

# **LIFS 2060 Biodiversity**

**Fall 2016-2017**

**Tuesday and Thursday, 10:30 am - 11:50 am, LTC**

## **Learning Outcomes**

On successful completion of this course, students are expected to be able to:

- 1) Appreciate the beauty and richness of our biodiversity.
- 2) Discuss the variety and classification of life, and identify the ecological relationships between organisms and their environment.
- 3) Critically evaluate the relationship between humans and the environment, and examine how environmental conservation has been carried out.
- 4) Give examples to illustrate the balance between human society and the natural world, and how this affects the concept of sustainable living.

## **Instructors**

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## **Format and Course Assessment**

Two 80-minute lectures (with discussions) per week.

Tentatively, the final grades are based on:

- Midterm Examination (40 - 45%)
- Final Examination (50 - 55%)
- Quizzes (up to 10%)

## **Textbook**

Raven PH, Johnson GB, Losos JB, Mason KA & Singer SR (2014) *Biology*, 10th edition, McGraw-Hill Companies, Inc

## **Reference**

Cunningham WP & Cunningham MA (2017) *Principles of Environmental Science: Inquiry & Application*, 8th edition, McGraw-Hill Companies, Inc

	<b>Date</b>	<b>Lecture Topic</b>	<b>Instructor</b>
1)	1 Sept (Thu)	Introduction and Overview	Zeng
2)	6 Sept (Tue)	Origin of Life and Chemical Evolution	Zeng
3)	8 Sept (Thu)	Evolution of Life: Darwin's Theory	Zeng
4)	13 Sept (Tue)	Evidence for Evolution	Zeng
5)	15 Sept (Thu)	Microevolution (Genes within Populations)	Zeng
6)	20 Sept (Tue)	Characteristics and Classification of Life	Liu
7)	22 Sept (Thu)	Bacteria and Viruses	Liu
8)	27 Sept (Tue)	Protists	Liu
9)	29 Sept (Thu)	Green Plants	Liu
10)	4 Oct (Tue)	Fungi	Liu
11)	6 Oct (Thu)	Animals	Liu
<b>12)</b>	<b>11 Oct (Tue)</b>	<b>Midterm Examination</b>	<b>Zeng &amp; Liu</b>
13)	13 Oct (Thu)	Five Agents of Evolution Change	Zeng
14)	18 Oct (Tue)	Species Concept; Macroevolution (Speciation)	Zeng
15)	20 Oct (Thu)	Species Extinction	Zeng
16)	25 Oct (Tue)	The Value of Biodiversity	Ko
17)	27 Oct (Thu)	Habitat Diversity and Biomes	Ko
18)	1 Nov (Tue)	Tropical Rainforests (I)	Ko
19)	3 Nov (Thu)	Tropical Rainforests (II)	Ko
20)	8 Nov (Tue)	Coral Reefs (I)	Ko
21)	10 Nov (Thu)	Coral Reefs (II)	Ko
22)	15 Nov (Tue)	Human Effects: Loss of Biodiversity (I)	Ko
23)	17 Nov (Thu)	Human Effects: Loss of Biodiversity (II)	Ko
24)	22 Nov (Tue)	Ecological Conservation and Restoration (I)	Ko
25)	24 Nov (Thu)	Ecological Conservation and Restoration (II)	Ko
26)	29 Nov (Tue)	Review	Ko