

The Hong Kong University of Science and Technology
Division of Life Science
LIFS 5710
Cellular Regulation
(2018/19 Fall Semester)

Course Description

This course will cover advanced topics on cellular regulation that include genome and epigenome transcriptional regulation, miRNA biogenesis and regulation, and protein trafficking.

Learning Outcomes

By the end of this course, you will be able to:

1. Understand the latest concepts in selected cellular processes and the basic mechanisms underlying these processes.
2. Have a general appreciation of how new discoveries can impact detection and treatment of diseases.
3. Acquire the ability to apply the knowledge learnt in this course to problem solving in your own research.

Date/Time: 12:00 PM-14:50 PM (Thursday)

Venue: Rm 5508 (Lifts 25-26)

Instructors: Prof. Toyotaka Ishibashi (TI) (Ext. 2238, E-mail: toyotaka@ust.hk) (**Course Coordinator**)

Prof. Hookeun Park (HKP) (Ext. 7322, E-mail: hkpark@ust.hk)

Prof. Yusong Guo (YSG) (Ext. 2492, E-mail: guoyusong@ust.hk)

Prof. Tuan Anh Nguyen (TAN) (Ext. 2679, E-mail: tuananh@ust.hk)

Date	Lecture	Instructor
Sept 06	Mechanisms of transcriptional regulation – I	TI
Sept 13	Mechanisms of transcriptional regulation – II	TI
Sept 20	Vesicle trafficking at the Golgi apparatus – I	YSG
Sept 27	Vesicle trafficking at the Golgi apparatus – II	YSG
Oct 04	Transport, Secretion and Endocytosis – I	HKP
Oct 11	Transport, Secretion and Endocytosis – II	HKP
Oct 18	miRNA biogenesis and regulation – I	TAN
Oct 25	miRNA biogenesis and regulation – II	TAN
Nov 01	Student presentations – I	TI
Nov 08	Student presentations – II	YSG
Nov 15	Student presentations – III	HKP
Nov 22	Student presentations – IV	TAN
TBD	Written Examination	

Grading method:

The oral presentation will account for 60% of the final score. Each student will be assigned a paper as the presenter and a paper as the reader. Readers will prepare at least 2 critical questions for the presenter. Students who volunteer questions will get bonus points of up to 5%. Students are also required to give an evaluation score for each presentation. 10% of the final score will be based on student evaluations.

In addition, a written examination, which will account for the remaining 40% of the final score, will be given at the end of the semester. One Q&A type question will be given by each instructor for the written exam.