

TIGP Molecular and Cell Biology for Fall 2022 (tentative on 2022/5/18)

Code	3024101
Credits	4 (lectures: 4 hr per week, in English)
Organizer	Dr. Hsou-min Li
References	Alberts et al. Molecular Biology of the Cell 7 th ed.
Evaluation	<ol style="list-style-type: none"> 1. A 2-hour exam will be conducted in a close-book and in-class format for both the mid-term and final exams. Some instructors may also use in-class quiz or homework for grading. 2. Each lecture will weigh the same in your final grade 3. Students with a final grade ≥ 70 are regarded as “pass”. Students who fail the course cannot be granted the course credits and should retake the course if the course is required by their program.
Time	Monday 10:00-11:50 ; Thursday 14:30-16:20

Date	Week	Topic	pages	Instructor
9/8	(T)	Chapter 3 Proteins (Structure)	chap 3	Hung-Ta Chen
9/12	(M)	Chapter 3 Protein Function	134-170	See-Yeun Ting
9/15	(T)	Chapter 4 DNA, Chromosomes and genome	175-216	Chung-Ju Wang
9/19	(M)	Chapter 5 DNA Replication, Repair, and Recombination	chap 5	Liuh-Yow Chen
9/22	(T)	Chapter 5 DNA Replication, Repair, and Recombination	chap 5	Liuh-Yow Chen
9/26	(M)	Chapter 4 How genomes evolve and evolution	216-236	Jun-Yi Leu
9/29	(T)	Chapter 6 From DNA to RNA	299-333	Chien-Ling Lin
10/3	(M)	Chapter 6 From RNA to protein and the RNA world	333-368	Tien-Hsien Chang
10/6	(T)	Chapter 7 Control of Gene Expression: transcriptional control	369-392	Jun-An Chen
10/10	(M)	National Birthday (No class)		
10/13	(T)	Chapter 7 Control of Gene Expression: post-transcriptional controls, cell types, epigenetics, and non-coding RNA	392-438	Jun-An Chen
10/17	(M)	Chapter 7 Control of Gene Expression: cell types, epigenetics, and non-coding RNA	392-438	Jun-An Chen
10/20	(T)	Chapter 8 Mathematical analysis of cell functions	Chap 8	Sheng-hong Chen
10/24	(M)	Chapter 11 Membrane Transport of Small Molecules and the Electrical Properties of	chap 11	Yi-Fang Tsay

		Membranes		
10/27	(T)	No class		
10/31	(M)	Midterm Exam		
11/3	(T)	Chapter 12 Intracellular Compartments and Protein Sorting	chap 12	Hsou-min Li
11/7	(M)	Chapter 12 Intracellular Compartments and Protein Sorting	chap 12	Hsou-min Li
11/10	(T)	Chapter 13 Intracellular Membrane Traffic	chap 13	Chi-Kuang Yao
11/14	(M)	Chapter 14 Energy Conversion: Mitochondria and Chloroplasts	chap 14	Jychian Chen
11/17	(T)	Chap 15 Signaling in plants	880-885	Paul Verslues
11/21	(M)	Chapter 15 Cell Signaling – principles and GPCR	813-849	Yen-Ping Hsueh
11/24	(T)	Chapter 15 Cell Signaling – enzyme coupled receptors and alternative signalings	850-879	Cheng-Ting Chien
11/28	(M)	Chapter 16 The Cytoskeleton – actin and myosin	889-925	Yu-Ling Shih
12/1	(T)	Chapter 16 The Cytoskeleton – microtubules	925-962	Kuo-Chiang Hsia
12/5	(M)	Chapter 24 The innate and adaptive immune	chap 24	Kuo-I Lin
12/8	(T)	No class		
12/12	(M)	Chapter 17 The Cell Cycle	chap 17	Jen-Hsuan Wei
12/15	(T)	Chapter 18 Cell Death	chap 18	Guang-Chao Chen
12/19	(M)	Chapter 20 Cancer	chap 20	Sheng-hong Chen
12/22	(T)	No class		
12/26	(M)	Final Exam		