

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

**LIFS 2080 Plant Biology**

Spring semester, 2022

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, 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
A. Mid-term Examination	50
B. Final Examination	50

**Teaching Schedule**

**L1**

Lectures

Monday	9:30-10:20	LT-G
Wednesday	9:30-10:20	LT-G
Friday	9:30-10:20	LT-G

**L2**

Lectures

Monday	10:30-11:20	LT-G
Wednesday	10:30-11:20	LT-G
Friday	10:30-11:20	LT-G

## Course Outline

Week	Date	Topic	Instructor
1	4 Feb (Fri)	Agriculture, food and human	Li
	7 Feb (Mon)	Plant cellular structure and chemical composition 1	Li
	9 Feb (Wed)	Plant cellular structure and chemical composition 2	Li
	11 Feb (Fri)	Tutorial	Li
2	14 Feb (Mon)	Plant classification	Leung
	16 Feb (Wed)	Shoot & root primary growth	Leung
	18 Feb (Fri)	Shoot & root secondary growth	Leung
3	21 Feb (Mon)	Tutorial	Leung
	23 Feb (Wed)	Photosynthesis 1	Leung
	25 Feb (Fri)	Photosynthesis 2	Leung
4	28 Feb (Mon)	Tutorial	Leung
	2 Mar (Wed)	Respiration & Energy	Leung
	4 Mar (Fri)	Movement of Water and Solutes	Leung
5	7 Mar (Mon)	Tutorial	Leung
	9 Mar (Wed)	Plant defense responses to pathogens	Leung
	11 Mar (Fri)	Review for the Mid-term Exam	Leung
6	14 Mar (Mon)	Review for the Mid-term Exam	Li
	<b>16 Mar (Wed)</b>	<b>Mid-term exam*</b>	<b>Li / Leung</b>
7	21 Mar (Mon)	Introduction to flowering plants	Li
	23 Mar (Wed)	Reproduction of plant and development of seeds	Li
	25 Mar (Fri)	Tutorial	Li
8	28 Mar (Mon)	Hormonal physiology 1	Li
	30 Mar (Wed)	Hormonal physiology 2	Li

	1 Apr (Fri)	Tutorial	Li
9	4 Mar (Mon)	Hormonal physiology 3	Li
	6 Apr (Wed)	Hormonal physiology 4	Li
	8 Apr (Fri)	Tutorial	Li
10	11 Apr (Mon)	Plant response to environmental stimuli 1	Li
	20 Apr (Wed)	Plant response to environmental stimuli 2	Li
	22 Apr (Fri)	Tutorial	Li
11	25 Apr (Mon)	Plant cell signaling 1	Li
	27 Apr (Wed)	Plant cell signaling 2	Li
	29 Apr (Fri)	Tutorial	Li
12/13	4 May (Mon)	Plant molecular biotechnology 1	Li
	6 May (Wed)	Plant molecular biotechnology 2	Li
	11 May (Fri)	Review for the Final Exam	Li
	<b>TBC</b>	<b>Final exam</b>	<b>Li</b>