

## **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.

### **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:**

**-Email your paper as a PDF (.pdf) document to [casb@lifesci.ucla.edu](mailto:casb@lifesci.ucla.edu).**

- 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) along with the Faculty Acknowledgement Form.
- After obtaining your faculty mentors signature on the form, submit the form along with the final paper to [casb@lifesci.ucla.edu](mailto:casb@lifesci.ucla.edu).