

LIFS 2060 Biodiversity

Fall 2018-19

Tuesday and Thursday, 12:00 – 13:20, LT-J

Learning Outcomes

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

- 1) Describe and explain biodiversity and its importance.
- 2) Understand the principle of classification and appreciate the diversity of extant life form and their interactions
- 3) Apply understanding evolution to account for changes in biodiversity through time
- 4) Critically evaluate the relationship between humans and the environment, and examine how environmental conservation has been carried out.

Instructors

Prof Karen CHAN (Course Coordinator)
Telephone: 2358 7998, Email: karenchan@ust.hk
Office: CYT Room 5004 (L35/36)

Prof Qing-Lu ZENG
Telephone: 2358 8701, Email: zeng@ust.hk
Office: CYT Room 5006 (L35/36)

Dr Ice KO
Telephone: 2358 8923, Email: iceko@ust.hk
Office: Room 5444 (L25/26)

Format and Course Assessment

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

- Midterm Examination (35%)
- Final Examination (65%)

Textbooks (Recommended)

Magurran, A.E. & McGill, B. J. (2011) *Biological Diversity: Frontiers in Measurement and Assessment*, Oxford University Press

Gaston, K.J. & Spicer, J. I. (2004) *Biodiversity: An Introduction*, 2nd edition, John Wiley & Sons, Inc

References

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

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

	Date	Lecture Topic	Instructor
1)	Sept 4 (Tue)	Introduction Defining biological diversity	Chan
2)	Sept 6 (Thu)	Measuring and patterns of biodiversity	Chan
3)	Sept 11 (Tue)	Biodiversity of Hong Kong	Chan
4)	Sept 13 (Thu)	Biodiversity through time: a brief history	Chan
5)	Sept 18 (Tue)	Introductory taxonomy	Chan
6)	Sept 20 (Thu)	Introductory plant diversity	Chan
	<i>Sept 25 (Tue)</i>	<i>Public Holiday</i>	
7)	Sept 27 (Thu)	Introductory animal diversity: Invertebrates	Chan
8)	Oct 2 (Tue)	Introductory animal diversity: Chordates	Chan
9)	Oct 4 (Thu)	Mid-term examination	Chan
10)	Oct 9 (Tue)	Origin of life; Chemical evolution	Zeng
11)	Oct 11 (Thu)	Evolution of life: Darwin's Theory	Zeng
12)	Oct 16 (Tue)	Evidence for evolution	Zeng
13)	Oct 18 (Thu)	Microevolution (genes within populations)	Zeng
14)	Oct 23 (Tue)	Five agents of evolution change	Zeng
15)	Oct 25 (Thu)	Species concept; Macroevolution (speciation)	Zeng
16)	Oct 30 (Tue)	Species extinction	Zeng
17)	Nov 1 (Thu)	The future of evolution	Zeng
18)	Nov 6 (Tue)	The value of biodiversity	Ko
19)	Nov 8 (Thu)	Habitat diversity and biomes	Ko
20)	Nov 13 (Tue)	Tropical rainforests (I)	Ko
21)	Nov 15 (Thu)	Tropical rainforests (II)	Ko
22)	Nov 20 (Tue)	Coral reefs (I)	Ko
23)	Nov 22 (Thu)	Coral reefs (II)	Ko
24)	Nov 27 (Tue)	Human effects: Loss of biodiversity	Ko
25)	Nov 29 (Thu)	Ecological conservation and restoration	Ko