**Syllabus**

**Course Information**

BIO 497 *< A or B >*. Biological Research. Section *< Section # >*

1 credit

*< Semester and Year >*

Meeting time: Varies with research mentor.

Location: Varies with research mentor.

**Instructor Information**

Dr. Sam Prins

Office: Bioscience 2001C

Phone: 568-6733

Email: prinssc@jmu.edu

Office hours: see <http://www.jmu.edu/biology/office_hours.shtml>

**Goals of the Course**

To learn research techniques and theory, and to develop and pursue an independent research project. To give you practical experience in scientific research. Experience will be gained in data collection and analysis, as well as presenting your results to a professional audience.

This course will fulfill the following Department of Biology Academic Objectives:

1. Formulate a hypothesis and identify relevant variables necessary to test that hypothesis

2. Design and execute experiments to test hypothesis

3. Obtain data

4. Organize data

5. Analyze and interpret data

6. Evaluate a statement, hypothesis, or claim using different kinds of evidence, including qualitative and quantitative observations and experimental results.

7. Locate and use reliable sources of scientific information

8. Critically evaluate a paper from the primary scientific literature.

9. Synthesize information and concepts, and apply that knowledge to new situations.

**Nature of Course Content**

**Course Description**

BIO 497. Biological Research (0, 4-8). 1 credit. *Offered fall and spring.*

Students pursue a lab or field research project in a selected area of biology. For new projects (497A), students must contact and make arrangements with a supervising instructor in the term prior to registration and complete a 2-3 page proposal no later than five weeks after the start of the course. Course may be repeated as BIO 497B with the same instructor, or as BIO 497A with a different instructor. Offered as credit/no credit only. *Prerequisite: GPA of 2.5 or greater.*

Prerequisites: A Biology GPA of 2.5 or better, and permission of the instructor.

**Assignments and Due Dates**

Varies with research mentor. Students will work independently, with regular lab meetings with the mentor. The work will be based on a research proposal submitted at the beginning of the project.

If not previously written, a research proposal should be submitted within the first five weeks.

**Methods of Evaluation**

**Expectations**

Varies with research mentor. General expectations include:  
Productive contributions to the mentor’s research program.  
Maintenance of a lab notebook.  
Adherence to all lab policies.  
Teamwork and cooperation with the mentor’s research group.  
Attendance and active participation in all research group meetings.  
Attendance and active participation in the BioSymposium (Spring semesters only).

The research mentor may require a research paper, poster, journal log, annotated data report or written summary statement for the completion of the course.

**Grading**

Credit / no credit only. Grades of WP and WF will not be given out in this class.

**Requirements and Policies**

**Required Texts**

None

**Academic Honesty**

Policies for academic honesty and plagiarism can be found here: <http://www.jmu.edu/syllabus/>

**Adding/Dropping Classes**

Policies for adding and dropping courses can be found here: <http://www.jmu.edu/syllabus/>

**Disability Accommodations**

Policies for disability accommodations can be found here: <http://www.jmu.edu/syllabus/>

**Inclement Weather Policies**

Policies for inclement weather can be found here: <http://www.jmu.edu/syllabus/>

**Religious Observation Accommodations**

Policies for religious observation accommodations can be found here: <http://www.jmu.edu/syllabus/>.