

BIOC 391 (3 credits) GUIDELINES

The Biochemistry Department expects students to participate in laboratory research during multiple semesters, and to enroll in BIOC 391 during at least one semester. Students may arrange to work with a faculty research mentor in any department at CWRU or a local hospital affiliate.

Restrictions:

- Each Biochemistry undergraduate student is expected to enroll in BIOC 391 for at least one semester, and strongly encouraged to enroll in BIOC 391 for two semesters, with a maximum of three semesters.
- BIOC 391 research projects can be carried out with a faculty mentor in any department at CWRU or local affiliate hospital, but the research project must be “biochemical” in nature/approach. Students should submit a completed BIOC 391 Permission Request form for project approval.
- BIOC 391 research projects cannot be entirely computational, and must include some hands-on experimentation.
- The faculty research mentor must agree to the student sharing information about their project as a written document and graded poster at the Biochemistry senior capstone retreat as part of their degree and capstone course (BIOC 393) requirements.

1. **TIME COMMITMENT:** The student and their faculty research mentor should agree on a regular schedule of time devoted to the research project. (Some flexibility should be allowed for variability in course workload.) The student is expected to spend a minimum of 10 hours per week (on average) on their project to earn 3 credit hours. This commitment includes time experimenting in the lab, analyzing data, and reading of relevant scientific literature.
2. **RESEARCH PROJECT:** The student should participate in a well-defined research project. They should be involved in the planning and execution of experiments, as well the interpretation of data. The student's involvement in each of these steps will increase as they gain more experience and spend more time in the lab. Beginning students may observe and focus on learning lab skills, but more senior students should perform experiments and interpret results.
3. **MEETINGS WITH MENTOR:** The student and their faculty research mentor or designated supervisor should meet on a regularly scheduled basis to ensure progress (weekly).
4. **FORMAT OF PAPER:** At the end of the semester, the student must submit a 3-5 page report describing their research. The report should include an introduction, results, discussion, and bibliography. Additional information and submission will be through Canvas.
5. **EVALUATION:** BIOC 391 is a Pass/No Pass course. The BIOC 391 course instructor will read the final paper, consult with the student's faculty research mentor if necessary, and assign a grade.

For permission to enroll in BIOC 391, the student and faculty research mentor should complete the permission form and return to bioc391@case.edu. This form may be obtained from the CWRU Biochemistry website, the undergraduate program director, or the student's faculty major advisor. Upon permission granted, student should enroll in BIOC 391 section with their faculty major advisor as instructor.