Fall 2017-18 **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)]

o	Part I & II Examination	45%
o	Part III Examination &	45%
	In class clicker questions	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**	**Reading**	**Instructor**
	Part I: Organization of Life		
Sep 5, 7	The study of life	Ch. 1	Tang
Sep 12, 14	The Chemical Basis of Life/The Molecules of Life	Ch. 2, 3	Tang
Sep 19, 21	Cell Structure and Function	Ch. 4	Tang
Sep 26, 28	Biological membranes: Structure and Function	Ch. 5	Tang
	Part II: Energy Transfer Through Living Organisms		
Oct 3, 10	Energy and Enzymes	Ch. 5	Tang
Oct 12, 17	Respiration, Photosynthesis	Ch. 6, 7	Tang
Oct 19	**Examination for Part I and Part II**		**Tang**
	Part III: Continuity of Life/DNA the blueprint of life		
Oct 24, 26	Patterns of inheritance	Ch. 9	Tye
Oct 31, Nov 2	The cellular basis of reproduction and inheritance	Ch. 8	Tye
Nov 7, 9	Molecular biology of the gene	Ch. 10	Tye
Nov 14, 16	How genes are controlled	Ch. 11	Tye
Nov 21, 23	DNA Technology and genomics	Ch. 12	Tye
Nov 28, 30	Evolution and speciation	Ch. 13, 14	Tye
TBA	**Final examination for Part III**		**Tye**