

BIO496 SYLLABUS

COURSE DESCRIPTION: This course is designed to provide students an opportunity to gain practical hands-on training, skill development and experience in a professional setting outside of the university and under the guidance of professionals in a work environment related to biology. The number of credits is variable, from two to three. For each credit hour, a minimum of 45 hours at the internship site must be completed.

PRE-REQUISITES: To be eligible for an internship, students must meet the following requirements:

- matriculation and completion of 30 credits;
- completion of BIO200 and BIO201, with a minimum grade of B;
- minimum institutional grade point average of 2.5;
- permission of the Internship Coordinator

PROGRAM LEARNING OBJECTIVES: In the context of departmental program learning objectives, this course will, for the student:

- provide depth within specialized areas;
- provide an understanding of experimental design and methodology;
- develop approaches for integration of information;
- encourage critical thinking and hypothesis building;
- provide skills in scientific communication;
- provide contemporary information; and
- encourage an appreciation of scientific values.

COURSE LEARNING OBJECTIVES: In the specific context of course learning objectives, students successfully completing this course will:

- ¹ apply skills and knowledge learned in a non-academic environment;
- ² acquire technical and professional skills;
- ³ develop problem-solving and communication skills in a professional setting;
- ⁴ gain real-world experience relevant to academic or career interests;
- ⁵ explore and strengthen academic and career goals.

COURSE REQUIREMENTS AND ASSESSMENT: Prior to course registration and commencement of the internship an Internship Learning Agreement must be approved and on file with the Faculty Internship Coordinator.

Student achievement of course learning objectives will be assessed formally by (1) a midterm reflection report, (2) internship agency evaluations and (3) a comprehensive final report.

- **Midterm reflection report:** This report should reflect on the progress of the internship and include a description of what is being learned with direct reference to the course learning objectives. In the report, the student should discuss the

specific task(s) she/he has been asked to do at the internship site, as well as student impressions of what has been learned. This report should be emailed to the Faculty Internship Coordinator. (Note: student problems or concerns about the internship site should be brought to the attention of the Internship Coordinator if/when they occur. Students need not wait until the midterm report to communicate these issues and seek assistance). (course learning objectives 1-3)

- **Internship agency evaluation:** Near the midpoint of the internship, and again at its conclusion, the Internship Coordinator will send an evaluation form to the on-site supervisor to assess the student intern's performance and provide constructive feedback on his/her internship experience. (course learning objectives 1-3)
- **Final report:** At the conclusion of the internship the student will write a comprehensive evaluation of their internship experience. This report should include, but not be limited to, the following: general information about the organization where the internship was completed and what they do; student intern impressions of the organization; projects worked on, and a summary of the main tasks accomplished during the internship; significant learning experiences the internship provided (including specific skills or business/organizational concepts); opportunities provided by the internship to meet people or make contacts that will help future education or employment; a critique of the University at Buffalo's preparation of the student for the internship. (course learning objectives 1-5).

The following supporting documents need to be included along with the final written report:

- Student Statement of Hours Worked Form. This is to be completed, signed and dated by the student and site supervisor to show a computation of total hours served at the internship site on a week by week basis.
- Student Internship Learning Outcomes Form. This form will specify which internship tasks and activities helped the student achieve the course learning objectives.

Final reports, and supporting documents, must be submitted to the Internship Coordinator within one week from the end of the semester in which the internship was completed.

GRADING POLICY: Letter grades are assigned for this course based on the following criteria:

- Verifiable completion of the minimum required hours;
- Assessment of the course requirements (midterm report, final report and learning outcomes form) demonstrating achievement of the course learning objectives;
- Midterm and final evaluations by the internship site supervisor.

**RELATIONSHIP OF BIO496 COURSE OBJECTIVES AND ASSESSMENT TO BIO
PROGRAM OBJECTIVES**

BIO Program Objective	Depth*	Specific Outcome Objectives for BIO496:	Assessment Instrument(s)
1. Provide breadth of knowledge of basic principles and concepts	0	N/A	N/A
2. Provide depth within specialized areas	2	Acquiring in-depth knowledge and practical experience in a professional work setting.	Midterm and final student reports
3. Provide an understanding of experimental design and methodology	1	Identifying approaches and methodologies to investigate real-world questions and problems in a non-academic setting.	Midterm and final student reports
4. Develop approaches for integration of information	2	Integrating knowledge and skills acquired in the classroom and academic laboratory into the professional world outside of academia.	Midterm and final student reports
5. Encourage critical thinking and hypothesis building	2	Applying knowledge and skills in a variety of novel professional situations; test new approaches and techniques in solving problems.	Midterm and final student reports, Internship agency evaluation
6. Provide skills in scientific communication	2	Clearly and concisely explaining internship projects and methodologies; developing effective communication skills in a professional setting	Midterm and final student reports, Internship agency evaluation
7. Provide contemporary information	2	Understanding the relevance of biological study to real-world, modern topics in a professional setting.	Midterm and final student reports.
8. Encourage appreciation of scientific values	2	Demonstrating ethical and professional behavior in a non-academic setting	Internship agency evaluation

- *Depth: 0 = not covered; 1 = moderately covered; 2 = extensively