

110-1 Advanced Cell Biology-B**Class Time:** 3:10 ~ 6:00 PM, Tuesdays**Language:** English**Credits:** 3 hours**Classroom:** Rm 208 at NCKU Medical College**Coordinator:** Prof Li-Wha Wu (Ext. 3618)

Goals: Familiarize students with the fundamentals of cell biology and with the application of this knowledge in addressing both basic and clinical research questions. By the end of the course, students would know the basics of fundamental cell biology and how to apply what they learn in addressing cell biology-related questions arising in the research field of their interest, including cancer biology, immunology, neurobiology, microbial pathology, and developmental biology.

Format: Divided into two parts: 1st on the fundamentals of cell biology and contemporary cell biology technology, and 2nd on the applied knowledge in cell differentiation, organogenesis, embryonic development, immunity, pathogen and host interaction, neuro sciences and cancer. Each lecture will be presented by the instructors with their expertise in the field. Problem-based assignment(s) will be given before the lecture via Moodle.

Materials: Molecular Biology of the Cell by Alberts B et al (5th or 6th editions) and the relevant published materials given by each lecture

Grading criteria: Student participation and punctuality (20%), PBL assignment and panel discussion (20%), one mid-term (30%) and one final exam (30%)

Evaluation criteria	Percentage (%)	Good reading comprehension of scientific materials and excellent capabilities in applying professional knowledge	Abilities of updating and organizing innovative knowledge and demonstrating good communicational skills	Problem-solving skills
Punctuality and Attendance (Q/A included)	20	√	√	√
Problem-based assignments and panel discussion	20	√	√	√
Mid-term	30	√	√	√
PBL-based final exam	30	√	√	√

Course Progress Outline

Date	Week	Progress Description	Lecturer
9/21	1	Holiday (Introduction will be rescheduled during week 1)	Wu, Li-Wha/吳梨華
9/28	2	Plasma membrane	Chiang, Chi-Wu/蔣輯武
10/5	3	Cytoskeleton and cell movement	Huang, Po-Hsien /黃柏憲
10/12	4	Endomembrane systems and organelles	Pritha Majumder/馬珍德
10/19	5	Cell cycle and its control system	Chen, Yun-Wen/陳韻雯
10/26	6	Cell death	Wan, Shu-Wen / 萬書炆
11/2	7	Cell adhesion and extracellular matrix	Yeh, Yi-Chun/葉儀君
11/9	8	Mid-term	Wu, Li-Wha/吳梨華
11/16	9	Cell-cell communication	Chiu, Wen-Tai/邱文泰
11/23	10	Stem cell self-renewal and pluripotency	Wang, Yang-Kao/王仰高
11/30	11	Development and organogenesis	Chu, Chun-Hsien/朱俊憲
12/7	12	Immunity	Wang, Shainn-Wei/王憲威
12/14	13	Nervous system	Chu, Chun-Hsien/朱俊憲
12/21	14	Pathogen and host interaction	Teng, Ching-Hao/鄧景浩
12/28	15	Cancer	Wu, Li-Wha/吳梨華
1/4/2022	16	Panel discussion	Kuo, Yi-Zih /郭怡孜
1/11/2022	17	PBL-based final	Wu, Li-Wha/吳梨華