

TIGP Bioinformatics Program
Basic Molecular Biology I (B1)
Fall 2024 Syllabus

Latest syllabus: <https://idv.sinica.edu.tw/tigpbio/>

Place: Room 308, Institute of Statistical Science, Academia Sinica

Time: Tuesday 09:00-12:00

Chair: Dr. Ho-Ming Chen (homing@gate.sinica.edu.tw)

Aim: Understanding the key concepts in molecular and cell biology and their experimental underpinnings

Textbook: (Required)

1. Molecular Cell Biology, 7th edition, by Harvey Lodish et al. Publisher: W. H. Freeman. International Edition (13 Aug, 2012). ISBN-13: 9781464109812.
 Local book store: <http://www.yihsient.com.tw/front/bin/ptdetail.phtml?Part=06585>
 Reference: (Recommended but not required)

2. Molecular Biology of the Cell, 6th edition, 2014.
<http://www.yihsient.com.tw/front/bin/ptdetail.phtml?Part=06595&Rcg=53601>

3. Molecular Biology: Principles of Genome Function, 2nd edition, 2014.
<http://www.yihsient.com.tw/front/bin/ptdetail.phtml?Part=06594&Rcg=52559>

4. Biochemistry: A Short Course, 2nd edition, by Lubert Stryer et al. Publisher: W. H. Freeman (December 23, 2011). ISBN-10: 1429283602, ISBN-13: 978-1429283601.

TA: N/A (Please refer to the lectures respectively shall you have any questions for each class)

Grades: Midterm exam 50%. Final exam 50%.

【 For Non-BP student 】

For Non-BP student to register/sit-in any BP course, it is required to gain course chair's permission:

(1) Basic Enrollment Information form <https://forms.gle/oK7vJzzrx9EvybbT9>

(2) TIGP-BP Course Registration Consent Form
https://idv.sinica.edu.tw/tigpbio/index/TIGP%20Bioinformatics_Class%20Registration%20Consent%20Form.docx

※ Deadline: **the 4th week** of each semester.

※ Signature of the course chair should be collected before submission. Incomplete form will not be accepted.

※Course grade will NOT be given (even class enrollment is completed at school) if fail to follow the above procedures.

Week	Date	Topics/Brief Description	Lecturers	Evaluation Method	Email
1	2024/9/3 @Webex Only	Molecules, Cells, and Evolution	Dr. Ueng-Cheng Yang	Take-home exam with a specified deadline: ▶ Sep. 20th	uyang@nycu.edu.tw
2	2024/9/10 @Webex Only	Basic Molecular Genetic Mechanisms	Dr. Ueng-Cheng Yang	Take-home exam with a specified deadline: ▶ Sep. 24th	
3	2024/9/17	Holiday—Mid-Autumn Festival (no class)	--	--	--
3	2024/9/18(Wed) 9:00-12:00 @Webex Only	Molecular Genetic Techniques	Dr. Ueng-Cheng Yang	Take-home exam with a specified deadline: ▶ Oct. 2nd	uyang@nycu.edu.tw
4	2024/9/24	Genes, Genomics, and Chromosomes	Dr. Liang-Chuan Lai	Take-home exam with a specified deadline: ▶ Oct. 8th	llai@ntu.edu.tw
5	2024/10/1	Transcriptional Control of Gene Expression	Dr. Chuan Ku	Take-home exam with a specified deadline: ▶ Oct. 22nd	chuanku@gate.sinica.edu.tw
6	2024/10/8	Post-Transcriptional Gene Control	Dr. Ho-Ming Chen	Take-home exam with a specified deadline: ▶ Oct. 22nd 23:00	homing@gate.sinica.edu.tw
7	2024/10/15	Review Week (no class)	--		
8	2024/10/22	Midterm Exam (take-home exams, no class)	--		
9	2024/10/29	Protein Structure and Function	Dr. Lay-Sun Ma	Take-home exam with a specified deadline: ▶ Nov. 12th	laysunma@gate.sinica.edu.tw
9	2024/10/30(Wed) 14:00-17:00	Biomembrane Structure and Transport	Dr. Jung-Hsin Lin	Take-home exam with a specified deadline: ▶ Dec. 15th	jhlin@gate.sinica.edu.tw
10	2024/11/5	Signal Transduction	Dr. Ho-Ming Chen	In-class exam on final exam date	homing@gate.sinica.edu.tw
11	2024/11/12	Rescheduled to 2024/10/30	--	--	--
12	2024/11/19 @Webex Only	Cellular Energetics	Dr. Ueng-Cheng Yang	Take-home exam with a specified deadline: ▶ Dec. 20th	uyang@nycu.edu.tw
13	2024/11/26	The Eukaryotic Cell Cycle	Dr. Hsiao-Chun Huang	Take-home exam with a specified deadline: ▶ Dec. 20th	hsiaochun@ntu.edu.tw
14	2024/12/3	Cancer	Dr. Liang-Chuan Lai	Take-home exam with a specified deadline: ▶ Dec. 17th	llai@ntu.edu.tw
15	2024/12/10	Review Week (no class)	--		
16	2024/12/17	Final Exam	--		