

S18 Research for Credit: Student Requirements

Research for Credit requires a large time commitment:

1. You must identify two time blocks of three hours each during the week from 9 A.M. to 5 P.M. Once you gain independence you may choose to work more flexible hours with the agreement of your faculty member.
2. You may be expected to attend all lab meetings and journal clubs that the lab may have. Please contact your faculty project advisor for more information.
3. If you are taking lab for credit, you are expected to spend all approved credit hours working in the lab. For example, if you sign up for six units of credit you should spend at least six hours per week working on your project.

Research for Credit requires dedication from you and your mentor. During busy times it is **not** permissible for you to skip work to study for exams or write papers. If someone is expecting you to be present, it is only right that you keep the meeting.

Students **MUST** submit a report at the end of the summer session in which they are registered.

The report must be approved by the faculty mentor and forwarded to the Undergraduate Programs Office (DH 1321) or email to Tara at primiero@andrew.cmu.edu by 5:00pm on Reading Day for the spring semester (Wednesday, May 9th). The report should be 1.5 to 2 pages (around 1000 words) in length with paragraphs addressing the following issues:

1. **Rationale** – *Why is your work important? What scientific question did your work address?*
2. **Approach** – *What techniques did you use to address your scientific question? Why?*
3. **Results** – *Describe your outcomes. What did you find?*
4. **Setbacks** – *Describe any problems that you encountered. What did you learn?*
5. **Conclusions** – *What do your outcomes tell you? How does this fit into the “big picture”?*
6. **Prospects for the future** – *Should you pursue the project, modify it, extend it?*

****By signing the attached form, the student acknowledges and agrees to these requirements and the associated deadlines.**

This signed form is due back to the Undergraduate Programs Office (DH 1321) by 9:00 am on Friday, January 26th.

*Forms submitted after this date will be accepted only a case-by-case basis.

Research for Credit: Faculty Research Advisor Requirements

_____ (student's name) is requesting permission to register for 03-445, Biological Sciences Research for Credit, at Carnegie Mellon University for _____ units. You must approve this student earning credit for their work in your lab this semester. You will be responsible for:

1. **Providing an appropriate mentor for the student.** This could be you, but could also include a postdoc, experienced technician, or senior graduate student in the lab.
2. **Confirming that the student has the appropriate safety training from CMU Environmental Health and Safety as appropriate.** If a student has taken 09-221 (Chemistry Lab I), then they received CMU's general lab safety training. If your lab requires more extensive safety training or if your lab is off campus (e.g. Pitt) then the student will need to complete that safety training before they can begin their research.
3. **Submitting mid-semester and final grades.** Ms. Tara Primiero (primiero@andrew.cmu.edu) will contact you for the:
 - Mid-Semester Grade, which is due by 5:00 pm on Wednesday, March 7th
 - AND
 - Final Grade, which is due by 5:00 pm on Friday, May 11th

Reminders will be sent via the email address provided below closer to the due dates. You should discuss your expectations with the student early in the semester. Because project outcomes are not guaranteed, we ask that grades be considered on the following items:

- a. The number of hours per week the student is engaged in the lab— should be equal to the number of hours listed in “units” on the next page.
 - b. Was the student intellectually engaged in their project?
 - c. Did the student keep an accurate and up-to-date lab notebook? Did they communicate effectively with you and their immediate supervisor?
 - d. Was the student's final report accurate and well written?
4. **Reviewing and approving a final summary of the student's work.** Students will be required to submit a summary of their work to the Biological Sciences Undergraduate Programs office at Carnegie Mellon University. This summary could be in the form of a written report (see previous page) or could be a copy of a poster they are presenting at CMU's Meeting of the Minds (held on May 10, 2017). The final format of either document is up to you, but the information on the previous page should be included in the final report. It is preferred that the report is less than 2 pages, but figures and references may exceed that text limit. You will need to sign (either physically or electronically) a final copy of the report or poster. The student should be in touch with you in advance to ensure that they get the required signature by the deadline.

****By signing the attached form, the faculty research advisor acknowledges and agrees to these responsibilities.**

This signed form is due back to the Undergraduate Programs Office (DH 1321) by 9:00 am on Friday, January 26th.

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Biological Sciences Research for Credit (03-445)

Add Request Form

Student Name _____ Student Andrew ID _____

Research Advisor's Name _____

Affiliation (i.e., CMU, Pitt, Other) _____

If other please describe _____

Research Advisor's Email Address _____

Research Advisor's Phone Number _____

Number of Units to be Registered _____ (no more than 10) Semester **Spring 2018**
(each unit is equivalent to 1 hour of research/work per week)

Project Title _____

Please summarize the work you will be doing in the lab this semester in the space below

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CMU-Based Projects

By signing this form, the student named above ("Student") is choosing to participate in the project described above ("Project") as a Biological Sciences Research for Credit. In consideration of the opportunity to participate in the Project as a Biological Sciences Research for Credit, Student agrees that Carnegie Mellon University will own (and student hereby irrevocably assigns and transfers to Carnegie Mellon) any and all right, title and interest (including intellectual property rights) Student may have in the work performed by Student on the Project. Student agrees to execute any paperwork reasonably requested by Carnegie Mellon to confirm this assignment and/or the nature of any work developed by Student. Student agrees that Carnegie Mellon may exercise all ownership rights in the assigned Project work (including but not limited to the right to disseminate it to others) even though such Project work may constitute an educational record within the meaning of the Family Educational Rights and Privacy Act of 1974 (FERPA). Although Carnegie Mellon will own the Project work, Student may continue to use the general experience, know-how and techniques learned by Student under the Project for non-commercial educational and research purposes. Student may also mention this Project experience on Student's resume or portfolio. Student's participation in this research for credit Project is unpaid and intended to provide an educational experience for Student. Student is not entitled to any university employment, financial compensation or university benefits as a result of Student's participation in the Project and/or development of work under it.

Student should sign this form only if Student is at least 18 years old and is willing and able to participate in this research for credit Project under the terms described in this form. If Student is not at least 18, or if Student is not in agreement with the Project or terms listed in this form, the Student should contact Student's advisor to discuss alternate ways to fulfill Student's credit requirements.

SIGNATURES BELOW CONFIRM ACKNOWLEDGEMENT OF STUDENT AND RESEARCH ADVISOR REQUIREMENTS ON 3 PREVIOUS PAGES.

Intending to be legally bound under Pennsylvania law, this form is signed in favor of, and for the benefit of, Carnegie Mellon University.

Student Signature _____ Date _____

Research Advisor's Signature _____ Date _____

Off-Campus Projects

SIGNATURES BELOW CONFIRM ACKNOWLEDGEMENT OF STUDENT AND RESEARCH ADVISOR REQUIREMENTS ON 3 PREVIOUS PAGES.

Student Signature _____ Date _____

Research Advisor's Signature _____ Date _____

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