

Syllabus: C&S BIO 198A – Honors Research in Computational & Systems Biology

Course Description:

Tutorial, 12 hours minimum. Requisites: M150. Limited to C&S BIO students. Supervised individual research involving extensive reading and development of honors thesis or comprehensive project under guidance of faculty mentor. Maximum of 8 units of courses 198A and 198B may be applied toward the major. Individual contract required. In Progress grading (credit to be given only on completion of course 198B).

Schedule:

There will be regular meetings with the faculty supervisor on a tutorial basis.

Learning Outcomes:

- Demonstrate critical thinking skills and familiarity with research techniques needed to successfully pursue a research project in computational and systems biology.
- Conceive and execute a research project upon which the student engages current methods and theory.
- Communicate original scholarly findings to peers both in oral and written form.
- Work productively with others as part of a research team.

Assignments/topics:

- Topics and reading list are to be chosen in consultation with the individual faculty supervisor.
- Students in 198A and 198B will be conducting research and working towards completing the three Capstone project deliverables—a 10-minute presentation, a poster, and an approximately 10 pages or longer honors thesis paper—which are due at the completion of 198B.
- At the completion of 198A, students will submit to their faculty mentor and to the CaSB Undergraduate Office a preliminary draft of their thesis paper providing evidence of work completed, as outlined in the individual 198A contract.
 - Research Thesis Draft – The research thesis draft should follow standard guidelines for a scientific publication. The paper should be at least five pages single-spaced. It should include the following sections: Title, Authors, Affiliation, Abstract, Introduction, Methods, Results (if any), Next Steps (for 198B), and References. The references should follow the guidelines of a journal that is relevant to the research topic, and there should be at least five references. If the paper includes figures, each should have a caption, and figures should be embedded within the text of the thesis rather than added to the end of the report. The final report should be submitted in pdf format.

Specific Contract Expectations:

Grading:

Grades are assigned by the student's faculty mentor, based on submission of a research thesis paper. Letter grade only, to be assigned upon completion of 198B.

TO SUBMIT YOUR PAPER DRAFT TO THE CaSB Undergraduate Office:

-Submit your paper as a PDF (.pdf) document to CaSB via Message Center.

- Thesis Paper Draft Due: 5:00PM, Friday of Finals Week

Thesis Paper Draft:

- Include your name and UID on the first page of the paper.
- Turn-in your paper to your faculty mentor (either electronic or hardcopy).
- After obtaining your faculty mentors signature on the form, submit the form along with the final paper to **CaSB via Message Center**.