

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

**LIFS 1930 Nature of Life Sciences**

Fall semester, 2016-2017

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                    13.30-14.50    Rm4582

T2 Thursday                09.00-10.20    Rm4582

Date	Topic	Instructor
Sep 5, 8	Biodiversity and Evolution	Tang
Sep 12, 15	Ecology	Tang
Sep 19, 22	Conservation Biology	Tang
Sep 26, 29	Animal Form and Function	Lam
Oct 3, 6	Cell Signaling	Lam
Oct 13, 17	Metabolism and Nutrition	Lam
Oct 20, 24	Transcription and Translation	Cheung
Oct 27, 31	Stem Cells	Leung
Nov 3, 7	Recombinant DNA	Cheung
Nov 10, 14	Animal Biotechnology	Cheung
Nov 17, 21	Plant Biotechnology	Leung
Nov 24, 28	Bio-ethics and Public Acceptance	Leung