

Fundamentals of Earth Science II

Registration Code	0052521	Credits	2.0
Course Category	Sciences Basic		
Term (Semester) / Day / Period	G-II (1st year, Spring Semester) / Tue. / 5 (16:30~18:00)		
Instructor	HUMBLET Marc Andre		
Target Schools (Programs)	Sc(P·C·B)·En(P·C·Au)·Ag(B)		

●Objective of the Course

In the course “Fundamentals of Earth Science II” we examine the interactions between humanity and the Earth system. The Earth is a dynamic planet where the evolution of the environment and that of life are closely related. Human societies have been, and still are, profoundly influenced by climate change and catastrophic geologic events, such as volcanic eruptions and earthquakes. Entire civilizations have been decimated by droughts, and major cities have been destroyed by ground shaking, tsunamis or pyroclastic flows. Today the growing human population and its use of natural resources are affecting the environment on a global scale to an extent never attained before. Learning about the interactions between humanity and the Earth system is needed to use Earth’s limited natural resources in a sustainable manner, minimize the risks of natural hazards and envisage a safe future for us all.

●Course Prerequisites

This course has no prerequisite, but prior completion of “Fundamentals of Earth Science I” is recommended.

●Course Contents

1. Introduction
2. Volcanoes
3. Seismology I: Earthquakes
4. Seismology II: Reconstruction of Earth’s Interior
5. Biogeochemical cycles I: The Water Cycle
6. Biogeochemical cycles II: The Carbon Cycle
7. Climate I: Introduction to the Climate System
8. Climate II: Natural Variations
9. Climate III: Recent Global Change
10. Geological Resources

●Evaluation Methods

Two quizzes (multiple choice): 20% (10% each)

Mid-term exam: 40%

Final exam: 40%

Students will be graded following the five-step S-A-B-C-F grade evaluation system.

S: 90-100%, A: 80-89%, B: 70-79%, C:60-69%, F: 59-0%

A student who wishes to withdraw from the course needs to submit a Course Withdrawal Request Form by the end of May in order to receive an “Absent” grade. This deadline does not apply to students who drop the class part-way through for an exceptional reason (e.g. illness, accident).

NB: A review session will be organized once a week in addition to regular class time for students who wish to receive additional information about the course content.

Textbook	
Reference Book	Title:Understanding Earth Authors: John Grotzinger & Thomas H. Jordan Publisher: W. H. Freeman Issue year: 2014 (7 th edition) ISBN: 978-1464138744