Capstone I, II courses: (I) 50:121:400, (II) 50:121:401

Name of the Courses: Computational and Integrative Biology Capstone I and II

A brief description: A two-semester courses (fall and spring) to be completed in the last year of study for the major in Computational and Integrative Biology. Student will participate in a faculty-guided independent project and will present the results in written and oral forms. Completion of the two-semester sequence fulfills the Writing Requirement (W) of the General Curricular Requirements.

Learning goals: The Capstone courses bring together the interdisciplinary studies comprising the Computational and Integrative Biology major. These courses provide research experience for undergraduate students in CCIB's related subjects. Deeper understanding of the research conducted by CCIB members.

Procedure: Junior students should contact the Director of CCIB in the middle of the spring semester (March) to coordinate the Capstone courses taken in their Senior year. Prior to contacting the Director, students should contact a faculty member of CCIB to discuss potential research projects. The research project will be done over a period of two semesters under the guidance of one or two faculty members of CCIB. Students are encouraged to select an interdisciplinary project with one advisor from an experimental and another from a computational lab (selecting two advisors is not mandatory). Students are required to submit a comprehensive written report* to the advisor(s), and present their project during the Celebration of Undergraduate Research and Creative Activities (CURCA) during the spring semester. Students are encouraged to publish their work in a scientific journal together with their advisor(s).

Grade: The final course grade is determined by the student's advisor(s). It is a letter grade. In case of grade disagreement, a written appeal that reasons why the grade does not reflect the student's achievements should be sent to the CCIB Director no later than 10 days after posting the grade.

*A few points to the written report:

- Opening page- Include the title, course name and number, student name, advisor(s) name, date.
- Abstract- A summary that reflects that entire work (~300 words).
- Introduction- Introducing your research, background, what is the motivation, etc.
- Results- Organize the results in traditional figures and tables as commonly used by the discipline of your PI's area of research (look at papers in the field of research how to write the results). Make sure that every figure/table is directed from the text. Every figure has clear caption, every table has a title and, as needed, footnotes.
- Discussion- What is the meaning of your findings? Synthesize with the known literature. Emphasize the novelty of your results. Include potential new directions that came out of your research. Etc.
- Literature- All cited literature in the text has to be included.