M2M 2027 Call for Applications

Mauka to Makai (M2M): Introduction to Oceanography

1. Purpose

The Uehiro Laboratory for Oceanography conducts research and education based on oceanography, aiming to foster human resources capable of contributing globally to the realization of a sustainable society through a comprehensive understanding and conservation of the Earth's environment under global warming, as well as education focused on practical training and international exchange.

As part of this effort, we send undergraduate students to participate in field-based educational programs related to oceanography provided by the University of Hawai‘i at Mānoa. Through this program, participants are expected to interact with faculty and students from diverse backgrounds at the University of Hawai‘i, gain a deeper understanding of the tropical environment and culture of Hawai‘i—which differ greatly from those of Hokkaido—and acquire knowledge and skills that will enable them to contribute to solving various issues surrounding the marine environment.

This call is open to students who wish to participate in **Mauka to Makai (M2M): Introduction to Oceanography**, a two-week summer program conducted by the University of Hawai‘i at Mānoa.

2. Eligibility

Undergraduate students enrolled in the School of Fisheries Sciences, Hokkaido University, in the academic year 2027.

3. Program Schedule

Program: Mauka to Makai (M2M): Introduction to Oceanography
Dates: August 9-20, 2027
Duration: 2 weeks
Credits: 2 credits

[Important] The entrance examination for the Graduate School of Fisheries Sciences, Hokkaido University, is scheduled to be held in August 2027. Applicants planning to take the examination should be aware that the examination dates are highly likely to overlap with the program period. Even if such an overlap becomes apparent after selection, withdrawal after notification of selection will not, in principle, be permitted. Please apply only after fully understanding this condition.

4. Program Content

Mauka to Makai (M2M) reflects the traditional Hawaiian concept of the interconnectedness of nature and life from mauka (the mountains) to makai (the ocean). Through lectures, laboratory exercises, fieldwork, and service-learning, participants study oceanography from an interdisciplinary perspective, with an emphasis on connections with local communities.

The program covers a broad range of topics, including:

- Foundations of Oceanography
  Learn about the major fields of oceanography—including physical, chemical, biological, and geological oceanography—and how these components are interconnected.

- Marine Geology
  Study the basic geological processes that shape the ocean and seafloor, and observe Hawai‘i's unique geological environment through fieldwork.
- Marine Chemistry, Biology, and Ecology
  Learn about the key chemical and biological processes that shape coastal marine ecosystems through coral reef surveys involving snorkeling and plankton collection and observation at the Hawai‘i Institute of Marine Biology (HIMB).
- Physical Oceanography and Climate Change
  Learn about physical interactions between the ocean and atmosphere, natural climate variability such as El Niño and La Niña, and long-term climate change associated with human activities.
- Oceanographic Instruments and Field Observations
  After learning the measurement principles and operation of oceanographic instruments, conduct observations of water temperature, salinity, dissolved oxygen, and other parameters aboard the research vessel R/V Kaunānā.
- Basic Programming and Oceanographic Data Analysis
  Using data collected during the program, learn basic programming and methods for organizing, visualizing, and analyzing oceanographic and climate data.
- Hawaiian Watershed and Coastal Resource Management
  Through collaborative activities such as working in taro fields, learn how traditional Hawaiian resource management treats the land from the mountains to the ocean as an integrated whole, and how land use and human activities affect coastal environments.

5. Number of Participants

Up to **8 students** from Hokkaido University.

6. Prerequisites

Applicants must possess sufficient English proficiency to communicate effectively and actively participate in lectures, field activities, group work, and discussions conducted in English. All information and instructions in Hawaii will be provided in English. Applicants must be committed to fulfilling their responsibilities as exchange students, including submitting required reports, website articles, and other assignments and be able to attend post-program reporting session. Applicants must understand that the program schedule may be subject to sudden changes due to local circumstances and be able to respond flexibly by following instructions from the University of Hawai‘i. Applicants must understand that the entire stay, including free time, forms part of the program. They must inform the faculty members in charge or other designated staff in advance of their destinations and planned activities, and consult them as needed.

The program includes outdoor and field activities, including coastal observations, snorkeling-related activities, and oceanographic sampling. Applicants should therefore be physically able and comfortable participating in such activities.

7. Financial Support

Travel expenses from Hakodate to Hawai‘i, local accommodation costs, and overseas travel insurance fees will be covered.

If a visa or other entry-related procedure is required, eligible costs associated with the procedure will also be covered.

8. Accommodation

Participants will stay at accommodation arranged for the program in Hawai‘i.

9. Application Procedure

Application Deadline: Dec 16 (Wed), 2026

Required Documents
Documents may be prepared in either English or Japanese.

Download all necessary forms from the announcement section (News) of the Uehiro Laboratory for Oceanography website.

1. Application Form
   [M2M_Application_Form _2027]
2. Academic Transcript
3. English proficiency test score (e.g., TOEFL or TOEIC) taken within the past two years, if available. Submitted scores will be used only as supplementary information regarding language proficiency.
4. Copy of residence status (e.g., residence card) – for non-Japanese nationals only.
5. Supervisor Confirmation Letter (required only for fourth-year students in AY 2027)

Submission Method

Documents 1–4:
Convert all documents into a single PDF file and send it by email to the address below.

File name:
[Student Number]_Firstname_Lastname_M2M_Application.pdf

Email: ulo(at)fish.hokudai.ac.jp

Email subject:
[Student Number]_Firstname_Lastname_M2M_Application

Documents 5: Convert the document into a PDF file and send it by email to the address below by supervisor

File name:
[Student Number]_Firstname_Lastname_M2M_Supervisor_confirmation.pdf

Email: ulo(at)fish.hokudai.ac.jp

Email subject:
[Student Number]_Firstname_Lastname_M2M_ Supervisor_confirmation

10. Screening and Notification of Results

Applicants will undergo a document review and an interview.

After the document review, selected applicants will be invited to an interview. Details regarding the interview schedule will be sent to the email address provided in the application form.

Only successful candidates will be notified by email.

Evaluation Criteria:

- Alignment of the applicant's motivation with the purpose of the M2M program
- Interest in oceanography and marine science
- English communication skills
- Motivation to participate actively in lectures, fieldwork, and international exchange
- Interpersonal and teamwork skills

11. Withdrawal Policy

In principle, withdrawal after notification of selection is not permitted.

Applicants should confirm and coordinate other important schedules, including regular examinations, internships, and job-hunting activities, before applying. In particular, applicants planning to take the entrance examination for the Graduate School of Fisheries Sciences, Hokkaido University, should be aware that the examination dates may overlap with the program period.

If a selected participant becomes unable to participate due to illness, injury, or other unavoidable circumstances, they should contact the organizers immediately.

12. Handling of Personal Information

Personal information included in the application materials will be strictly managed and used only for the following purposes, except when required by law:

(1) Screening and notification of selection results.
(2) Providing necessary information to travel agencies and related organizations for arranging flights, accommodation, and overseas travel insurance.
(3) Sharing necessary information with responsible faculty and staff for safety management during the program.
(4) Providing information to Hokkaido University, the Uehiro Foundation, and media organizations for public relations purposes. Affiliation, academic year, and name may be used for publicity.

13. Other Notes

Participants are expected to participate in all lectures, field activities, laboratory exercises, and other components of the M2M program.

After completing the program, participants must submit a report and may be asked to present their experiences and results at a debriefing session organized by the Uehiro Laboratory for Oceanography.

14. Contact Information

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