

**TIGP Bio 2021 Fall Syllabus**  
**Basic Molecular Biology I (B1)**

For the most up-to-date syllabus, please visit <https://tigpbp.iis.sinica.edu.tw/tigpbio/index.html>

**Place:** Room 107, New Building of the Institute of Information Science, Academia Sinica.  
**Time:** Tuesday 09:00-12:00  
**Chair:** Dr. Ueng-Cheng Yang ([uyang@nycu.edu.tw](mailto:uyang@nycu.edu.tw)), Dr. Sen-Lin Tang ([sltang@gate.sinica.edu.tw](mailto:sltang@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.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06585>  
 Reference: (Recommended but not required)  
 1. Molecular Biology of the Cell, 6th edition, 2014.  
<http://www.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06595&Rcg=53601>  
 2. Molecular Biology: Principles of Genome Function, 2nd edition, 2014.  
<http://www.yihscient.com.tw/front/bin/ptdetail.phtml?Part=06594&Rcg=52559>  
 3. 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 refers to the lectures respectively shall you have any questions of each class)  
**Grades:** Midterm exam 50%. Final exam 50%.  
**Note:** For **Non-BP student** to register/sit-in any BP course, it is required to gain course chair's permission and follow the steps:  
 (1) Submit the hard copy or PDF file of the completed [TIGP Bioinformatics Course Registration Consent Form](#) to the TIGP BP office  
 (2) Provide the information via the google form at [BP Class Enrollment Information](#).  
 The deadline for above requirement is **the 4<sup>th</sup> week** of each semester. Signature of corresponding BP Course Chair should be collected and 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
1	2021/9/14@ <a href="#">Webex</a>	Molecules, Cells, and Evolution	Dr. Chuan-Hsiung Chang changed to Dr. Ueng-Cheng Yang
2	2021/9/21 (Holiday) →Moved to 2021/9/22	--	--
2	<b>2021/9/22(Wed)</b> @ <a href="#">Webex</a>	Basic Molecular Genetic Mechanisms	Dr. Ueng-Cheng Yang
3	2021/9/28@ <a href="#">Webex</a>	Molecular Genetic Techniques	Dr. Ueng-Cheng Yang
4	2021/10/5@ <a href="#">Webex</a>	Genes, Genomics, and Chromosomes	Dr. Chuan-Hsiung Chang changed to Dr. Ueng-Cheng Yang
5	2021/10/12@ <a href="#">Webex</a>	Protein Structure and Function	Dr. Jie-Rong Huang
6	2021/10/19 <b>Moved to 10/27</b>	--	--
7	<b>2021/10/27(Wed)</b> <b>14:00-17:00@<a href="#">Webex</a></b>	Biomembrane Structure and Transport	Dr. Jung-Hsin Lin
8	2021/11/02	Midterm Exam (take-home exam, no class)	
9	2021/11/9@ <a href="#">Webex</a>	Transcriptional Control of Gene Expression	Dr. An-Chi Wei
10	2021/11/16	Post-Transcriptional Gene Control	Dr. Ho-Ming Chen
11	2021/11/23	Cellular Energetics	Dr. Ueng-Cheng Yang
12	2021/11/30	Signal Transduction and G Protein–Coupled Receptors	Dr. Wailap Victor Ng
13	2021/12/7	Signaling Pathways That Control Gene Expression	Dr. Wailap Victor Ng
14	2021/12/14@ <a href="#">Webex</a>	The Eukaryotic Cell Cycle	Dr. An-Chi Wei
15	2021/12/21	Review Week (no class)	
16	2021/12/28	Final Exam (take-home exam, no class)	
17	2022/1/4	Cancer	Dr. Yuh-Shan Jou