

Ocean excursion course for undergraduate students using research vessel

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The ocean, which covers more than 70% of Earth's surface, has the potential to change global environment. It is known as "Earth's final frontiers" because no more than 5% of the world ocean has been explored and lots of issues in marine science still remain uncertain. Giving a course of ocean excursion for undergraduate school students studying Earth and Planetary Sciences will increase their interests and promote their understanding on Earth Sciences. To conduct an ocean excursion course for undergraduate school students, however, is not so easy due to limitation in facilities, funds, and instruments as well as lack of experts in oceanographic field studies.

In Nagoya University, introductory ocean excursion course to study marine geochemistry have been opened for undergraduate students who belong to the department of earth and planetary sciences since 2002. The field observation using research vessel Seisui-maru (Mie University) is carried out at Ise Bay area every summer. The course have been successfully conducted by borrowing the vessel, which is usually used as the training ship for fisheries in Mie University, for four days without charge through the courtesy of Mie University.

In the course, students can acquire basic skills to study marine sciences, such as sampling seawater using CTD-RMS, sampling sediments using G. S. corer, analyzing CTD data set obtained during the cruise, measuring concentrations of the dissolved substances (major components, nutrients, and gases), presenting the results to others (master the oral presentation skills) and summarizing the results into reports. We will introduce our activities and present some results obtained during the course held in the summer of 2015.