

BIO_SC 4950/4950H/4952/4952H - Undergraduate Research in Biological Sciences

OBJECTIVE

As a student, you have the opportunity to learn a lot of biology in your classes. It is also important, however, that your scientific education include learning not just *what* we know, but *how* we know it, and how the scientific process is used to generate new knowledge. You can be part of the process of creating new knowledge by participating in a research project under faculty supervision, and earn academic credit for doing so. We strongly encourage this hands-on research experience!

The core of the research experience is intensive theoretical, field, and/or laboratory research in any area of biology. You may seek your own faculty research mentor from within or outside the Division of Biological Sciences, or we can help you find a research mentor. You and your mentor will collaborate to design your own personalized research project. If you are interested in assistance and advice for finding a faculty mentor, you can find information in 3 Tucker Hall, on the MU Life Sciences Undergraduate Research Opportunity Program website (<http://surop.missouri.edu>), or by consulting [Dr. David Schulz](#), Director of Undergraduate Research in the Division of Biological Sciences. While we can help, in the end it is your responsibility to arrange the details of your research experience. The following Guidelines and Agreement are designed to help insure the **best possible** experience for both you and your mentor.

HOURS AND CREDIT

Variable credit: 1-3 hours. May be repeated up to a total of 12 hours. Upon completion of a total of 6 hours, 3 hours may be applied as elective credit toward the BA or BS in Biological Sciences. Any remaining hours may be applied as general elective hours toward graduation. As a general rule of thumb, your project should be of a scope that requires you to spend 4-5 hours per week per credit hour, but your time commitment to the project should always be determined by what the science requires, and may vary considerably depending on the specific project.

PREREQUISITES

Overall GPA of 2.7 or greater [the Honors sequence prerequisite is an overall GPA of 3.3 or greater]; completion of at least 20 total hours of Biology, Chemistry, and/or Physics; department and instructor's consent. Any exceptions will require departmental consent.

COURSE REQUIREMENTS

To initiate and complete your Undergraduate Research program in Biological Sciences you must:

1. Identify a faculty member who will agree to be your research mentor and, in consultation with that faculty member, devise a project for which you will have primary intellectual as well as technical responsibility.
2. If you will be pursuing honors research credit (Bio 4950H/4952H), you must complete the [Honors Research Application](#) and submit the completed application as an e-mail attachment to Dr. David Schulz, Director of the Biology Honors Program, at biohonors@missouri.edu.
3. Submit the signed GUIDELINES AND AGREEMENT FOR UNDERGRADUATE RESEARCH IN BIOLOGICAL SCIENCES to the Biology Advising Center, 3 Tucker Hall, for approval.
4. If you wish to use this research experience as a Capstone experience in Biological Sciences, you must complete at least 6 hours of undergraduate research with a grade of C- or greater and your research program must conclude with a poster presentation and/or a written report. The second course in the sequence must be completed within the last 45 hours of enrollment before graduation. The presentation can be part of an on-campus symposium (e.g., the Undergraduate Research and Creative Achievements Forum or Life Sciences Week) or a regional or national meeting of a scientific society. A written report should resemble journal articles in your field and should be prepared following the Division's [Guidelines for Honors Research Papers](#).
5. In order to graduate with departmental honors in Biology, you must also complete a poster or paper presentation of your research. This presentation can be the same one you use to obtain capstone credit (see above).

