

Fall 2022-23

LIFS 1901 General Biology I

Class Time: Tuesday and Thursday 10:30-11:50

Room: LTJ

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 (not compulsory) From Campus Bookstore:

Print book:

ISBN	Title	Author	Edition	Student Price
9781265140601	INQUIRY INTO LIFE	MADER	17	\$447.2

Standalone connect ecode: (Access for 180 days, non-returnable)

ISBN	Title	Author	Edition	Student Price
9781264406937	CNCT OLA INQUIRY INTO LIFE	MADER	17	\$360

Teaching & Learning Activities:

- Two 80-minute online lectures per week

Assessment:

Examinations: [Assessing all ILOs]

- Parts I & II
 - Examination 45%
 - In-class clicker questions 5%
- Parts III & IV
 - Examination 50%

Instructors	Room	Ext.	Email
Dr. Eugene HUNG	5451 (course coordinator)	x7303	bohsc@ust.hk
Dr. Jessica TANG	5450	x7314	bocemun@ust.hk

Date	Topic	Reading	Instructor
	Part I: Organization of Life		
Sep 1, 6	The study of life	Ch. 1	Tang
Sep 8, 13	The Chemical Basis of Life/The Molecules of Life	Ch. 2	Tang
Sep 15, 20	Cell Structure and Function	Ch. 3	Tang
Sep 22, 27	Biological membranes: Structure and Function	Ch. 4	Tang
	Part II: Energy Transfer Through Living Organisms		
Sep 29, Oct 6	Energy and Enzymes	Ch. 6	Tang
Oct 11, 13	Respiration, Revision class	Ch. 7	Tang
Oct 18	Mid- term examination (Parts I & II)		Tang
	Part III: Continuity of Life		
Oct 20, 25	Determination of Form & Function of an Organism	Ch. 25	Hung
Oct 27, Nov 1, 3	Making of a New Life	Ch. 5	Hung
	Part IV: Biodiversity		
Nov 8,10, 15	Differences among Living Individuals	Ch. 24	Hung
Nov 17, 22	Variety of Living Things on Earth	Ch. 27	Hung
Nov 24, 29	Special Topic: Viral Infection – Immune Responses, Prevention & Treatment	Ch. 13 & Ch. 28	Hung
(TBA)	Final examination (Parts III & IV)		Hung