

BRR 401: RESEARCH

Instructors: BRR Faculty Research Mentors

Prerequisites: Students must be in the BioResource Research Major

Credits: BRR students must complete 14 credits for the BRR major. Up to 3 of these may be from the faculty mentor's home department. Each credit is considered to require 3-5 hours per week per term enrolled. Students are expected to keep track of their hours.

Course Description:

Mentored investigation by an undergraduate student that makes an original contribution to the discipline and reaches beyond the traditional curriculum. Students develop and practice advanced discipline-specific projects in collaboration with faculty mentors. Students usually join existing research projects; some may take on new approaches or questions.

Objectives:

- Gain insight into what's involved in planning and carrying out research studies.
- Learn specific research techniques and trouble-shooting skills.
- Develop self-confidence in applying academic knowledge and in following a research project from inception to completion.
- Become familiar with literature related to the area of your research interest and option.
- Find out whether you're interested in graduate school or employment in your research area.

Learning Outcomes: After completing this course, students will be able to:

- Plan and write a research proposal.
- Demonstrate an understanding of the scientific method by designing an experiment, collecting, analyzing, and interpreting data.
- Demonstrate professionalism, including critical thinking, a strong work ethic, and the ability to contribute to a team.

Grading:

The BRR Academic Coordinator, Wanda Crannell, will contact the faculty mentor each term for a letter grade. Grades are typically based on student interest, thoughtfulness, hard work, reliability, participation, and professionalism.

Assignments:

- A. It is the student's responsibility to learn and conform to the expectations of the research group, such as attending lab meetings, following standard operating procedures, and the like.
- B. Following the format required by your mentor, maintain a lab notebook/journal for a record of accomplishments and protocols, problems encountered, date and number of hours worked, and lab or field results. Expect your research mentor and coworkers to consult your notebook.

C. Especially when you are beginning your research, schedule regular hours and meetings with your faculty mentor and supervisor (could be a technician, graduate student, or postdoc).

D. During the first term that you are enrolled in research credits, complete a 2-3 page proposal that briefly and succinctly outlines your proposed research, containing:

1. Problem Statement or Needs Assessment,
2. Research Objectives,
3. Methods,
4. Expected Outcomes and Impact
5. References (minimum 3-5 publications, properly formatted).

Consult with your research mentor and a reference librarian, and read research papers to understand how your proposed research fits into the field and what its impact is expected to be. Submit a copy, initialed by the faculty mentor and secondary advisor, to the BRR office.

E. During the first term that you are enrolled in research credits, complete a list of proposed option courses needed to complete the BRR degree requirement. Your faculty mentor is the lead advisor for your option courses. This course list should be initialed by the faculty mentor and submitted with the project proposal.

F. As your research progresses and you begin to obtain results, create figures and tables to communicate the data. These will form the basis of your thesis.

G. Three terms prior to graduation and/or mid-way through your research, write a progress report, containing a research update, problems encountered, and a time line for project completion. Schedule a meeting with your committee (mentor and secondary mentor and BRR director) to discuss the report.

Thesis and final seminar: Thesis (BRR 403) and Seminar (BRR 407) are graded separately from research.

Statement Regarding Students with Disabilities

Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

Link to Statement of Expectations for Student Conduct, i.e., cheating policies

<http://oregonstate.edu/admin/stucon/achon.htm>