

Guidelines for Students/Faculty Submitting Undergraduate Research Proposals for 4000-level Biology Elective Credit (Amended 11/9/15):

1. The Undergraduate Research proposal form is included on the Biology Department website in PDF format. Students must use the proposal format for consideration, including the signature from their mentoring research advisor.
2. Each proposal must be written by the student with guidance from the mentor.
3. It is strongly encouraged that any student applying for 4000-level credit will have spent a previous semester (during which the proposal is written) doing research for 3000-level credit (or on a grant-funded or volunteer basis) in the same lab as the proposed 4000-level research.
4. Students must submit their proposals no later than the deadline date for credits in the given semester, although proposals may be submitted earlier. It should also be noted that submitted proposals may still be rejected or returned for revision. Students should be aware that submission doesn't guarantee approval, and take this into consideration when turning in proposals. Resubmissions and registration will be due by the end of add/drop for the semester in which the research is to take place.

Due dates for proposals are as follows:

Fall research—Proposal due 1st Friday in April, unless the student will be doing 3000-level research during the summer, in which case proposal due 3rd Friday in July
Spring research—Proposal due Friday following Thanksgiving break
Summer research—Proposal due 1st Friday in April

5. Projects that will progress across more than one semester can be written into one proposal. There is no need to submit multiple proposals for the same project. The total expected number of credits for each semester should be included in the proposal. If approved, the Committee's approval letter will indicate that these credits, once completed, will be considered as Biology elective credit.
6. The review process is meant to hold students to a high standard for both scientific process and scientific writing. In the committee's voting process, a majority vote approves the proposal, even if a committee member has objections. The committee will provide feedback for revision and resubmission by the student.
7. It is against general policy to award more than 3 Undergraduate Research credits in a given semester. No more than 4 Undergraduate Research credits can be included towards a Biology major.
8. A student cannot be paid for research work at the same time they are receiving credit for that work, although a student CAN be paid for research work in a semester when they are NOT receiving credit for that work, even if they are continuing on the same project.

9. Time/effort requirements should also be clearly stated. The general rule is that 1 credit is equal to at least 3 hours/week of effort by the student.
10. One credit literature reviews require students to document a plan to meet the 3 hours/week effort guideline throughout the semester. It is recommended that students pursue other options for required biology elective credits. While there have been such projects approved in the past, it is the Committee's goal to eliminate such projects, except under exceptional circumstances (see #11).
11. The committee reserves the right to examine each case individually and approve proposals that do not meet these requirements under EXCEPTIONAL circumstances.

Proposals should include the following

1. Title of Project

2. Problem Statement (if research proposal) or Statement of Need (if credit for off-campus course is requested)

3. Literature Review

For a research project, explain the context of your project using past and current literature as background. Make sure to refer to primary literature. (Include journal and review articles in your reference list; internet web sites are not generally acceptable references.) Proposals should contain adequate references (peer-reviewed journal articles) in a bibliography/references cited section.

If taking an off-campus course, describe in detail the instructional methodology of the course (including a syllabus is strongly recommended). Include the target academic classification for the course, what prerequisite courses are required, and what reading the course requires (textbook, outside reading, etc.). Describe the special opportunities afforded by the off-campus course (*e.g.* travel, access to unusual facilities, etc.).

4. Methods (Research projects only):

- a. What methodologies will you use to accomplish your research project?
- b. Will other students, faculty, etc. work with you to accomplish the goals of this project?
- c. How much work will you do independently of others?

5. What will the project require as a final report/project output at completion of the work? Proposals should include some description of what the expected final outcome/output of the project will be (a chalk talk, a CNSM poster, some other poster or talk).

6. Explain why this research project will be more beneficial to your academic program of study than enrolling in one of the upper division courses offered by the Biology Department.