

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

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

<p><b>Place:</b> Room 308, Institute of Statistical Science, Academia Sinica</p> <p><b>Time:</b> Tuesday 09:00-12:00</p> <p><b>Chair:</b> Dr. Ho-Ming Chen (homing@gate.sinica.edu.tw)</p> <p><b>Aim:</b> Understanding the key concepts in molecular and cell biology and their experimental underpinnings</p> <p><b>Textbook: (Required)</b></p> <p>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: <a href="http://www.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06585">http://www.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06585</a></p> <p>Reference: (Recommended but not required)</p> <p>2. Molecular Biology of the Cell, 6th edition, 2014.  <a href="http://www.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06595&amp;Rcg=53601">http://www.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06595&amp;Rcg=53601</a></p> <p>3. Molecular Biology: Principles of Genome Function, 2nd edition, 2014.  <a href="http://www.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06594&amp;Rcg=52559">http://www.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06594&amp;Rcg=52559</a></p> <p>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.</p> <p><b>TA:</b> N/A (Please refer to the lectures respectively shall you have any questions for each class)</p> <p><b>Grades:</b> Midterm exam 50%. Final exam 50%.</p>
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**【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/oK7vJzrx9EvybbT9>

(2) TIGP-BP Course Registration Consent Form  
[https://idv.sinica.edu.tw/tigpbio/index/TIGP%20Bioinformatics\\_Class%20Registration%20Consent%20Form.docx](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	<a href="#">2024/9/3</a> <a href="#">@Webex Only</a>	Molecules, Cells, and Evolution	Dr. Ueng-Cheng Yang	HW with a specified deadline	uyang@nycu.edu.tw
2	<a href="#">2024/9/10</a> <a href="#">@Webex Only</a>	Basic Molecular Genetic Mechanisms	Dr. Ueng-Cheng Yang		
3	2024/9/17	Holiday—Mid-Autumn Festival (no class)	--	--	--
3	<a href="#">2024/9/18(Wed)</a> <a href="#">9:00-12:00</a> <a href="#">@Webex Only</a>	Molecular Genetic Techniques	Dr. Ueng-Cheng Yang	HW with a specified deadline	uyang@nycu.edu.tw
4	2024/9/24	Genes, Genomics, and Chromosomes	Dr. Liang-Chuan Lai	HW with a specified deadline	llai@ntu.edu.tw
5	2024/10/1	Transcriptional Control of Gene Expression	Dr. Chuan Ku	HW with a specified deadline: ▶ Oct. 15th	chuanku@gate.sinica.edu.tw
6	2024/10/8	Post-Transcriptional Gene Control	Dr. Ho-Ming Chen	was HW with a specified deadline	homing@gate.sinica.edu.tw
7	2024/10/15	Review Week (no class)	--		
8	2024/10/22	Midterm Exam	--		
9	2024/10/29	Protein Structure and Function	Dr. Lay-Sun Ma	To Be Announced	laysunma@gate.sinica.edu.tw
9	<a href="#">2024/10/30(Wed)</a> <a href="#">14:00-17:00</a>	Biomembrane Structure and Transport	Dr. Jung-Hsin Lin	was HW with a specified deadline	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	<a href="#">2024/11/19</a> <a href="#">@Webex Only</a>	Cellular Energetics	Dr. Ueng-Cheng Yang	HW with a specified deadline	uyang@nycu.edu.tw
13	2024/11/26	The Eukaryotic Cell Cycle	Dr. Hsiao-Chun Huang	HW with a specified deadline	hsiaochun@ntu.edu.tw
14	2024/12/3	Cancer	Dr. Liang-Chuan Lai	To Be Announced	llai@ntu.edu.tw
15	2024/12/10	Review Week (no class)	--		
16	2024/12/17	Final Exam	--		