

## Advanced Microbiology (微生物學特論); 2022 Spring

### Affiliated Programs

- TIGP-MBAS (AS-NCHU): Elective Core Course; NCHU course code: 8024 (listed under “Special Topics in Microbiology”).
- TIGP-BIODIV (AS-NTNU): Elective Course; NTNU course code: DID0003.
- TIGP-MCB (AS-NDMC): Elective Course; NDMC course code: 3024470.
- Plant Pathology and Microbiology (NTU): Elective Course; NTU course code: 633 U1480 PPM5082.

### Course Information

- Coordinators
  - TIGP: Chih-Horng Kuo (郭志鴻); [chk@gate.sinica.edu.tw](mailto:chk@gate.sinica.edu.tw); 02-2787-1127.
  - NTU: Li Chang (張立); [lichang@ntu.edu.tw](mailto:lichang@ntu.edu.tw); 02-3366-4095.
- Assistant: Jennifer Wu (吳泓欣); [mbastigp@gate.sinica.edu.tw](mailto:mbastigp@gate.sinica.edu.tw); 02-2652-2928.
- Objectives: Introduce the principles and potential applications of microbiology. The first part is organized by organisms and focuses on the general biology of each group. The second part covers different fields of biology related to microbiology research. The third part covers special topics, including those related to applied microbiology.
- This is a 3-credit graduate-level course conducted in English; includes a 2-hour lecture and a 1-hour discussion weekly.
  - Lecture: Tuesday 3-5PM; Room A236, Agricultural Biotechnology Building, Academia Sinica. May switch to online if required.
  - Discussion: arranged by instructors and students.
- Evaluation
  - Three homework assignments and one in-class oral presentation (25% each).
  - Each student needs to select three instructors for their assignments and one topic for oral presentation in the first week. The assignments are due one week after the selected lectures.
  - Each instructor will decide on the assignment format and provide further details during the lecture. Examples include but not limited to: (1) an essay on one paper/topic, (2) a practice review on one paper/preprint, and (3) a short proposal. Instructors should provide written or oral feedback to the students and email the scores to the coordinator within two weeks after the lecture.
  - Attendance is required but not scored. Students who missed three or more of the lectures will not receive the course credit, unless special permission from the course coordinator is granted.

## Schedule

Week	Date	Topic	Instructor
1	2/15	Bacteria and archaea	Chih-Horng Kuo (郭志鴻); <a href="mailto:chk@gate.sinica.edu.tw">chk@gate.sinica.edu.tw</a>
2	2/22	Viruses	Na-Sheng Lin (林納生); <a href="mailto:nslin@gate.sinica.edu.tw">nslin@gate.sinica.edu.tw</a>
3	3/01	Oomycetes	Chih-Hang Wu (吳志航); <a href="mailto:wuchh@gate.sinica.edu.tw">wuchh@gate.sinica.edu.tw</a>
4	3/08	Nematodes	Jiue-In Yang (楊爵因); <a href="mailto:jiueinyang@ntu.edu.tw">jiueinyang@ntu.edu.tw</a>
5	3/15	Fungi	Hiran Anjana Ariyawansa (歐海仁); <a href="mailto:ariyawansa44@ntu.edu.tw">ariyawansa44@ntu.edu.tw</a>
6	3/22	Cell biology	Chao-Wen Wang (王昭雯); <a href="mailto:cwwang02@gate.sinica.edu.tw">cwwang02@gate.sinica.edu.tw</a>
7	3/29	Molecular genetics	Yen-Ping Hsueh (薛雁冰); <a href="mailto:pingshueh@gate.sinica.edu.tw">pingshueh@gate.sinica.edu.tw</a>
8	4/05	Holiday; no class	NA
9	4/12	Bioinformatics and metagenomics	Yu-Wei Wu (吳育璋); <a href="mailto:yuwei.wu@tmu.edu.tw">yuwei.wu@tmu.edu.tw</a>
10	4/19	Evolution	Jun-Yi Leu (呂俊毅); <a href="mailto:jleu@gate.sinica.edu.tw">jleu@gate.sinica.edu.tw</a>
11	4/26	Microalgae: diversity and interactions	Chuan Ku (顧銓); <a href="mailto:chuanku@gate.sinica.edu.tw">chuanku@gate.sinica.edu.tw</a>
12	5/03	Bacterial secretion and interactions	Erh-Min Lai (賴爾珉); <a href="mailto:emlai@gate.sinica.edu.tw">emlai@gate.sinica.edu.tw</a>
13	5/10	Microbial ecology	Sen-Lin Tang (湯森林); <a href="mailto:sltang@gate.sinica.edu.tw">sltang@gate.sinica.edu.tw</a>
14	5/17	Symbiosis	Ko-Hsuan Chen (陳可萱); <a href="mailto:kohsuanchen@gate.sinica.edu.tw">kohsuanchen@gate.sinica.edu.tw</a>
15	5/24	Viral vectors and biotechnology applications	Li Chang (張立); <a href="mailto:li.chang0220@gmail.com">li.chang0220@gmail.com</a>
16	5/31	Microbial therapeutics	See-Yeun Ting (陳詩允); <a href="mailto:syting@gate.sinica.edu.tw">syting@gate.sinica.edu.tw</a>
17	6/07	In-class presentation	Chih-Horng Kuo (郭志鴻); <a href="mailto:chk@gate.sinica.edu.tw">chk@gate.sinica.edu.tw</a>
18	6/14	Final exam week; no class	NA