

**The Hong Kong University of Science and Technology**  
**Division of Life Science**  
**LIFS 5710**  
**Cellular Regulation**  
**(2016/17 Fall Semester)**

**Course Description**

This course will cover advanced topics on cellular regulation that include genome and epigenome replication, muscle differentiation and regeneration, acetylcholinesterase structure and function, 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:** 1:00 PM-3:50 PM (Friday)

**Venue:** Rm 6573 (Lifts 29-30)

**Instructors:** Prof. Bik-Kwoon Tye (BKT) (Ext. 7307, E-mail: biktye@ust.hk) (**Course Coordinator**)  
Prof. Karl Tsim (KWT) (Ext. 7332, E-mail: botsim@ust.hk)  
Prof. Zhenguo Wu (ZGW) (Ext. 8704, E-mail: bczgwu@ust.hk)  
Prof. Yusong Guo (YSG) (Ext. 2492, E-mail: guoyusong@ust.hk)  
Prof. Hyoukeun Park (HKP) (Ext. 7322, E-mail: hkpark@ust.hk)

| <b>Date</b> | <b>Lecture</b>   | <b>Instructor</b> |
|-------------|--|-------------------|
| Sep 02      | Replication of Genomes                                       | BKT               |
| Sep 09      | Replication of Epigenomes                                    | BKT               |
| Sep 16      | <b>Mid Autumn Festival</b>                                   |                   |
| Sept 23     | Muscle differentiation and regeneration – I                  | ZGW               |
| Sep 30      | Muscle differentiation and regeneration – II                 | ZGW               |
| Oct 07      | Acetylcholinesterase: Function, Regulation and Assembly – I  | KWT               |
| Oct 14      | Acetylcholinesterase: Function, Regulation and Assembly – II | KWT               |
| Oct 21      | Vesicle trafficking at the Golgi apparatus – I               | YSG               |
| Oct 28      | Vesicle trafficking at the Golgi apparatus – II              | YSG               |
| Nov 04      | Transport, Secretion and Endocytosis – I                     | HKP               |
| Nov 11      | Transport, Secretion and Endocytosis – II                    | HKP               |
| Nov 18      | Student presentations  | Instructors       |
| Nov 25      | Student presentations  | Instructors       |
| Dec 02      | Study Break  |                   |
| Dec 09      | Study Break  |                   |
| <i>TBD</i>  | 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.*