

Fall 2017

LIFS 1010: APPRECIATION OF BIOLOGICAL SCIENCE

Course goal: This course aims to introduce to students diversity of life forms; origin of life; chemical basis of life; cell structure and function; genetics and molecular biology; structure and life processes in animal and plants; evolution; ecology and environment.

Intended learning outcomes:

1. Explain fundamental principles and inter-relationship among biochemicals, cells, and life.
2. Describe the process of evolution and its implication in biodiversity.
3. Describe the structure and life processes in human.
4. Explain the inter-relationship between organisms and the environment.
5. Apply the biological knowledge in explaining current issues relating to human life.

Text Book: Biology, Campbell, 11th ed. by Reece, Urry, Cain *et al.* (2016) Pearson

Entry Levels: The course is designed for non-biology major students who are interested in learning about the biology related to the human body functions and the rest of the world.

Course format: Two 80 minutes lecture per week. Grades will be based on the results of one midterm examination (50%) and one final examination (50%).

Lecture time/venue:

Monday 12:00 – 13:20 Rm2407
Wednesday 12:00 – 13:20 Rm2407

Instructors	Room	Tel.	Email
Prof. Andrew L. Miller*	5453	x8631	almiller@ust.hk
Prof. Zhenguo Wu	5527	x8704	bczgwu@ust.hk
Dr. Melody Leung	5450	x8634	bomleung@ust.hk

*Course Director

DATE	TOPIC	LECTURER
	Fundamentals of life	Wu
Sept 4, 6	Atoms, molecules, and life's chemistry	
Sept 11, 13	The cell: basic unit of life	
	The perpetuation of life	Wu
Sept 18, 20	Cell cycle and Meiosis	
Sept 25, 27	Chromosomes and DNA	
	Evolution	Leung
Oct 4	Darwinian evolution theory	
	Evidence for evolution	
Oct 9	Microevolution	
	Macroevolution	
	Origin and history of life	
Oct 11	MIDTERM EXAMINATION: LT-H	
	Diversity of Life	Leung
Oct 16	Viruses and prokaryotes	

Oct 18	Protists	
Oct 23	Fungi and plants	
Oct 25	Invertebrates and chordates	
	Ecology	Leung
Oct 30	Population dynamics	
Nov 1	Community	
Nov 6	Ecosystems and the Biosphere	
Nov 8	Environmental challenges	
	Human biology	Miller
Nov 13	The nervous system	
Nov 15	Senses and the brain	
Nov 20	Muscles and movement	
Nov 22	Heart and circulation	Miller
Nov 27	Lungs and breathing	
Nov 29	Kidney and excretion	
Dec 1 - 6	Study Break	
Dec 7 - 19	FALL TERM EXAMS: END OF TERM EXAM (to be arranged by ARRO)	