

Fall 2020-21

LIFS 1901 General Biology I

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

Mode: Online

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:

- E-book: Campbell Biology: Concepts & Connections with Mastering Biology (Pearson)—purchase the access code in the university bookstore, price HKD 370.80, access code valid for 2 years
- or
- Physical book: Campbell Biology: Concepts & Connections, Global Edition 9e (Pearson), price HKD 466.20

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 45%
 - Individual project 5%

Instructors	Room	Ext.	Email
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Date	Topic	Reading	Instructor
	Part I: Organization of Life		
Sep 7, 9	The study of life	Ch. 1	Tang
Sep 14, 16	The Chemical Basis of Life/The Molecules of Life	Ch. 2, 3	Tang
Sep 21, 23	Cell Structure and Function	Ch. 4	Tang
Sep 28, 30	Biological membranes: Structure and Function	Ch. 5	Tang
	Part II: Energy Transfer Through Living Organisms		
Oct 5, 7	Energy and Enzymes	Ch. 5	Tang
Oct 12, 14	Respiration, revision class	Ch. 6	Tang
Oct 19	Mid- term examination (Parts I & II)		Tang
	Part III: Continuity of Life		
Oct 21, 28, Nov 2	Determination of Form & Function of an Organism	Ch. 10	Hung
Nov 4, 9, 11	Making of a New Life	Ch. 8	Hung
	Part IV: Biodiversity		
Nov 16, 18, 23	Differences among Living Individuals	Ch. 11	Hung
Nov 25, 30, Dec 2	Variety of Living Things on Earth	Ch. 14, 15	Hung
Dec 10-22 (TBA)	Final examination (Parts III & IV)		Hung

