in applied physics that meet social needs for innovations. With this aim, the department seeks

1. for the master's degree program, those who have acquired the basic academic ability and a wide range of liberal arts in their bachelor's degree program, those who aim to break new ground in the field of applied physics, and those who aim to become researchers, engineers or teachers,
2. for the doctoral program, based on the research skills acquired up to master's program, those who aspire to be

a researcher with the ability to conduct creative research in fundamental and/or applied physics, those who aspire to contribute to the society through research, and those who are ready to be an active professional in any fields with an international perspective.

The following methods of admission are available:

The expected ability of candidates and the method of its evaluation in each admission type:

(Admission based on general entrance examination)

For the master's program, the university seeks those who have acquired a level of knowledge in physics and English skills that can be grown up to fundamental physics research and/or advanced applications. Candidates will be tested through a submitted document, their ability with foreign language(s), and an oral examination of scholarly aptitude. In the doctoral program, candidates will be tested through a submitted document, and an interview of their master's thesis.

(Admission based on recommendation)

For the master's program the university seeks those who aim to be independent researchers in physics. For this purpose, candidates must have the professional knowledge and logical reasoning in physics. Communication skills including English are also required. Candidates will be tested based on a submitted document as well as an interview.

(Special admission for working people, and students graduated from non-Japanese institutes)

The university seeks those who have acquired the basics of physics in their experience in research institutes, companies, or foreign universities. For the master's program, candidates will be tested through a submitted document, their ability with foreign language(s), and an oral examination of scholarly aptitude. For the doctoral program, candidates will be tested through a submitted document, and an oral examination of their master's thesis. Note that the special admission for working people is conducted only for the doctoral program.