

Fall 2016-17

LIFS 1901 General Biology I

Class Time: Tuesday and Thursday 15:00-16:20

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)]

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| ○ | Part I & II Examination | 45% |
| ○ | Part III & IV Examination &
In class clicker questions | 45%
10% |

Instructors	Room	Ext.	Email
Prof. Bik TYE	5435 (course coordinator)	x7307	biktye@ust.hk
Dr. Jessica TANG	4218	x7314	bocemun@ust.hk

Date	Topic	Instructor
	Part I: Organization of Life	
Sep 1, 6	The study of life	Tang
Sep 8, 13	The Chemical Basis of Life/The Molecules of Life	Tang
Sep 15, 20	Cell Structure and Function	Tang
Sep 22, 27	Biological membranes: Structure and Function	Tang
	Part II: Energy Transfer Through Living Organisms	
Sep 29, Oct 4	Energy and Life	Tang
Oct 6, 11	Respiration, Photosynthesis	Tang
Oct 13	Revision	Tang
Oct 18	Examination for Part I and Part II	Tang
	Part III: Continuity of Life/DNA the blueprint of life	
Oct 20, 25	Genetic Variation	Tye
Oct 27, Nov 1	DNA Replication and Cell Reproduction	Tye
Nov 3, 8	Genes and Gene Expression	Tye
Nov 10, 15	Infectious Disease	Tye
Nov 17, 22	DNA Technology	Tye
Nov 24, 29	Evolution	Tye
TBA	Final examination for Part III and Part IV	Tye