

Division of Life Science

The Hong Kong University of Science and Technology

LIFS 2080 Plant Biology

Spring semester, 2017

Credits: 3 (**2 lectures + 1 tutorial**)

Pre-requisites: LIFS 2210 or LIFS 2040

Course coordinator: Prof. Ning Li

Instructors: Prof. Ning Li, Dr Melody Leung

Course goals

This is a core lecture course accompanied by the practical course LIFS 2280 to provide students with a preliminary understanding of the basic cellular structures, molecular mechanisms and physiological processes during plant growth and development and reproduction. The course is also to provide students with current research topics on plant biotechnology.

Reference books

1. Biology of Plants by Raven et al.

Assessment scheme

Components	Percentage
1. Mid-term Examination	50
2. Final Examination	50

Teaching Schedule

Lectures

Wednesday 17:00-17:50 LT-B

Friday 17:00-17:50 LT-B

Tutorials

Wednesday 18:00-18:50 T1: Rm 1103 // T2: Rm 2464

Class outline

Week	Date	Topic	Instructor
1	1 st Feb	Agriculture, food and human	Li
	3 rd Feb	Introduction to flowering plants	Li
2	8 th Feb	Plant cellular structure and chemical composition 1	Li
	8 th Feb	Tutorial	Li / Leung
	10 th Feb	Plant cellular structure and chemical composition 2	Li
3	15 th Feb	Roots and tissue secondary growth	Leung
	15 th Feb	Tutorial	Li / Leung
	17 th Feb	Shoots and tissue secondary growth	Leung

4	22 nd Feb	Photosynthesis 1	Leung
	22 nd Feb	Tutorial	Li / Leung
	24 th Feb	Photosynthesis 2	Leung
5	1 st Mar	Respiration and energy	Leung
	1 st Mar	Tutorial	Li / Leung
	3 rd Mar	Movement of water and solutes	Leung
6	8 th Mar	Seed development and plant reproduction	Leung
	8 th Mar	Tutorial	Li / Leung
	10 th Mar	Plant defense responses to pathogens	Leung
7	15 th Mar	Review	Li / Leung
	17 th Mar	Midterm exam	Li / Leung
8	22 nd Mar	Hormonal physiology 1	Li
	22 nd Mar	Tutorial	Li / Leung
	24 th Mar	Hormonal physiology 2	Li
9	29 th Mar	Hormonal physiology 3	Li
	29 th Mar	Tutorial	Li / Leung
	31 st Mar	Hormonal physiology 4	Li

10	5 th Apr	Plant response to environmental stimuli 1	Li
	5 th Apr	Tutorial	Li / Leung
	7 th Apr	Plant response to environmental stimuli 2	Li
11	19 th Apr	Plant cell signaling 1	Li
	19 th Apr	Tutorial	Li / Leung
	21 st Apr	Plant cell signaling 2	Li
12	26 th Apr	Plant biotechnology 1	Li
	26 th Apr	Tutorial	Li / Leung
	28 th Apr	Plant biotechnology 2	Li
13	5 th May	Review	Li
	TBC	Final exam	Li