Module Code	19349010	Course Term	
Course Subject Name	**Systematics, Diversity and Evolution**	Autumn Semester	
Course Tutor	**Y.Ogino**		
Credit	2	Taught Day	
Schools	School of Agriculture	TUE-3	
Taught Year	The 3rd year		
Campus	Ito campus		
Subject Area	Lecture		
Course Subject Classification	Common Basic Subjects	Tuesday, 3rd priod (13:00-14:30)	
Course Requirements			
Course Requirement (Pre-requisite)	Basic knowledge of Biology		

Course Outline

Modern understanding of evolution of Life on earth, including history and current knowledge. This course will cover the application including classical and modern analytical techniques for evolutionary study.

key words

environment, phylogeny, Fossil record, genetic variation, biodiversity, phenotypic traits, reproductive adaptation

Study Objectives (General)

Gain an understanding of the diversity of life on earth and how it came to be.

Study Objectives (Specific) The course aims to achieve the following:

To understand the fundamental principles of evolutionary biology. To learn classical and modern analytical approaches used for molecular evolutionary analysis and developmental biology.

Course Plan

Tentative Weekly Schedule:

1. Introduction to Evolutionary Biology
2. Classification and Phylogeny
3. Patterns of Evolution
4. Evolutiona in the Fossil Record
5. Geography of Evolution
6. Genetic basis of Biodiversity
7. Genetic Recombination and DNA Technology
8. Foundation of Evolution
9. Genetic Drift and Natural Selection
10. Pattern of Evolution, Trace of natural selection in a genome
11. Evolutionary Mechanisms of Sex Characteristics and Reproductive Behaviors
12. Speciation Mechanisms
13. Evolution of Genes and Genomes
14. Evolutionary constraint, Evolution of novelties
15. Summary of Diversity and Evolution

Course Approaches	Lectures
Textbooks	Futuyama (2009), Evolution (Second Edittion), Sinauer Associates, Inc.
Reference Books	
Study consultation (office hour)	Yukiko Ogino Office: Room 579 Bldg. WEST-5, Faculty of Agriculture, Kyushu University Ito Campus Office Hours: 9:00 - 18: 00, Email: ogino@agr.kyushu-u.ac.jp Phone: 092-802-4766
Exams/Results Evaluation Method	1. Attendance, in-class activities and others (50%), 2. Report (50%)
Others	