

**Independent Research Permit Request**  
**BIOLOGY 388, 388s, 389, 389S, 390**  
**(Circle One)**

Date: \_\_\_\_\_

Semester:    Fall\_\_\_        Spring\_\_\_        Summer \_\_\_\_\_        20\_\_\_

**Number of credit hours:** \_\_\_\_\_

Name:	Student ID number	Local Phone:
Local Address:	Email:	

**RESEARCH SPONSOR INFORMATION**

(The individual in whose lab you will be working)

Name:	e-mail:
Campus Address and Phone No:	
Signature and Date:	

**BIOLOGY SPONSOR INFORMATION**

(The individual within the Biology Department who will assign the final grade)

Name:
Signature and Date:

The Biology Sponsor, by signing above, hereby authorizes the credit hours listed above.

**PROJECT INFORMATION**

Project Title: (must be included):
(Please type a short description of your research project)
Student Signature: (I have read and understand the guidelines for my independent research project)

# INDEPENDENT RESEARCH PROJECT GUIDELINES

The Biology Department encourages student to participate in laboratory research (BIOL 388, 388S [additional guidelines attached], 390) and/or library research (BIOL 389). Students may choose to work with faculty in the Biology Department or students choosing to work with a member of another department must also have a Biology faculty member act as Biology Sponsor. These students must also be sure that their Research Sponsor receives a copy of these guidelines.

1. **TIME COMMITMENT:** A student should work out with his/her sponsor a regular schedule of time devoted to the research project. (Some flexibility is allowed for variability in course workload.) The student is expected to spend a minimum of 9 hours per week (on average) in the laboratory (or library) to earn 3 credit hours, though sponsors may require more time than this.
2. **INPUT INTO PLANNING:** For BIOL 388, the student may be expected to help plan the research project or may be assigned a project. In either case, background reading and discussions should assure that the student thoroughly understands the specific project and its general significance.
3. **MEETINGS WITH SPONSOR:** The student should meet with his/her research sponsor and Biology Department sponsor on a regularly scheduled basis (weekly or twice a month is suggested). This is particularly important for BIOL 389 to insure that progress continues throughout the semester.
4. **FORMAT OF PAPER:** Students doing BIOL 388 and BIOL 390 must submit a paper in the format of a scientific journal research article. If results are incomplete, the paper can be a progress report, but should still be in research article format. For BIOL 389, the paper should be similar to a long term paper or review article and the majority of the references should be primary research papers. It is suggested that a specific number of papers be discussed with the BIOL 389 sponsor at each regularly scheduled meeting, and that an outline of the paper be completed by mid-semester. It is also recommended that a first draft of the paper be submitted at least two weeks prior to the end of the semester so that revisions are possible.
5. **EVALUATION:** The Biology Department Sponsor will read the paper and assign a grade. If the Research Sponsor is outside the department, he/she will complete an evaluation form for the benefit of the Biology Sponsor. Please note that BIOL 390 is graded on a pass/fail basis only.

To sign up for BIOL 388, 389, or 390, obtain the department permit form from the Biology Office, (DeGrace Hall room 203) complete the form, and return it to the Biology Office. This form is also available online through the departmental website.

# Biology 388S – UNDERGRADUATE RESEARCH SAGES CAPSTONE EXPERIENCE Permission Form

Undergraduate students at Case Western Reserve University may elect to utilize BIOL 388S, Undergraduate Research, as their SAGES Capstone experience. The following criteria must be met in order for their research to satisfy the requirements of a SAGES Capstone experience.

1. In addition to this permission form the student must also fill out the “Independent Research Permit Request” form included in this packet and turn it into the Biology office.
2. The name and campus address of the research sponsor must be written on the form and it must be signed by the research sponsor.
3. If the research is to be done outside the Biology Department, a Biology sponsor must be designated and his or her name and signature must also appear on the form.
4. A research plan must be provided on the form.
5. The student must sign the form and submit it to the Biology Office.
6. Once the research plan is accepted, a permit will be issued and the student may register for the course. **STUDENTS REGISTERING FOR BIOL 388S MUST REGISTER FOR THREE CREDITS.**
7. During the second week of the semester a more detailed plan, developed in conjunction with the research sponsor, must be submitted to the Biology Office.
8. During the semester in which the research is being conducted, the student must interact regularly with his or her research sponsor. In addition, the student must meet with the research sponsor AND Biology sponsor during the fifth week of the semester and during the tenth week of the semester and present a progress report.
9. A final report must be submitted to the research sponsor and Biology sponsor at the end of the semester.
10. The student must give a public presentation of his or her research either in an arranged poster session featuring undergraduate research or through a seminar open to faculty and students or through some other approved medium, such as at a regional or national scientific meeting at which research papers are presented.

**STUDENT AND SPONSOR ACCEPTANCE OF CRITERIA:**

We have read and accept the criteria necessary for this BIOL 388S research to count as a SAGES Capstone experience:

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Student Name (print)	Student Signature	Email	Date
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Research Sponsor Name (print)	Signature	Department	Email	Date
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Biology Sponsor Name (print)	Signature	Date
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**Evaluation of BIOL 388S, 388, 389, OR 390**  
**To be Completed by Research Sponsor for Biology Dept. Sponsor**

Name of Student: \_\_\_\_\_

Title of Project: \_\_\_\_\_

Course:       388                       389                       390

Semester:     Fall                       Spring                       Summer                      Year: \_\_\_\_\_

Research Sponsor: \_\_\_\_\_ Phone: \_\_\_\_\_

Research Sponsor's Department/Location: \_\_\_\_\_

Biology Dept. Sponsor: \_\_\_\_\_ Phone: \_\_\_\_\_

If you were to assign a grade to this project it would be: \_\_\_\_\_

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Please evaluate the student on the following by circling the appropriate numbers:

	Low		Moderate		High
Student input into planning of project (low input into planning 388 is OK)	1	2	3	4	5
Time commitment of student to this project (expect ~ 9 hrs/wk for 3 hr. credit, so that = moderate)	1	2	3	4	5
Interest in and understanding of project by student	1	2	3	4	5
Reliability of students results (388 & 390)	1	2	3	4	5
Ability of student to work independently and help solve problems that occur (388 & 390)	1	2	3	4	5

Comments: \_\_\_\_\_