

**Division of Life Science**  
**The Hong Kong University of Science and Technology**

**LIFS 1930 Nature of Life Sciences**

Spring semester, 2016-17

Credits: 3

Exclusion: LIFS 2030 (prior to 2014-15)

Course coordinator	Prof. Robert Ko	
Instructors	Dr. Jessica Tang	bocemun, x7314
	Dr. Philip Lam	ylam, x8714
	Dr. Melody Leung	bomleung, x8634
	Dr. Helen Cheung	cheungh, x7904

**Course goals**

This is an innovative blended-learning course that comprises both independent e-learning and face-to-face tutorial components. The course covers general and up-to-date topics such as conservation biology and animal forms and functions in the field of Biology, metabolism and cell signaling in Biochemistry, and recombinant DNA, animal and plant biotechnology and bioethics in Biotechnology.

**Intended Learning Outcomes**

At the end of this course, students will be able:

- To acquire fundamental knowledge through computer-assisted learning in the areas of biochemistry, biology and biotechnology.
- To cultivate self-paced practice, feedbacks and monitoring of self-progress.
- To be able to inaugurate global connection.
- To be able to utilize in-class game-based / case study activities to reinforce on-line learning.
- To develop higher order skills in order to make critical and rational judgments over societal concerns in life sciences.
- To seek and share biological knowledge, independently and in collaboration with others.

### Assessment scheme

Components	Percentage
On line quiz	20
Written assignment *	20
Final examination 1.5 hours	60

\*Each student is required to write a 400 words essay on one of the assigned topics. Topics are related to the content of the face-to-face tutorial. The assignment topics will be announced by the end of the course.

### Class outline

Tutorials (Each student is assigned to attend one of the following sessions by ARRO, please check with your course registration information):

T1 Monday                1030-1150     Rm4582

T2 Friday                0900-1020     Rm5620

Date	Topic	Instructor
Feb 3, 6	Biodiversity and Evolution	Tang
Feb 10, 13	Ecology	Tang
Feb 17, 20	Conservation Biology	Tang
Feb 24, 27	Animal Form and Function	Lam
Mar 3, 6	Cell Signaling	Lam
Mar 10, 13	Metabolism and Nutrition	Lam
Mar 17, 20	Transcription and Translation	Cheung
Mar 24, 27	Stem Cells	Leung
Mar 31, Apr 3	Recombinant DNA	Cheung
Apr 7, 10	Animal Biotechnology	Cheung
Apr 21, 24	Plant Biotechnology	Leung
May 5, 8	Bio-ethics and Public Acceptance	Leung