科目ナンバリング	U-LAS15 10010 LE58				
授業科目名<英訳>	How the Earth Works II-E2 :Earth's History How the Earth Works II-E2 :Earth's History		担当者所属職名・氏名	理学研究科　准教授　ENESCU, Bogdan Dumitru	
群	自然科学科目群	分野(分類)	地球科学(基礎)	使用言語	英語
旧群	B群	単位数	2単位	週コマ数	1コマ	授業形態	講義（対面授業科目）
開講年度・開講期	2026・後期	曜時限	木4	配当学年	全回生	対象学生	全学向

[授業の概要・目的]

The Earth was born as a "fireball" of mixed molten rock and metal; after subsequent hardening, it was very similar with the other "inner" planets: Mars, Venus and Mercury. However, Life was formed only on planet Earth. Why Earth followed a different destiny from other planets? During this lecture we will follow the history of Earth's evolution, from its formation until present days. To facilitate understanding and encourage active participation during the class, some materials and vocabulary in Japanese will be also provided.

[到達目標]

The student will familiarize with the most important events in the Earth history and will be able to understand the formation and structure of planet Earth.

[授業計画と内容]

- Formation of the Solar System and the Earth;
- Structure of the Earth;
- Beginning of Plate Tectonics;
- Birth and evolution of Life;
- Atmosphere evolution: oxygen and carbon dioxide;
- The supercontinent cycle;
- Continent fragmentation and magmatic activity;
- Macro-evolution of Life and extinction episodes.

For each of the topics above, we plan 1-2 lectures.There will be in total 15 classes, including the feedback class.

[履修要件]

At the beginning of the course, you do not need specific knowledge of Earth Sciences. However, self-study is required to learn the essential knowledge necessary for the course.

[成績評価の方法・観点]

Evaluation will be based on class attendance and active participation (30%), class-room exercises (30%) and a final examination (40%).

How the Earth Works II-E2 :Earth's History(2)へ続く↓↓↓

How the Earth Works II-E2 :Earth's History(2)

[教科書]

A pack of class materials (mainly Power Point/PDF files) will be provided to students. The following textbook is recommended, but not required:
C.H. Langmuir and W. Broecker, How to Build a Habitable Planet: The Story of Earth from Big Bang to Humankind, Princeton University Press, 2012, ISBN: 9781400841974 (*Japanese edition available).

[参考書等]

（参考書）
John P. Grotzinger and Thomas H. Jordan 『Understanding Earth (7th edition)』（W.H. Freeman and Company）ISBN:978-1-4641-3874-4

[授業外学修（予習・復習）等]

Students will be expected to do readings in preparation for the class. Class-related materials should be downloaded and printed out by students, from a dedicated website, which will be announced at the beginning of the lecture.

[その他（オフィスアワー等）]

Students can meet me during office hours with prior appointment. The number of students who can take this class will be limited to a maximum of 60 students.

[主要授業科目（学部・学科名）]