

CAMB 7000: Topics in Microbiology (Spring 2026)

Directors: Joseph Zackular, Sunny Shin, Michael Betts

Class Time: Tuesdays and Thursdays, 2:00-3:30 PM from January 20th to March 17th

Location: The course will be held in person in **John Morgan M100**. A hybrid option will be available if possible.

Course Description: This course is designed for second year students studying MVP program related projects and focuses on presentation skills in the scientific area of microbiology and pathogen-host interactions. The overall goal of this course is to give students the tools to present and defend their science in a clear and concise fashion. Introductory sessions address the role of storytelling in effectively communicating their research and the use of clear and concise schematics to convey the project. The course directors will also cover strategies for effective prelim presentations in the new slide-based format. In subsequent classes students will give two presentations on their research project.

First presentation: The students will present a PowerPoint presentation on their project Specific Aims and a project schematic. Each student presentation should provide sufficient background, discuss what is known and what is not known about the topic, and frame two or three Specific Aims for a potential F31 style grant application. We will also discuss potential experimental strategies to address the central hypothesis of the grant proposal. The discussions are deliberately wide-ranging, and review recent literature, techniques, and how to construct a presentation and grant. There will be specific focus on experimental expectations, alternative approaches/strategies, and alternative models. For the first presentation we will have a visiting senior graduate student join to provide feedback and their experiences.

Second presentation: Students presentations will be given in the format of the preliminary exam for this year (5 PowerPoint slides given uninterrupted for 15 minutes, followed by questions). Students will present background, Specific Aims, experimental details, expected results, and alternative strategies during their presentation and field questions from faculty, peers, and upper year students. For this second presentation, two visiting faculty and the same visiting senior graduate student will join the class to provide critical feedback and questions.

Taken together, the students will learn how to prepare, present, and defend a research topic, as well as to integrate constructive criticism into the development of a strong research direction.

Outside experts: Each student will be required to identify and contact an outside expert (Penn faculty member) in their field of research (broadly defined – virology, bacteriology, immunology). They will meet with the outside expert at least once in the semester. Students should receive feedback on their proposed Specific Aims from their outside expert. We highly encourage students to meet with and stay in contact with their experts throughout the Spring semester and meet as frequently as needed. Faculty experts will not be restricted from student preliminary exam committees.

Course Evaluation: The success of the course rests entirely upon the discussion quality and engagement of the faculty and students involved. Class participation is 100% of grade.

Schedule:

Jan 20: “In the beginning...” Course introduction and Expectations. Discussion will include details on preliminary exam format.

Jan 22: Example Prelims

Jan 27: Presentation Prep

Jan 29: Round 1 Presentations 1+2:

Feb 3: Round 1 Presentations 3+4:
Feb 5: Round 1 Presentations 5+6:
Feb 10: Round 1 Presentations 7+8:
Feb 12: Round 1 Presentations 9+10:
Feb 17: Round 1 Presentations 11+12:
Feb 19: Wrap-up discussion
Feb 24: Round 2 Presentations 1+2:
Feb 26: Round 2 Presentations 3+4:
Mar 3: Round 2 Presentations 5+6:
Mar 5: Round 2 Presentations 7+8:
Mar 10: Round 2 Presentations 9+10:
Mar 12: Round 2 Presentations 11+12:
Mar 17: Wrap-up discussion

<https://docs.google.com/spreadsheets/d/1jmA7OXn-nHaf2r6GGAuT3InrTFpZYMQtOH2jq8-rA-k/edit?gid=891695898#gid=891695898>Links to an external site.

Contact information:

Admin support:

Natasha Smith (smithn25@chop.edu)

Priscille Mieles (mielesp@chop.edu)

Directors:

Joseph Zackular (joseph.zackular@penncmedicine.upenn.edu)

Sunny Shin (sunshin@penncmedicine.upenn.edu)

Michael Betts (betts@penncmedicine.upenn.edu)

Faculty Attendance Schedule:

Class dates	Presentations	Faculty	Backup
20-Jan	Intro	All	
22-Jan	Sample prelims	Mike	
	Round 1		
27-Jan	Presentation Prep	Joe	
29-Jan	1 and 2	Sunny	
3-Feb	3 and 4	Mike	Sunny
5-Feb	5 and 6	Joe	Mike
10-Feb	7 and 8	Mike	Joe
12-Feb	9 and 10	Sunny	Mike
17-Feb	11 and 12	All	
19-Feb	Round 1 wrap up	Mike	Sunny
	Round 2		
24-Feb	1 and 2	Joe	
26-Feb	3 and 4	Joe	
3-Mar	5 and 6	Sunny	Mike
5-Mar	7 and 8	Mike	Joe
10-Mar	9 and 10	Sunny	Joe
12-Mar	11 and 12	All	
17-Mar	Wrap up	All	

Academic Freedom Statement

The policies of the University of Pennsylvania protect academic freedom, as defined in the [AAUP's 1940 Statement of Principles](#)[Links to an external site.](#). This statement has been endorsed by over 250 scholarly and educational organizations in the United States, and its principles are written into faculty handbooks nationwide, including [Penn's](#)[Links to an external site.](#). The principles of academic freedom were established to protect the integrity of research and teaching from interference by donors, trustees, politicians, and others who might seek to make universities serve private and political interests. They are founded on the idea that a university's purpose is to generate new knowledge that can serve the common good in a democratic society, and that generating new knowledge requires free and open inquiry. To safeguard the university's public mission, academic freedom entails the following rights for all faculty members—whether tenure-track or non-tenure track, and including graduate research and teaching assistants—and for students:

The right of faculty members to full freedom in research, teaching, extramural speech (public speech on issues of general concern) and intramural speech (speech about the university itself, including criticism of it).

The right of students to freedom in learning, which includes freedom of association and expression and freedom of inquiry in the classroom.

Academic freedom is only as strong as the institutions, procedures, and professional norms that faculty members established over the last century to protect it: institutions of faculty governance such as Faculty Senates and unions; the institution of tenure; and due process procedures that protect both tenure-track and non-tenure-track faculty against unjust discipline or dismissal. For further information about academic freedom, see the [AAUP-Penn website](#)[Links to an external site.](#)

—AAUP-Penn Executive Committee