

Spring 2019
 BioMi 3990
 Professional skills for host-microbe interactions research
 1 credit
 Wednesdays 3:35-4:25
 Instructors: Tory Hendry ([th572](#)) & Teresa E. Pawlowska ([tep8](#))

This course complements the Undergraduate Research Experience program coordinated by the Cornell Institute of Host-Microbe Interactions and Disease. The goal is to introduce students interested in research on host-microbe interactions to professional skills needed to successfully complete research projects and apply to graduate school. Course activities will address principles of the scientific method, research ethics, electronic database literacy, science citation software, science communication as well as planning for graduate study, including preparation of curriculum vitae and personal statement.

Learning outcomes:

1. Familiarity with principles of the scientific method.
2. Awareness of principles of research ethics.
3. Appreciation of the significance of broader impacts

Skills:

1. Critically read scientific literature.
2. Design and execute a research project aimed at understanding an aspect of host-microbe biology:
 - a. Write a research proposal,
 - b. Develop an oral presentation of the project proposal,
 - c. Revise a proposal according to reviewer comments,
 - d. Collect, analyze and interpret data,
 - e. Report results in a poster and/or oral presentation.
3. Build a cv.
4. Formulate a personal statement.

Evaluation: Active **participation** is required, including oral presentation, draft cv and personal statement.

Grading: S/U.

Students with disabilities: Your access to this course is important. Please give us your Student Disability Services (SDS) accommodation letter early in the semester so that we have adequate time to arrange your approved academic accommodations. If you need an immediate accommodation for equal access, please speak with us after class or send an email message to us and/or SDS at sds_cu@cornell.edu. If the need arises for additional accommodations during the semester, please contact SDS. SDS is located on level 5 of Cornell Health, 110 Ho Plaza, 607-254-4545, sds.cornell.edu.

Discussion	Date	Topic	Instructor
1	Jan 23	The scientific method	TP
2	Jan 30	Science ethics	TP & TAH
3	Feb 6	How to critically read scientific literature	TP & TAH
4	Feb 13	How to research a science topic	TP & TAH
5	Feb 20	How to write a research proposal	TAH
6	Feb 27	Broader impacts of your work	TAH
7	March 6	Applying to graduate school	TP & TAH
8	March 13	Perform a self-assessment	TAH
9	March 20	How to write a CV and a statement of purpose	TP
10	March 27	Lightning talks on research projects I	TP & TAH
11	April 10	Lightning talks on research projects II	TP & TAH
12	April 17	Lightning talks on research projects III	TP & TAH
13	April 24	Lightning talks on research projects IV	TP & TAH
14	May1	Lightning talks on research projects V	TP & TAH