

LIFS 2070: Introduction to Biotechnology (Fall 23/24)

Lecturers:	Prof Karl Tsim (Course director) Prof. Yukinori Hirano	Rm 5456 (botsim@ust.hk) Rm 5505A (yukinori@ust.hk)
Time & Venue:	Monday Wednesday	12:00 – 13:20 12:00 – 13:20
References:	Introduction to Biotechnology Biotechnology Fundamentals Phytocosmetics and Cosmetic Science Yahoo; Google and etc	Thieman et al 2013 Khan, 2016 Lourith and Tsim 2021 Pearson CRC Press CRC Press

Course goals:

This course will provide students with a general understanding and recognition of fundamental subjects in biotechnology and is particularly aimed at students who are interested in declaring major or minor in Biotechnology.

Learning Outcomes:

On successful completion of this course, students are expected to be able to:

1. Understand the basic concepts of biotechnology and how this is related to our daily life.
2. Evaluate and analyse information relevant to biotechnology issues.
3. Communicate and explain information regarding issues and importance of biotechnology to general public.
4. Recognize how biotechnology can help resolve healthcare issues and develop a sustainable society.
5. Use a global perspective to analyze issues related to life science and biotechnology.

First Learning Assessment: 26%

Second Learning Assessment: 30%

Third Learning Assessment: 44%

	Date	Topic	Instructor	
1	4-Sept-22	Introduction to biotechnology	Tsim	
2	6-Sept-22	Application of biotechnology	Tsim	
3	11-Sept-22	Molecular foundation of biotechnology	Tsim	
4	13-Sept-22	Biotechnology tools in research & development	Tsim	
5	18-Sept-22	Testing and Certification Industry and Relevant ISO Standards	Tsim / R Wong	
6	20-Sept-22	Assessment 1 (26%) – [5 lectures, No. 1-5]	Tsim	
7	25-Sept-22	Technological approaches and achievements in animal, plant, and marine biotechnology	Hirano	
8	27-Sept-22		Hirano	
9	4-Oct-22		Hirano	
10	9-Oct-22		Hirano	
11	11-Oct-22		Hirano	
12	16-Oct-22		Hirano	
13	18-Oct-22		Hirano	
14	25-Oct-22		Assessment 2 (30%) – [7 lectures, No. 7-14]	Hirano
15	30-Oct-22	Basic and practical knowledge/means in biotechnology	Hirano	
16	6-Nov-22		Hirano	
17	8-Nov-22		Hirano	
18	13-Nov-22	Biotechnology in industry, environment, scientific discovery, and medical science	Hirano	
19	15-Nov-22		Hirano	
20	20-Nov-22		Hirano	
21	22-Nov-22		Hirano	
22	27-Nov-22		Hirano	
23	29-Nov-22		Assessment 3 (44%) [9 lectures No. 15-24]	Hirano
24	4-Dec-22		Hirano	

Note: The formats adopted for conducting Assessments 1-3 may be different and are up to the preferences of the three lecturers.