Advanced Microbiology (微生物學特論); 2021 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

- Objectives: Introduce the principles and potential applications of microbiology. The first part is organized by organisms (e.g., bacteria, archaea, fungi, viruses, etc) and focuses on the general biology of each group. The second part covers different fields of biology (e.g., cell biology, evolution, molecular genetics, physiology, omics, etc) related to microbiology research. The third part emphasizes on applications.
- Course Coordinator: Chih-Horng Kuo (郭志鴻); chk@gate.sinica.edu.tw; 02-2787-1127.
- Course Assistant: Jennifer Wu (吳泓欣); mbastigp@gate.sinica.edu.tw; 02-2652-2928.
- Time: Tuesday 3-5PM. Additional discussion time for assignments will be arranged by instructors and students.
- Place: A236, Agricultural Biotechnology Building, Academia Sinica. (Tentative; may be switched to online teaching if necessary)
- Course Language: English.
- Evaluation
    - Each student must contact three instructors for their assignments, the three scores are averaged as the final score for the semester. There is no midterm/final exam. (Tentative; may be adjusted according to the number of students)
    - Each instructor may decide on the format of assignment and evaluation. Examples include but not limited to: (1) write an essay on one assigned paper, (2) practice review on one assigned paper (or preprint), and (3) prepare a short proposal (written and/or oral). After receiving the assignments, instructors should provide written or oral feedback to the students, and send the scores to the course coordinator.
    - 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	2/23	Bacteria and archaea	Chih-Horng Kuo (郭志鴻) chk@gate.sinica.edu.tw
2	3/02	Fungi	Wei-Chiang Shen (沈偉強) wcshen@ntu.edu.tw
3	3/09	Oomycetes	Chih-Hang Wu (吳志航) wuchh@gate.sinica.edu.tw
4	3/16	Nematodes	Jiue-In Yang (楊爵因) jiueinyang@ntu.edu.tw
5	3/23	Viruses	Na-Sheng Lin (林納生) nslin@gate.sinica.edu.tw
6	3/30	Cell biology	Chao-Wen Wang (王昭雯) cwwang02@gate.sinica.edu.tw
7	4/06	Molecular genetics	Yen-Ping Hsueh (薛雁冰) pinghsueh@gate.sinica.edu.tw
8	4/13	Evolution	Jun-Yi Leu (呂俊毅) jleu@gate.sinica.edu.tw
9	4/20	Omics	Chuan Ku (顧銓) chuanku@gate.sinica.edu.tw
10	4/27	Bioinformatics	Yu-Wei Wu (吳育瑋) yuwei.wu@tmu.edu.tw
11	5/04	Microbial physiology and metabolism	Yin-Ru Chiang (江殷儒) yinru915@gate.sinica.edu.tw
12	5/11	Secretion systems	Nai-Chun Lin (林乃君) nlin@ntu.edu.tw
13	5/18	Microbe-microbe interactions	Erh-Min Lai (賴爾珉) emlai@gate.sinica.edu.tw
14	5/25	Microbe-plant interactions	Lay-Sun Ma (馬麗珊) laysunma@gate.sinica.edu.tw
15	6/01	Microbial ecology	Sen-Lin Tang (湯森林) sltang@gate.sinica.edu.tw
16	6/08	Microbial inoculants for agriculture: principle, market and application	Chi-Te Liu (劉啟德) chiteliu@ntu.edu.tw
17	6/15	Viral vectors and biotechnology applications	Hsin-Hung Yeh (葉信宏) hyeh@sinica.edu.tw
18	6/22	Final exam week; no class	NA