

COURSE DETAIL

ISLAND ARCS

Country

Japan

Host Institution

Tohoku University

Program(s)

Engineering and Science

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Geography Environmental Studies Earth & Space Sciences

UCEAP Course Number

111

UCEAP Course Suffix**UCEAP Official Title**

ISLAND ARCS

UCEAP Transcript Title

ISLAND ARCS

UCEAP Quarter Units

3.00

UCEAP Semester Units

2.00

Course Description

This course presents basic concepts and information of plate tectonics and the tectonic history of the Asiatic continent and the Japanese islands, active faults and earthquakes, and volcanoes. The lectures include how past and recent environment influence human livelihood.

The course covers the following topics:

- Introduction of the course
- Basics of Plate tectonics
- Plate margin and Japan island arc
- Rock structure beneath surface
- Geology and natural resources
- History of earth and geological timescale
- Earthquake and active faults
- The Great East Japan earthquake
- Rheology of rocks and subduction zone earthquake cycles
- Volcanoes
- Advancement in geodynamics with space geodesy
- Advancement in geodynamics with InSAR and machine learning

Language(s) of Instruction

English

Host Institution Course Number

N/A

Host Institution Course Title

ISLAND ARCS

Host Institution Campus

Tohoku University

Host Institution Faculty

Host Institution Degree

Host Institution Department

JYPE

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