

## Elective Course Description (1. Fall Semester)

Subject (English)	Dynamic of the Earth		Semester	Fall	Day/Slot	
科目名 (日本語)	惑星地球のダイナミクス					
Course Code		Course Numbering	SEP-EA801E		Period	Oct. - Feb.
Instructor (Post)	T. Kuribayashi <i>et al.</i> (Assoc. Prof.)				Campus	
					Building	
Faculty	Faculty of Science		Credits	2	Class Room	
Class subject	<b>Dynamics of the Earth</b>					
Object and summary of class						
<p>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.</p>						
Keywords	Earth's interior, Volcano, Origin of life, Minerals					
Goal of study						
<p>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.</p>						
Contents and progress schedule of class						
<p><b>Detail of schedules will be announced at the guidance of this class.</b></p> <ul style="list-style-type: none"> <li>- <b>Guidance</b></li> <li>- <b>History of the Earth 1</b> This lecture covers the overview of the formation of planetary system, oceans, and continents in the very beginning of the Earth's history.</li> <li>- <b>History of the Earth 2</b> Origin of life on the Earth and researches in astrobiology are introduced.</li> <li>- <b>History of the Earth 3</b> 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.</li> <li>- <b>About Solar Systems ~ 3 lectures</b> Details will be announced at the guidance.</li> <li>- <b>Introduction to volcanology ~ 3 lectures</b> Details will be announced at the guidance.</li> <li>- <b>Introduction to Mineralogy and Crystallography 1</b> In this class, the fundamentals of Mineralogy will be lectured: Definition, Crystal Structure and Symmetry <i>etc.</i></li> <li>- <b>Introduction to Mineralogy and Crystallography 2</b> In this class, the classification of Minerals and how to identify minerals will be lectured.</li> <li>- <b>Tohoku University Museum Tour</b> This lecture will be held at the Tohoku University Museum in Aoba-yama Campus. Minerals, Rocks and Fossils are exhibited and the student CAN visit freely. <b>A brief report should be given.</b></li> </ul>						
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						