

Diploma Policy of School of Marine Resources and Environment

The School of Marine Resources and Environment awards a Bachelor of Marine Science degree to individuals who are committed to the conservation of the marine environment and the sustainable development and utilization of marine resources and energy. Recipients of this degree will have cultivated the ability to analyze various issues from a global perspective, think independently, and develop solutions. The qualities and abilities that students are expected to acquire are as follows:

(1) Expert knowledge

A comprehensive foundation in marine science spanning from the atmosphere to the sub-seafloor, along with specialized knowledge in the development and utilization of marine resources and energy, conservation and restoration of the marine environment, and environmental impact assessment

(2) Rich internationality and wide-ranging education

Communication and presentation skills, including proficiency in languages, as well as a high level of international and cultural literacy

(3) Ability to think and judge by oneself

The ability to logically analyze information from various sources and make sound judgments with a strong sense of ethics

(4) Practical skills that can be applied in the field

The capacity to effectively utilize knowledge, data, and information technology in diverse situations, integrating and applying them in real-world marine environments

Undergraduate Course of Ocean Sciences

Undergraduate Course of Marine Resources and Energy

1. Graduation and degree conferment policy

The Undergraduate Course of Ocean Sciences awards a Bachelor of Marine Science degree to individuals with a keen interest in the marine environment and the organisms that inhabit it. Degree recipients will have developed the knowledge and skills necessary to analyze and address related issues through a broad educational foundation and technical expertise.

2. Learning outcomes and achievement objectives

(1) Expert knowledge

In addition to a broad foundation in ocean-related basic sciences, students will acquire specialized knowledge in oceanography, marine biology, conservation of the marine environment, restoration, and environmental impact assessment.

(2) Rich internationality and wide-ranging education

Students will acquire strong communication and presentation skills, including proficiency in foreign languages, along with a high level of international and cultural literacy.

(3) Ability to think and judge by oneself

Students will acquire the ability to logically analyze various sources of information and make well-reasoned decisions with a strong ethical foundation.

(4) Practical skills that can be applied in the field

Students will integrate the specialized knowledge, information technology, and skills acquired through experiments, practical training, and graduation research and develop the ability to independently and proactively analyze, solve, and act on various field-related issues from a broad perspective.

1. Graduation and degree conferment policy

The Undergraduate Course of Marine Resources and Energy confers a Bachelor of Marine Science degree to individuals who demonstrate an interest in the sustainable development and utilization of marine resources and energy and who have cultivated the knowledge and technical skills necessary to think critically and resolve related challenges.

2. Learning outcomes and achievement objectives

(1) Expert knowledge

Students will acquire expertise in a broad range of fundamental ocean sciences, the development and utilization of marine resources and renewable energy, as well as the conservation, restoration, and impact assessment of the marine environment.

(2) Rich internationality and wide-ranging education

Students will acquire strong communication and presentation skills, including proficiency in foreign languages, along with a high level of international and cultural literacy.

(3) Ability to think and judge by oneself

Students will acquire the ability to logically analyze various sources of information and make well-reasoned decisions with a strong ethical foundation.

(4) Practical skills that can be applied in the field

Students will integrate the specialized knowledge, information technology, and skills acquired through experiments, practical training, and graduation research and develop the ability to independently and proactively analyze, solve, and act on various field-related issues from a broad perspective.

Curriculum Policy of School of Marine Resources and Environment

1. Policy for curriculum organization

The School of Marine Resources and Environment systematically structures its curriculum to cultivate the four core competencies outlined in section 2. The curriculum consists of "General Courses," "Introductory Specialized Courses," "Foundational Specialized Courses," "Specialized Courses," and "Global and Career-Related Courses."

2. Policy on educational content and implementation methods

The curriculum is organized into the following course categories: "General Courses," "Introductory Specialized Courses," "Foundational Specialized Courses," "Specialized Courses," and "Global and Career-Related Courses." These courses are delivered through lectures, exercises, experiments, and practical training.

(1) Expert knowledge

To provide students with a comprehensive foundation in marine science—spanning from atmospheric studies to the seafloor—as well as specialized knowledge in marine resource and energy development, environmental conservation, restoration, and impact assessment, foundational Specialized Courses are offered from the first to third year, while specialized courses are primarily conducted in the second and third years. To ensure students develop fundamental interdisciplinary knowledge relevant to marine studies across both departments, a substantial portion of the foundational Specialized Courses consists of subjects shared by the two departments.

(2) Rich internationality and wide-ranging education

In order to help students acquire communication and presentation skills, including language proficiency, as well as a high level of international and cultural awareness, and to contribute to the development of problem-solving skills, We offer "General Courses" alongside "Global Career-Related Courses," which are associated with English proficiency exams, study abroad, and career development. To provide students with foundational knowledge in natural sciences, mathematical sciences, humanities, and social sciences, as well as basic information technology, which serve as the basis for specialized studies, "Introductory Specialized Courses" and "Foundational Specialized Courses" are mainly offered in the first and second years.

(3) Ability to think and judge by oneself

To equip students with the ability to logically analyze various information and make accurate judgments, "Introductory Specialized Courses" and "Specialized Courses" include exercises, experiments, practical training, fourth-year seminars, and graduation theses. Furthermore, to develop students' ability to make ethical judgments, education related to research ethics is incorporated as part of the fourth-year seminars.

(4) Practical skills that can be applied in the field

To ensure students can effectively utilize knowledge, data, and information technology in various situations and apply these skills in the field of marine science, they will learn the fundamentals through practical training in the second and third years. In the fourth year, seminars and graduation theses will be conducted to develop their ability to identify issues, formulate and execute plans for resolution, and verify the outcomes. Additionally, to facilitate students' smooth integration into international society and industry, "Global Career-Related Courses," which are linked to English proficiency exams, study abroad, and career development, are offered as requirements for academic progression.

3. Policy regarding evaluation method of learning outcomes

In all courses, students' learning outcomes and achievement of educational goals are rigorously assessed through examinations, reports, presentations, and other evaluative measures.

Undergraduate Course of Ocean Sciences

Undergraduate Course of Marine Resources and Energy

1. Policy for curriculum organization

The Undergraduate Course of Ocean Sciences systematically organizes "General Courses," "Introductory Specialized Courses," "Foundational Specialized Courses," "Specialized Courses," and "Global Career-Related Courses" to ensure that students acquire the four core competencies outlined in Section 2. Additionally, to promote interdisciplinary learning within specialized subjects, "Specialized Courses" cover topics in marine science, marine biology, and related interdisciplinary fields.

2. Policy on educational content and implementation methods

Course categories include "General Courses," "Introductory Specialized Courses," "Foundational Specialized Courses," "Specialized Courses," and "Global Career-Related Courses," with instruction delivered through lectures, exercises, experiments, and practical training.

(1) Expert knowledge

Beyond fundamental ocean-related sciences, the program provides students with both basic and specialized knowledge in oceanography, marine biology, and the conservation, restoration, and impact assessment of the marine environment. Foundational specialized courses are offered from the first to third years, while specialized courses are mainly conducted in the second and third years.

(2) Rich internationality and wide-ranging education

"General Courses" are offered to develop students' communication and presentation skills, including language proficiency, and foster a high level of international and cultural awareness. To build a foundation for learning "Specialized Courses," "Introductory Specialized Courses" are conducted in the first and second years to provide students with essential knowledge in natural sciences, mathematical sciences, and basic information technology. To prepare students for addressing global marine challenges, some "Basic Specialized Courses" in the second year and some "Specialized Courses" in the second and third years are taught in English.

(3) Ability to think and judge by oneself

To equip students with the ability to logically analyze various information and make accurate judgments, "Introductory Specialized Courses" and "Specialized Courses" include exercises, experiments, practical training, fourth-year seminars, and graduation theses. Furthermore, to develop students' ability to make ethical judgments, education related to research ethics is incorporated as part of the fourth-year seminars.

(4) Practical skills that can be applied in the field

Through lectures, exercises, experiments, and practical training in "General Courses," "Introductory Specialized Courses," "Basic Specialized Courses," and "Specialized Courses," students integrate specialized knowledge, information technology, and skills. This fosters the ability to proactively and practically explore, resolve, and act upon various issues in the field from a broad perspective. In the second and third years, students acquire foundational knowledge, including practical training. In the fourth year, they engage in seminars and graduation theses, cultivating the ability to identify problems, plan pathways to solutions, implement those plans, and evaluate their outcomes. Additionally, to facilitate students' smooth integration into international society and industry, "Global Career-Related Courses," which are linked to English proficiency exams, study abroad, and career development, are offered as

1. Policy for curriculum organization

The Undergraduate Course of Ocean Sciences systematically organizes "General Courses," "Introductory Specialized Courses," "Foundational Specialized Courses," "Specialized Courses," and "Global Career-Related Courses" to ensure that students acquire the four core competencies outlined in Section 2. Furthermore, to promote interdisciplinary learning within specialized courses, the curriculum incorporates a broad range of content related to the sustainable development and utilization of marine resources and energy.

2. Policy on educational content and implementation methods

Course categories include "General Courses," "Introductory Specialized Courses," "Foundational Specialized Courses," "Specialized Courses," and "Global Career-Related Courses," with instruction delivered through lectures, exercises, experiments, and practical training.

(1) Expert knowledge

To develop both fundamental and specialized knowledge across a wide range of ocean-related sciences, including the development and utilization of marine resources and renewable energy, as well as marine environmental conservation, restoration, and impact assessment, "Foundational Specialized Courses" are offered in the first through third years, while "Specialized Courses" are primarily conducted in the second and third years.

(2) Rich internationality and wide-ranging education

"General Courses" are offered to develop students' communication and presentation skills, including language proficiency, and foster a high level of international and cultural awareness. To build a foundation for learning "Specialized Courses," "Introductory Specialized Courses" are conducted in the first and second years to provide students with essential knowledge in natural sciences, mathematical sciences, and basic information technology. To prepare students for addressing global marine challenges, some "Basic Specialized Courses" in the second year and some "Specialized Courses" in the second and third years are taught in English.

(3) Ability to think and judge by oneself

To equip students with the ability to logically analyze various information and make accurate judgments, "Introductory Specialized Courses" and "Specialized Courses" include exercises, experiments, practical training, fourth-year seminars, and graduation theses. Furthermore, to develop students' ability to make ethical judgments, education related to research ethics is incorporated as part of the fourth-year seminars.

(4) Practical skills that can be applied in the field

Through lectures, exercises, experiments, and practical training in "General Courses," "Introductory Specialized Courses," "Basic Specialized Courses," and "Specialized Courses," students integrate specialized knowledge, information technology, and skills. This fosters the ability to proactively and practically explore, resolve, and act upon various issues in the field from a broad perspective. In the second and third years, students acquire foundational knowledge, including practical training. In the fourth year, they engage in seminars and graduation theses, cultivating the ability to identify problems, plan pathways to solutions, implement those plans, and evaluate their outcomes. Additionally, to facilitate students' smooth integration into international society and industry, "Global Career-Related Courses," which are linked to English proficiency exams, study abroad, and career development, are offered as requirements for academic progression.

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In all courses, students' learning outcomes and achievement of educational goals are rigorously assessed through examinations, reports, presentations, and other evaluative measures.

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