

# Syllabus ABIO 399/499 (Z)

## Supervised Research For Juniors & Seniors

**ABIO 399/499 Supervised Research for Juniors (1-3 credits) Seniors (1-4 credits) Individual, independent research on selected topics in biology. Critical analysis of selected research papers. Junior/Senior majors in Biology apply for this course through the prospective research adviser. Students taking two or more semesters of ABIO 399, 399Z, 499, or 499Z will make a poster or oral presentation at the April Research Symposium. A copy of the final report of each semester's work (typewritten in journal format) is kept on file in the department.**

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### Course Objectives

ABIO 399 & ABIO 499 (or Z components) are intended to engage students in a specific field of research by using the scientific method of investigation, so they may research a topic, develop an argument, organize supporting details, and produce coherent texts within common college-level written forms.

### Pre-Requisites

ABIO 399 & 499 do not have stated pre-requisites, *however, individual supervisors may request that students have completed course work in specific areas* such as genetics, molecular bio, chemistry etc.

ABIO 399Z/499Z Pre-Requisite is 2 prior credits of ABIO 399 or 499; supervisors may also request course work.

### Course Fulfillment

**4 credits over 2 semesters** in ABIO 399/499 (or Z) may be used to fulfill 1 lab requirement for the B.S. degree.

ABIO 399/499 (and Z) may contribute a **total of 4 credits** toward the biology major.

A Maximum of **6 credits in ABIO 399/399Z and; 8 credits in ABIO 499/499Z** may be earned.

**ACADEMIC INTEGRITY:** See [http://www.albany.edu/undergraduate\\_bulletin/regulations.html](http://www.albany.edu/undergraduate_bulletin/regulations.html)

### Student Expectations

While not easy to evaluate this experience with a single letter grade, a level of consistency and fairness in grading may be achieved by considering, wherever possible, similar evaluation criteria.

- **TIME:** University regulations state: **3 hours of work/ per week/ per credit in the Fall/Spring Semester or 8-10 hours/ week/ credit in the Summer session.** At times during the semester, students may need more time to study for exams, which may temporarily affect their availability for research. However, students should discuss this with their supervisor, and plan to make up this time in other weeks.
- **TRAINING:** Students are expected to make reasonable progress in responding to lab training by learning and correctly executing the required laboratory techniques.
- **MOTIVATION:** Students are expected to show genuine interest in, and become intellectually involved, in their research problem. This may be demonstrated (among other ways) by:
  - Completing assigned readings for their research (e.g. advanced textbook chapters, published papers, previous lab theses, etc.)
  - Level of preparation for any lab presentations (at least one presentation per semester would be appropriate, where the student may receive feedback from the various lab members)
  - Frequency or kind of questions asked and interest in discussing the research with their supervisor.
  - Level of responsibility and dedication toward their experiments.
- **DATA COLLECTION:** Students are expected to maintain a well-kept lab notebook, containing accurate and detailed notes regarding each experiment, data collected, and conclusions arrived at. It should be organized, neat, and legible.

▪ **RESEARCH PAPER:**

- Students are **required to write a research paper for each registration** of this course and submit to the mentor for grading. Graded papers are sent to the Research Coordinator within 5 business days of the last day of each semester. Late papers may receive a grade of Incomplete *for one semester only*.
- There is no set length for this paper; it should follow a scientific publication format, and
- Must include:
  - Project Title and Author (student name)
  - Introduction (with cited references within the text)
  - Materials and Methods (with cited references within the text)
  - Results (including relevant data and figure legends)
  - Discussion (with cited references within the text)
  - References

**Final Grade**

- The final grade should take **all of the Student Expectations** into consideration. A grade inferior to A, is acceptable, if one or more of the criteria are less than excellent.
- However, a student’s grade should not be strictly based on the success of their experiments.
- It is a good idea to discuss these and other expectations with a student at the beginning of each semester, and to discuss their progress regularly throughout the semester.
- Incomplete grades are discouraged, *but may be requested* of the Research Coordinator, prior to the last day to submit grades each semester.

Suggested Course Grade Range for ABIO 399/499 & 399Z/499Z

Evaluation Criteria	Excellent (A)	Very Good (B+ to A-)	Good (B- to B)	Marginal (C- to C+)	Poor (E to D+)
Amount of Time Devoted					
Response to Training					
Motivation					
Data Collection					
Research Paper					

**399Z / 499Z Writing Intensive Versions: Supervisors: Please read before agreeing to this version**

**University requirements include:**

- *A Substantial Body of Finished Work:* This is generally **expected to be a total of 20+ double-spaced pages in at least two, preferably more, submissions.** It may be a research papers.
- *Opportunity for Students to Receive Assistance in Progress:* Such assistance may be visits to the Writing Center (HU 140) to **conferences with the instructor/supervisor.**
- *Opportunity to Revise Some Pieces:* As revision is an essential characteristic of good writing, **students should be able to revise some portion of their work.**
- *Response to Student Writing:* **It is expected that the instructor will respond in detail to some extended work of the student.**