Microbiology 499Y/P/T
Honors Project or Thesis in Microbiology

Instructor: Dr. Kristen DeAngelis, deangelis@microbio.umass.edu
Meetings: TBD (scheduled upon enrollment)
Office Hours: Mondays 2:30 – 3:30, LSL N435

Course description: This is an independently contracted year-long course which in part satisfies the Commonwealth Honors College (CHC) requirement for honors scholarship.

This class is comprised of two parts: (1) **independent research** in the lab of a research advisor, and (2) monthly **group meetings** with the Microbiology Honors Program Director (HPD, Dr. DeAngelis) to guide and support the completion of the honors thesis or project.

To graduate with honors in Microbiology, students must be in the CHC, and must find a research advisor to sponsor their thesis or project (for almost all cases in Microbiology, students complete a thesis, but project is interchangeable). Students enroll in this course through PATHS with the approval of a research advisor, and are expected to spend at least 3 hours per unit enrolled engaged in independent research which will culminate in a thesis or project. There is a 3-unit minimum for this course. In addition to this time commitment, students will spend one hour per month in a group discussion with the HPD and other students concurrently enrolled in Microbio 499Y/P/T. This course fulfills the requirement for Honors in Microbiology, though it is open to other honors students. Students enrolled in other 499Y/P/T courses (through Biochemistry or Biology, for example), but who are working in a Microbiology lab are welcome to attend the monthly discussion sections.

Course goals: The goal of the 499Y/P/T is to develop skills for becoming better scientific thinker by completing a successful honors thesis or project in Microbiology. Specifically, students will

- engage in the process of writing the proposal and thesis, and develop tools to more successfully navigate the 499 honors process;
- gain technical expertise through their independent research conducted in their labs;
- reflect on and modify factors outside of the classroom that impact their success;
- practice skills in written and oral communication, with an emphasis on science communication aimed at a technical professional scientific audience.

Class Policy: All students are expected to schedule three hours per week per unit enrolled to work in their independent study lab, which is typically at least nine hours per week, in agreement with their research faculty mentors. In addition, students are expected to attend all monthly honors group meetings with the HPD. Absences may be excused with a written note or email submitted to the instructor before the missing class. All students are expected to adhere to the Code of Conduct as described by the UMass Dean's office to create a respectful atmosphere for learning and sharing. Students with disabilities should notify the instructor as early in the semester as possible for accommodations.

Grade Basis: There is one grade for this year-long course; at the completion of the first half of the course (499Y), students will get a "Y" on their transcript (indicating a year-long course). At the completion of the second half of the course in in the second semester (499P or 499T), students will receive their final grade. Grades are initially determined by your research advisor as described and mutually agreed upon in the PATHS proposal for your independent study research. Insufficient participation in the honors group meetings will result in a lowering of your grade, though students may miss one group meeting per semester with no penalty, or more depending on circumstances approved by the course instructor.

2018-2019 Class Schedule

Date & Time	Topic & Activities	Location
9/14/18 2 – 3:30	Introductions. All Microbiology CHC students are invited to this initial meeting, whether they are currently enrolled in Microbio 499Y/P/T or not. We will discuss expectations and visions of success for graduating with honors in Microbiology. There will be snacks. *NOTE: the reminder of classes will be limited to students currently enrolled in Microbio 499Y/P/T.*	LSL N610
10/--/18	~~Get to know a Microbiologist. Students enrolled in the 499Y/P/T will have a chance to discuss and then introduce each other's research. We will share challenges, upcoming deadlines and project planning strategies.~~	~~LSL N410~~
10/18/18 1:00 - 1:50pm	The Literature Review. This is a major component of the thesis. We will discuss how to research a topic and how to know when your review is complete. We will also discuss discipline-specific standards for referencing and how to avoid plagiarism.	LSL N415
11/29/18 1:00 – 1:50pm	The Rubric. Students will be introduced to an activity in self-evaluation for skills associated with high quality professional behavior and scientific thinking. Working in small groups, students will then complete the Rubric and discuss their self-evaluations.	LSL N415
	~ *Winter break* ~	
2/--/19	Abstract Workshop. We will discuss the structure and purpose of abstracts. Students will draft a brief abstract in class, and then work with their peers to refine it.	LSL TBD
3/--/19	Poster Presentation Workshop, part 1: the Poster. We will discuss the elements of an effective poster, and how to know and abide by poster guidelines. We will then tour the LSL to examine some posters, and discuss effective elements in posters we admire.	LSL TBD
4/--/19	Poster Presentation Workshop, part 2: the Oral Presentation. When presenting a poster, presenters are expected to have ready a brief (3-5 minute) talk to guide the listener through the elements of the poster. We will discuss how to do this, and engage in practice talks with peer feedback.	LSL TBD
5/2/19 11am – 2pm	Microbiology Honors Poster Session. This meeting serves as a group thesis defense for Microbiology Honors students, as long as their committee members attend and allow for them to defend their thesis. This meeting is open to the entire Microbiology community. There will be snacks.	201 Morrill IVN