

Year	First semester 2026
Course	Evolution of Island Arcs and Their Environments
Day/Period	Tue.2Period
Credit(s)	2Credits
Instructor	KAZUAKI HORI
Eligible Participants	Not specified (For all grades)
Course code/number	
Main Subjects	
Course of Media Class	
Practical business	
Language Used in Course	English
Course Title	Evolution of Island Arcs and Their Environments
Purpose/Abstract	In this lecture course, students will be introduced to some of the basic concepts and knowledge of the Earth Sciences with a variety of approaches and perspectives to the study.
Goal	This course aims to understand the Earth from the perspectives of geology, paleontology, geography, mathematical geophysics, and others. This knowledge will help to think deeply about the problems of how natural hazards and changes in the Earth's environment affect the living world and human life.
Contents and progress schedule of the class	<p>Lectures will be given in the following topics:</p> <ol style="list-style-type: none"> 1. Geology of Japan for Sightseeing 2. Geology and Geodynamic Processes at Convergent Plate Boundaries 3. Subduction Zone and Deep Earthquakes 4. Rheology of Rocks and Subduction Zone Earthquake Cycles 5. Evolution of Fluvial and Coastal Plains and Disaster 6. Earth's Life and Environmental History and Natural Resources 7. Paleoclimatology and Quaternary Climate Change 8. Estimation of Paleo and Future Marine Environments Based on Microfossils 9. History of Life on Earth 10. The Great East Japan Earthquake, Damages and Casualties 11. Tsunamis and Tsunami Sedimentology 12. Evaluating Japan's Seismic Hazards Using Geologic and Geomorphic Data 13. Human Geographies of Disaster Risk and Resilience
Grading	Attendance (50%) and submitted reports (50%)
Books required/referenced	No textbooks
Contents of preparation and review	Review
Study time for preparation and review	Four hours
How to contact and Google Classroom Code	E-mail: kazuaki.hori.b6@tohoku.ac.jp Class code for Google Classroom: jh62ve7u Class ID: VJ222S6
Remarks	
Last Update	

One-credit courses require 45 hours of study. In lecture and exercise-based classes, one credit consists of 15-30 hours of class time and 30-15 hours of preparation and review outside of class. In laboratory, practical skill classes, one credit consists of 30-45 hours of class time and 15-0 hours of preparation and review outside of class.