

Subject (English)	Dynamic of the Earth		Semester	Fall	Day/Slot	Tue. / 2 nd 10:30-12:00
科目名 (日本語)	惑星地球のダイナミックス					
Course Code	VJ223F74	Course Numbering	SEP-EA801E		Period	Oct. 1, 2019 - Jan. 21, 2020
Instructor (Post)	T. Kuribayashi <i>et al.</i> (Assoc. Prof.)			Campus	Aobayama	
				Building	Earth Science Building	
Faculty	Faculty of Science		Credits	2	Class Room	Room 503
Class subject	Dynamics of the Earth					
Object and summary of class	This class is an introductory geology program to understand fundamental issues of Earth Sciences. So, the basic of Mineralogy, Petrology, Volcanology, Geochemistry and Experimental Mineral Physics will be taught and some recent topics in each part will be introduced. Three Associate Professors and one lecturer will give the lectures weekly.					
Keywords	Earth's interior, Volcano, Origin of life, Minerals					
Goal of study	The goal of this class is to obtain wide background knowledge concerning Earth Sciences as well as the basic of mineralogy, petrology, volcanology, and geochemistry.					
Contents and progress schedule of class	Detail of schedules will be announced at the guidance of this class.					
No.	Date	Instructor	Contents			
1	10/1	Assoc. Prof. Takahiro KURIBAYASHI	Guidance (@ Earth Science & Biology Common Lecture Room, Biology Building Annex 3F)			
2	10/8	Lecturer Daisuke Nakashima	Evolution history of the Solar System 1 An overview of the current Solar System.			
3	10/15		Evolution history of the Solar System 2 A general picture of the Solar System evolution.			
4	10/29		Evolution history of the Solar System 3 Research methods for understanding of the Solar System evolution such as astronomical observations, analyses of extraterrestrial material (incl. returned samples from comets and asteroids), experiments, and simulations.			
5	11/5	Assoc. Prof. Satoshi Okumura	Introduction to volcanology1 This lecture introduces the dynamics of solid earth.			
6	11/19		Introduction to volcanology2 In this class, we discuss the dynamics of magma plumbing system.			
7	11/26		Introduction to volcanology3 In this class, we discuss the mechanism of volcanic eruptions based on physical and chemical properties of magma.			
8	12/3	Assoc. Prof. Takahiro KURIBAYASHI	Introduction to Mineralogy and Crystallography 1 In this class, the fundamentals of Mineralogy will be lectured: Definition, Crystal Structure and Symmetry <i>etc.</i>			
9	12/17		Introduction to Mineralogy and Crystallography 2 In this class, the classification of Minerals and how to identify minerals will be lectured.			
10	12/24		Tohoku University Museum Tour This lecture will be held at the Tohoku University Museum in Aoba-yama Campus. Minerals, Rocks and Fossils are exhibited and the students CAN visit freely. A brief report should be given.			
11	1/7	Assoc. Prof. Yoshihiro FURUKAWA	History of the Earth 1 This lecture covers the overview of the formation of planetary system, oceans, and continents in the very beginning of the Earth's history.			
12	1/14		History of the Earth 2 Origin of life on the Earth and researches in astrobiology are introduced.			
13	1/21		History of the Earth 3 The surface environments of the Earth have changed gradually with response the activity of life and others. This lecture introduces the co-evolution of the Earth and life.			
Preparation	Nothing special					
Record and evaluation method	Attendance, brief reports and examination					
Textbook and references	Textbooks and references will be introduced by each professor					
Self study	Nothing special					
In addition	-					