

TIGP Bioinformatics Program
Student Presentation
Spring 2026 Syllabus & Guidelines

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

Place: Online (Google Meet): <https://meet.google.com/bcg-pmr-x-yhv>

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 *BP student's presentation should be evaluated by their respective thesis advisor or lab advisor.
1	2026/2/26	Identifying temporal and spatial patterns of variation from multimodal data using MEFISTO	Thi Huong Giang Pham (BP)	Dr. Chen-Ching Lin
2	2026/3/5	Using deep learning to annotate the protein universe	Ya-Chu Hsu (BP)	Dr. Huai-Kuang Tsai
3	2026/3/12	Protein Set Transformer: a protein-based genome language model to power high-diversity viromics	Hsin-Ying Chang (BP)	Dr. Chuan Ku
4	2026/3/19	The SecM arrest peptide traps a pre-peptide bond formation state of the ribosome	Saptashwa Datta (BP)	Dr. Kazuhiro Takemura
5	2026/3/26	No class	--	--
6	2026/4/2	Complex genetic variation in nearly complete human genomes	Daniel Nelson (BP)	Dr. Shu-Jui Hsu
7	2026/4/9	Review Week (no class)	--	
8	2026/4/16	Midterm Exam Week (no class)	--	

9	2026/4/23	DNA shape and epigenomics distinguish the mechanistic origin of human genomic structural variations	Ru-Yin Jian (BP)	Dr. Huai-Kuang Tsai
10	2026/4/30	Cross-species gene redesign leveraging ortholog information and generative modeling	Hsuan-Ya Chiu (NYCU)	Dr. Hsuan-Cheng Huang
11	2026/5/7	Robust and interpretable prediction of gene markers and cell types from spatial transcriptomics data	Ching-Ya Lin (BP)	Dr. Hsuan-Cheng Huang
12	2026/5/14 Canceled	--	Apriandy Angdresey (BP)	Dr. Hsin-Chou Yang
13	2026/5/21	Multimodal AI generates virtual population for tumor microenvironment modeling	Hsu-Ching Huang (NYCU)	Dr. Hsuan-Cheng Huang
14	2026/5/28	No class		
15	2026/6/4	Review Week (no class)	--	
16	2026/6/11	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 NYCUCU 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%).