Course Name	General Biology II		
Semester, Year	２学期	Number of Credits	2 credits
Course level	2000	Course Number	27075
Instructor(s) (Institution)	Maria Helena Fortunato Martins (大学院理学研究院)		
Course Objectives	Understand the basic principles of evolution Understand Darwinian evolution and its modern extensions Understand the purpose and process of systematics Understand know how to formulate an hypothesis of evolutionary relationship Be familiar with the six kingdom system of classification Be familiar with the biological diversity within the prokaryote Understand the purpose and process of systematics Be familiar with the diversity, function and importance of viruses and bacteria Be familiar with the basic structure, diversity and function of Fungi Understand the evolutionary origin of vascular plants Recognize and understand the structure and function of seedless plants (ferns) Recognize and understand the structure and function of seed plants (Gymnosperms and Angiosperms) Understand how plants regulate growth and development Be familiar with the evolutionary origin and diversity of animals Recognize invertebrate and vertebrate body plans Understand animal homeostasis Understand the principles of animal behavior, learning and communication Be familiar with the ecological principles and processes that influence living systems Understand ecosystems dynamics and regulation Be familiar with the actual biodiversity crisis, its causes and probable outcomes Understand the basic conservation principles		
Course Goals	The course will present the fundamental principles and concepts of biology. The course will emphasize how the concepts were originally conceived and tested and how alternatives were rejected. Students will learn and use the fundamental concepts of biology to draw conclusions from data, to develop alternative hypotheses to explain observations, to make predictions, and to design experiments to test hypotheses. In addition, the social and medical implications of biological findings will be developed as classroom discussions		
Course Schedule	Week 1 Evidence for Evolution, Origin of species and Species concept - Ch. 21 & 22 Week 2 Systematics, Phylogenetics and Evolution - Ch. 23 & 25 Week 3 The six Kingdoms of Life - Ch. 26 Week 4 Viruses and Bacteria - Ch. 27 Week 5 Fungi - Ch. 31 Week 6 Overview of Green Plants (1)- Ch. 30 Week 7 Overview of Green Plants (2)- Ch. 30 Week 8 Plant Form and Function - Ch. 36 Week 9 Plant Reproduction - Ch. 42 Week 10 Overview of Animal Diversity 1 - Ch. 32 Week 11 Overview of Animal Diversity 2 - Ch. 33 Week 12 Overview of Animal Diversity 3 - Ch. 34 Week 13 Overview of Animal Diversity 4 - Ch. 35 Week 14 Population and Community Ecology - Ch. 55 & 56 Week 15 Comprehensive Final Exam		
Homework	Students will be given home work every week. Tasks will be related to the material given in class that day. Examples of tasks are: compare (schematic) animal body plans; compare (schematic) reproduction in seed and seedless plants; bring examples of animal behavior and learning; find solutions for the biodiversity crisis; find examples of how viruses and bacteria influence our daily life. Students will also do 6 research essays (about 3 pages including figures and references) from a list of topics given by the teacher.		
Grading System	Grades will be based on the numeric average of attendance (10%), homework + research essays (30%), short daily quizzes + mid term exam (35%) and final comprehensive exam (25%). Grades are based not on relative performance evaluation, but on absolute evaluation		
Textbooks / Reading List	Biology (10th ed.) P. H. Raven, G. B. Johnson, J. B. Losos, K. A. Mason and S. R. Singer McGraw-Hill Publishers 2014		
Websites	http://highered.mheducation.com/sites/0073383074/student_view0/index.html		
Website of Laboratory			
Additional Information			