

## 108-1 基礎分子生物學 General Molecular Biology

2019/06/28

**Department:** Institute of molecular medicine

**Class time:** Wednesday, 9:10 - 12:00 AM

**Number of credits:** 3 credits

(開課序號 Serial Number:027、課程系統碼 Course System Number:T161600)

**Classroom:** Lecture room 302D, College of medicine, NCKU

**Coordinator(s):** 橋本昌征 (ext. 3615) (hashmate@mail.ncku.edu.tw)

**Teaching assistant:** Trayee Dhar (ext. 3621) (trayeedhar007@gmail.com)

**Course Goals:** Molecular biology is an academic discipline to understand complicated biological phenomena at the molecular level. Through the progress of this molecular biology, we have created technologies such as gene therapy and gene recombination. In this lecture, we will learn the fundamentals and applications of molecular biology through the function of genes.

**Course Format:** The lectures will be given by the assigned professors with expertise in the lecture topic.

**Course Materials:** Listed reference books and lecture notes.

**Grading Criteria:** Midterm Exam (50%), Term exam (50%)

方法	百分比 (%)	閱讀、理解與運用專業知識	彙整新知與良好的溝通能力	解決研究問題的能力
期中考 Mid-term	50	V	V	V
期末考 PBL-based final	50	V	V	V

序	Date	Topic	Lecturer 2/3-4 period
1	2019/9/11	Molecular Nature of Genes; Introduction to Gene Function	橋本昌征/張雋曦
2	2019/9/18	DNA Replication I: Basic Mechanism and Enzymology	橋本昌征/張雋曦
3	2019/9/25	DNA Replication II: Detailed Mechanism	橋本昌征/張雋曦
4	2019/10/2	Homologous Recombination, Transposition	橋本昌征/張雋曦
5	2019/10/9	The Mechanism of Transcription in Prokaryotes	橋本昌征/張雋曦
6	2019/10/16	Eukaryotic RNA Polymerases and Their Promoters	橋本昌征/張雋曦
7	2019/10/23	General Transcription Factors in Eukaryotes	橋本昌征/張雋曦
8	2019/10/30	Transcription Activators in Eukaryotes	橋本昌征/張雋曦
9	2019/11/6	Chromatin Structure and Its Effects on Transcription	橋本昌征/張雋曦
10	2019/11/13	Midterm exam	橋本昌征/張雋曦
11	2019/11/20	Messenger RNA Processing I: Splicing	橋本昌征/張雋曦
12	2019/11/27	Messenger RNA Processing II: Capping and Polyadenylation; Other RNA Processing Events	橋本昌征/張雋曦
13	2019/12/4	Mechanism of Translation II: Elongation and Termination	橋本昌征/張雋曦
14	2019/12/11	Ribosomes and Transfer RNA	橋本昌征/張雋曦
15	2019/12/18	Protein structures and functions	橋本昌征/張雋曦
16	2019/12/25	Genomics and Proteomics	橋本昌征/張雋曦
17	2020/1/8	Term exam	橋本昌征/張雋曦