

TIGP Bioinformatics Program
Student Presentation
Fall 2025 Syllabus & Guidelines

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

Place: Online (Google Meet): <https://meet.google.com/tdr-jtku-fkn>

Time: Thursday, 15:30-17:00

Chair: Dr. Hsuan-Cheng Huang (hsuancheng@nycu.edu.tw)

*Effective from the 2014 Fall semester, all TIGP-BP students are required to present once a semester in student presentation.

*First Year Students: the paper should be assigned by your lab professor.

*The following schedule is confirmed and will not be changed. Please contact Dr. Hsuan-Cheng Huang if you do have difficulty with the assigned date.

*The presenter shall introduce the host and attended professors at the beginning of each seminar.

Week	Date	Topic	Student	Instructor
1	2025/9/4	SHARK enables sensitive detection of evolutionary homologs and functional analogs in unalignable and disordered sequences	Hsin-Ying Chang (BP)	Dr. Chuan Ku
2	2025/9/11	Unsupervised clustering identified clinically relevant metabolic syndrome endotypes in UK and Taiwan Biobanks	Ru-Yin Jian (BP)	Dr. Huai-Kuang Tsai
3	2025/9/18	A pathology foundation model for cancer diagnosis and prognosis prediction	Hsu-Ching Huang (NYCU)	Dr. Hsuan-Cheng Huang
4	2025/9/25	A Foundation Model for Generalizable Disease Detection from Retinal Images.	Apriandy Angdresey (BP)	Dr. Hsin-Chou Yang
5	2025/10/2	The landscape of tolerated genetic variation in humans and primates	Hsuan-Ya Chiu (NYCU)	Dr. Hsuan-Cheng Huang
6	2025/10/9	No class	--	--

7	2025/10/16	Review Week (no class)	--	
8	2025/10/23	Midterm Exam Week (no class)	--	
9	2025/10/30	<u>CelloType: a unified model for segmentation and classification of tissue images</u>	Ching-Ya Lin (BP)	Dr. Huai-Kuang Tsai
10	2025/11/6	No class	--	--
11	2025/11/13	<u>Dissecting cell identity via network inference and in silico gene perturbation</u>	Daniel Nelson (BP)	Dr. Sheng-Hong Chen
12	2025/11/20	<u>Sequence modeling and design from molecular to genome scale with Evo</u>	Ya-Chu Hsu (BP)	Dr. Hsiao-Chun Huang
13	2025/11/27	<u>Reengineering of a flavin-binding fluorescent protein using ProteinMPNN</u>	Saptashwa Datta (BP)	Dr. Lee-Wei Yang
14	2025/12/4	<u>A visual-language foundation model for computational pathology</u>	Thi Huong Giang Pham (BP)	Dr. Chun-Ying Wu
15	2025/12/11	Review Week (no class)	--	
16	2025/12/18	Final Exam Week (no class)	--	

[< Seminar presentation guidelines on the following pages >](#)

Seminar presentation guidelines for Ph.D. program students:

2025-07-10

This research seminar course is intended to provide students planning a research career in Bioinformatics with the opportunity to develop the skill of critically reading and evaluating research papers. The course consists of a weekly timetabled session in which students will read, present and discuss research papers published on high impact journals. A fixed threshold of impact factors is not imposed. Use your common sense instead.

Guidelines:

1. **Research article:** Each week, students will choose RESEARCH papers to be presented.
 - a. For NYCU students not in the TIGP-Bio program, the paper (+ supplements) pdf file should be emailed to (1) hsuancheng@nycu.edu.tw (Dr. Hsuan-Cheng Huang), (2) tigpbio@gate.sinica.edu.tw (TIGP-Bioinformatics Program office), (3) all students in student presentation class, and also (4) other participating professors **at least one week before** your in-class seminar presentation takes place. Any delay will result in 10 points deducted from your final grade. Please also send the slides to everyone **2 days before** the report. Because some modifications may be made right before the report, it is okay if the slides are not the final version.
 - b. For TIGP-Bio students, the paper (+ supplements) pdf file should be emailed to (1) **your thesis advisor/lab advisor**, (2) tigpbio@gate.sinica.edu.tw (TIGP-Bioinformatics Program office), (3) all students in student presentation class, and also (4) other participating professors **at least one week before** your in-class seminar presentation takes place. Any delay will result in 10 points deducted from your final grade. Please also send the slides to everyone **2 days before** the report. Because some modifications may be made right before the report, it is okay if the slides are not the final version.
1. **Article selection:** You are required to select a recent RESEARCH article that was published **after September 2020**. (Review articles are NOT acceptable.)
2. **Presentations:** Everyone in the class will present one paper. You should plan to talk for around 40 minutes. Starting from this you should initiate a discussion of the paper (so it is a good idea to conclude your slide presentation with a selection of points to consider and discuss). We should plan to have time for a lively discussion of each paper; your job in giving a presentation is to initiate this discussion. Make sure to
 - a. Draw **valid** conclusions from results of your presented paper.
 - b. **Summarize evidence for each conclusion.** (How does the paper support its conclusions?)
 - c. **Compare the results with other similar experiments published previously, if appropriate.**
 - Please refrain from presenting an article written by your supervisor or your friends/classmates. You need to increase the exposure to the breadth and depth of bioinformatics research.
 - Students are encouraged to prepare a few questions for group discussion at the end of the presentation. Students are not expected to simply sit in the class.

- Please make a rehearsed presentation if you don't know how long your presentation is going to last. An over-length presentation doesn't translate to a good one.

3. **Language of presentation:** You are required to present your research article **in English**.

Evaluation Criteria:

You will be evaluated by the following criteria:

1. Your attendance (10%).
2. Your seminar presentation (90%).