

Fall 2018-19

LIFS 1901 General Biology I

Class Time: Monday and Wednesday 09:00-10:20

Venue: LTA

Course Description:

This course targets science students not having sufficient biological knowledge for the entry to a life science program of a 4-year undergraduate curriculum. It provides students with a general overview of fundamental biology: basic characteristics of life (the chemistry of life, cells), vital life processes (respiration, photosynthesis), and essential concepts of genetics, and evolution. Topics on human diseases and gene technology will also be covered.

Credit Points: 3

Intended Learning Outcomes (ILOs):

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

- (1) Describe the basic characteristics of life and its composite units
- (2) Describe the interactions of organisms with each other and with the physical environment, taking particular account of energy source, the survival of individuals and the survival of a group.
- (3) Apply the basic knowledge of the characteristics of life and the interactions of organisms to explain essential life processes.
- (4) Illustrate how life science provides an investigative approach to interpreting the natural world.

Recommended Reading:

- Mastering Biology for Biology Concept & Connections 8e by Campbell, e-book with questions –purchase the access code in the university bookstore, price HKD 328, access code valid for 2 years

Teaching & Learning Activities:

- Two 80-minute lectures per week

Assessment:

Examinations: [Assessing ILOs (1), (2) & (3)]

- Part I & II Examination 45%
- Part III Examination & In class clicker questions (Dr. Tang's part) 45%
5%
- Individual project (Dr. Hung's part) 5%

Instructors	Room	Ext.	Email
Dr Eugene HUNG	5451 (course coordinator)	x7303	bohsc@ust.hk
Dr. Jessica TANG	4218	x7314	bocemun@ust.hk

Date	Topic	Reading	Instructor
	Part I: Organization of Life		
Sep 3, 5	The study of life	Ch. 1	Tang
Sep 10, 12	The Chemical Basis of Life/The Molecules of Life	Ch. 2, 3	Tang
Sep 17, 19	Cell Structure and Function	Ch. 4	Tang
Sep 24, 26	Biological membranes: Structure and Function	Ch. 5	Tang
	Part II: Energy Transfer Through Living Organisms		
Oct 3, 8	Energy and Enzymes	Ch. 5	Tang
Oct 10	Respiration	Ch. 6	Tang
Oct 13 (Sat)	Revision class (optional), Room TBC		Tang
Oct 15	Mid- term examination (TANG's part)		Tang
	Part III: Continuity of Life		
Oct 22, 24, 29	Determination of Form & Function of an Organism	Ch. 10	Hung
Oct 31, Nov 5, 7	Making of a New Life	Ch. 8	Hung
Nov 12, 14	Differences among Living Individuals	Ch. 11	Hung
	Part IV: Biodiversity and Ecology		
Nov 19, 21	Variety of Living Things on Earth	Ch. 14, 15	Hung
Nov 26, 28	Interactions within Living Systems	Ch. 37, 38	Hung
TBA	Final examination (HUNG's part)		Hung