| Fundamentals of Earth Science I | | | | |
|---------------------------------|--|---------|-----|--|
| Registration Code | 0061411 | Credits | 2.0 | |
| Course Category | Sciences Basic | | | |
| Term (Semester) / Day / Period | G-I (1st year, Fall Semester) / Mon. / 4 (14:45~16:15) | | | |
| Instructor | HUMBLET Marc Andre | | | |
| Target Schools (Programs) | $Sc(P \cdot C \cdot B) \cdot En(C \cdot Au) \cdot Ag(B)$ | | | |

• Goals and Objectives of the Course

The study of planet Earth embraces a wide range of topics, from the formation of rocks to the evolution of life, from continental drift to the study of earthquakes and volcanoes. In this course, fundamental concepts of earth science will be covered. Students will be introduced to plate tectonics, the fundamental theory underlying the geological processes which have shaped the environment in which we live and continue to modify the landscape, from the slow, progressive uplift of mountains to violent earthquakes and volcanic eruptions. Students will learn how the Earth recycles matter and how minerals and rocks form and are transformed; how the age of rocks and geological events can be determined, which is central to earth science; how the Earth's geography has changed and how life has evolved during Earth's 4.5-billion-year history.

Besides providing a basic and up-to-date knowledge of essential concepts of earth science, the aim of this course is to stimulate the interest and curiosity of students for the study of planet Earth and provoke questions, comments, and discussions about issues related to earth science.

• Course Prerequisites

None

• Course Contents/Plan

- 1. Earth Sciences: an introduction
- 2. The solar system
- 3. Plate tectonics
- 4. Minerals: rock's elementary building blocks
- 5. Rocks and rock cycle I: igneous rocks
- 6. Rocks and rock cycle II: sedimentary rocks
- 7. Rocks and rock cycle III: metamorphic rocks
- 8. The age of rocks
- 9. Earth history I: paleogeography
- 10. Earth history II: origin and evolution of life

• Course Evaluation Methods

Online quizzes: 60% Written essay: 30% Oral presentation: 10%

Students who enrolled in 2020 will be graded using the six-step A+, A, B, C, C-, and F grade evaluation system (A+: 100-95%, A: 94-80%, B: 79-70%, C: 69-65%, C-: 64-60%, F: 59 % or less).

Students who enrolled in 2019 or before 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 will be given an "Absent" grade if he or she submits a Course Withdrawal Request by the 15th of November. This deadline does not apply to students who drop the class part-way through for an exceptional reason (e.g. illness, accident). Also, NUPACE students should check the deadline set by the NUPACE program for course withdrawal.

•Notice for Students

Lectures will be given online. The online Nagoya University Collaboration and Teaching Tools (NUCT) will be used to upload teaching material and organize quizzes.

| Textbook | There is no required textbook for this course. Please refer to the recommended reading below for an additional source of information. | |
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| Reference Book | Title:Understanding Earth Authors: John Grotzinger & Thomas H. Jordan Publisher: W. H. Freeman Issue year: 2014 (7 th edition) ISBN: 978-1464138744 | |
| Reference website | None | |
| Message | There are no specific office hours for personal consultation outside class time. However, students are encouraged to make an appointment by e-mail beforehand. | |