

## Graduate School of Natural Science and Technology, Doctor's Course: Diploma Policy

The doctor's degree is awarded to students who have acquired the abilities to become internationally active researchers or advanced engineers. In other words, doctor's degree is awarded to those who have mastered the most advanced academic knowledge in their specialization, who have knowledge and skills in fields related to their field of specialization, who have acquired the ability to independently identify and solve problems related to their field of specialization. The doctoral dissertation, which summarizes the results of their own research, should be rich in academic significance.

## Graduate School of Natural Science and Technology, Doctor's Course: Curriculum Policy.

In the Doctor's Course of the Graduate School of Natural Science and Technology, five divisions are designed to nurture highly creative and independent international researchers or engineers by acquisition of cutting-edge academic knowledge in specialized fields and fostering ability to independently identify and solve problems related to specialized fields, as stated in the Diploma Policy. The divisions are Mathematics and Physics, Earth, Life and Molecular Sciences, Interdisciplinary Science, Industrial Innovation Sciences, and Applied Chemistry. Students are provided with systematic and sequential education in specialized fields through course planning and guidance by supervisor and co-supervisor.

In addition, in order to enhance and improve graduate school education, we are continuously working to improve our educational methods, such as enhancement lesson plans and FD activities, mainly through the Academic Affairs Committee.

### **【Acquisition of logical problem-solving skills】**

For learning leading-edge knowledge and skills deeply in academically specialized fields, students are assigned seminars in the education and research field to which they belong as compulsory subjects from the first year. In order to broaden academic base and acquire applied ability and perspective that allow a broad view of human society, in addition to the courses offered by the students' own division, the courses offered by other divisions (including other graduate schools or graduate schools in other universities) can be included in the requirements for completion. By taking courses according to the course method determined for each division or course, we expect students to acquire logical problem-solving skills.

### **【Fostering the ability to independently identify and solve problems related to the field of specialization】**

In order to recognize and solve problems faced by modern international society, science and technology, students will conduct scientific research which they have planned under the guidance of their supervisor, and give presentation at domestic and/or international conferences and write (an) academic paper(s) to return their achievement results to the society. Throughout

these activities, this course aims to cultivate the ability to independently identify and solve problems related to their specialized fields. In addition, it is compulsory that the guidance by supervisor and co-supervisor for students' research plan is formulated annually as research guidance documents, so that mutual checking can be possible within the school.

In addition, the Graduate School of Natural Science and Technology has established a system of cross-school study and advanced study (cross-school Flex BMD course) in order to respond to various demands of study and is also working to provide credits for practical study such as internships and conference presentations.

Credit for each course is awarded strictly based on a combination of various factors, including examinations, research reports, presentations and reports, attendance, and class attitude. In addition to earning the required credits for coursework and research work determined for each division or course, students are judged to have passed also by the examination of their dissertation, which based on the evaluation standards of the Degree Examination Committee, and the final examination.

### **Graduate School of Natural Science and Technology, Doctor's Course: Admission Policy**

#### Basic Policy for Selection of Applicants

We accept students from both domestically and internationally who have acquired advanced knowledge and skills in their specialized fields, as well as basic academic skills in fields other than their specialized fields and who can fuse those to make full use. In addition, we are looking for those who are motivated to make rapid progress in science and technology and to open up new academic fields by demonstrating abundant creativity, the ability to set original challenges, deep insight, and high communication skills. The entrance examination selection is made through document screening and oral examination to evaluate professional basic ability, problem-setting ability, and problem-solving ability. The selection is made based on the criteria and importance specified for each division or course and for each type of entrance examination (General Selection and Overseas Selection for International Students).

#### What we are looking for

Based on the objective of Okayama University, which is "constructing a new paradigm for the sustainable evolution of human society (constructing new paradigm as a fountainhead of knowledge)", we are seeking students with the following awareness and motivation:

1. Having an interest in the relationship between humans and nature, and a strong desire to contribute to local and international society
2. Are capable of mastering the fundamentals of their major field of study and having a strong sense of purpose to take on the challenge of advanced research fields
3. Having a strong desire to learn and who can think and act independently.
4. Are capable of demonstrating leadership in research and having a strong desire to play an

active role internationally.

5. Having an interest in fields other than their area of specialization and a desire to acquire a broad range of knowledge and perspectives.

#### Entrance Examination

The Doctor's Course of the Graduate School of Natural Science and Technology conducts the following entrance examinations to accept a diverse range of students.

##### (1) General Entrance Examination

A document screening and an oral examination are required. In the document screening, multiple faculty members check from various perspectives the expertise and career plans acquired by the time of application. In the oral examination, basic academic skills and the ability to set and solve problems are comprehensively evaluated.

##### (2) Overseas Selection for International Students

A document screening is required. In the document screening, multiple faculty members check from multiple perspectives the expertise acquired by the time of application, career plans, and the status of cross-cultural adaptation and financial status as a prerequisite for school attendance.

Table of the three components of academic ability

| Entrance examination classification           | Knowledge and skills |  | Ability to think, judge, and express oneself |                    | Attitude to learn by taking initiative and working with diverse people |                    |
|---|----------------------|--|--|--------------------|--|--------------------|
| General Entrance Examination                  | ◎                    | Document screening<br>Oral Examination | ○  | Oral Examination   | ☆  | Oral Examination   |
| Overseas Selection for International Students | ☆                    | Document Screening                     | ◎  | Document Screening | ○  | Document Screening |

(Note) ◎, ○, ☆ denote factors of special importance, importance, and overall judgment, respectively.