

Biology 397 & Biology 398  
Undergraduate Lab Assistant & Pedagogy  
Integrative and Applied Learning Experience  
Course Syllabus – Fall 2023  
Monday Evening, 3:30-4:20+ PM

**Course Instructor:**

**Dr. Robert Feissner** (Office: ISC 356, Phone: 245-5022, e-mail: [feissner@geneseo.edu](mailto:feissner@geneseo.edu))

Office hours: MWF, 11:30-12:20, and by appointment.

**Course description & Teaching Philosophy:**

Students enrolled in Biology 397, Biology Lab Instructor, will assist the faculty supervisor in lab sections in Biology 118: General Biology Laboratory, Biology 104: Human Biology, or Contemporary Biology: Biol 106. Biology 397 students will take part in weekly instructional activities. Weekly class meetings (Monday, 3:30 PM) will emphasize preparation for lab and discussion of topical instructional strategies.

**Learning Goals for Biology 397:**

This course has three major main objectives; the first is to gain an understanding of how the Biol lab courses are designed from the instructional perspective, the second is to practice small group student instruction and assist the Faculty Instructor, and the third is to use reflection to combine knowledge and skills acquired through the biology curriculum to practical education in the lab.

Upon completion of this course, through the evaluation methods described above, students will:

1. Understand the structure and learning outcomes of the Biology Lab Course.
2. Demonstrate the ability to reflect on experiences in the classroom and suggest ways to alter teaching practices to improve learning.
3. Teach mini-lessons on topics related to lab material using pre-determined learning objectives as a guide.
4. Identify a place for improvement in the course and develop a pedagogical solution.

**Integrative and Applied Learning Experience:**

Integrative learning fosters the ability to connect and combine knowledge and skills acquired through the curriculum and co-curriculum to new complex situations within and beyond the college. This approach allows students to reflect on the ways that such knowledge is utilized and places them on a fast track for continuing success.

As a ULI, you will meet the criteria for the integrative or applied learning experience which are:

- **Structured, Intentional, and Authentic Experiences:** Integrative and applied learning experiences should include a course syllabus or learning contract between parties and should have hands-on and/or real-world elements.
- **Preparation, Orientation, and Training:** Integrative and applied learning experiences should include sufficient background and foundational education and should include expectations that are expressed as learning outcomes that structure the experience and ongoing work.
- **Monitoring and Continuous Improvement:** Integrative and applied learning experiences should include in-experience mechanisms for feedback, course correction, quality monitoring, and evaluation of progress towards the state learning outcomes.

- **Structured Reflection:** Integrative and applied learning should include opportunities for students to self-assess, analyze, and examine their experience and to evaluate the outcomes. Reflection should demonstrate relevance and should form connections with previous experiences and/or future planning as well as a demonstration of one of Geneseo's core values: Civic Engagement, Sustainability, Inclusivity, Learning, or Creativity.
- **Evaluation:** Students must receive appropriate and timely feedback from the project organizer.

**Text and materials:**

The lab manual for your assigned Biology laboratory will be provided each week at the prep meeting. In addition, a preparation guide will be provided at the Monday meeting and will also be available online. A freshman biology text is a useful reference; copies of an older text are available in the lab classrooms.

**Evaluation:**

|  |     |
|--|-----|
| Class participation (interaction with students, engagement during laboratory preparation, weekly office hours) | 65% |
| Tutor Training course completion   | 15% |
| Creative Project   | 20% |

**Common Tutor & Safety Training:**

The Common Tutor Training program is a campus-wide initiative. It was assembled by the directors of the largest student support services and the Office of the Provost with input from the Office of Diversity and Equity, Student Health and Counseling, and the Office of Academic Planning and Advising. Here, the term “tutors” is used to cover the wide range of positions through which students interact educationally with their peers: teaching assistants for specific classes and courses, tutors in college-wide learning centers like writing and math, departmental tutors, supplemental instructors and undergraduate lab instructors, tutors in the Access Opportunity Programs, academic peer mentors, tutors in Residence Life, and club and honor societies who have set up peer support services.

This variety of positions means that many aspects of your work are specialized, but there are also certain principles of tutoring that you all share, and that material is what this course covers and asks you to reflect on.

The estimated time to complete the course is four to five hours. It's set up in a way we think makes sense if you move through it in a linear fashion, but you could complete the modules in any order. You will work with your supervisor or director on exact scheduling, but we recommend that you complete the material, the quizzes, and the reflective writing by around the mid-point of your first semester of tutoring (October 27<sup>th</sup> for the Fall 2023 Semester).

**Class Participation:**

Class participation will be assessed by direct observation by members of the instructional team including the course coordinator and the faculty advisor of your section.

Most weeks you will be asked to work directly with students in the lab. This includes but is not limited to asking questions to guide learning, demonstrating techniques, helping to brainstorm experimental

protocols, or clarifying procedures. You will also teach at least one mini-lesson and may be asked to demonstrate procedures for the class. The faculty supervisor will observe you and provide feedback.

ULAs will hold one hour of face-to-face office hours in the Biology Learning Center each week for their lab section. Times will be arranged to align with student availability to the extent possible.

### **Creative Project:**

Part of an integrated and applied learning experience is to observe a problem and formulate a response. Students will work towards completing a project during the semester that leads to the improvement of the laboratory course in some way. The project will consist of two elements; a practical improvement to the course itself, and a short justification for the change or addition. Examples include, but are not limited to updating assessment questions, developing updated lab handouts, creating supplemental study aids to improve understanding, or developing new experiments for future implementation in the class. The project deadline will be the last day of classes. Drafts and early submissions will receive appropriate and timely feedback.

### **Grading scheme:**

In order to receive an A, you must: (1) attend and participate in the weekly meetings as well as the Biology 116 lab to which you are assigned, (2) be consistently punctual and well-prepared for lab, (3) perform the instructional activities assigned to you with care, attention and enthusiasm, (4) communicate well with students in lab including initiating conversations with students, (5) work well with your faculty supervisor and (6) show growth through the semester.

Assignments in this class are evaluated on acceptable completion. Failure to complete assignments on time will result in no credit. Grading will use the standard Geneseo grading scale.

### **Accessibility**

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility Services will coordinate reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities, as well as medical conditions related to pregnancy or parenting. Students with letters of accommodation should submit a letter to each faculty member at the beginning of the semester and discuss specific arrangements. Please contact the [Office of Accessibility Services](#).

- Student responsibility: Please submit your letter of accommodations to us at the beginning of the semester and make an appointment to discuss arrangements.
- Instructor responsibility: We are committed to working with you to create a just learning environment while meeting the learning outcomes of the course. Unless you indicate otherwise, we will keep all accommodations confidential.

### **Responsibilities to prioritize everyone's health and wellbeing**

If at any time you fall ill, we ask that you protect our community and yourself by not coming to class. Lecture materials including presentation slides will be posted on Brightspace. Should you miss a class due to illness it is important that you try to get additional notes from other students and that you check Brightspace or ask your professor about any work you might have missed. Any Brightspace quizzes or

Achieve exercises done in class are due one week later and can be completed outside of class. Links to these can be found in the corresponding chapter module.

### **Responsibilities to promote learning**

Please arrive to class on time, stay through class, use your laptop and other technology only for class-related activities, and turn off your cell phone ringtones (including vibration mode).

### **Technology**

Technology can be beneficial to the process of your education. For this reason, laptops and smartphones are permitted so you can take notes and view classroom materials, as well take polls and quizzes. Please refrain from using your phone for any reason not related to class (e.g., social media websites, e-mail, playing games, cell phone photography). These diversions can jeopardize your learning and also distract those around you. We understand that in some emergency situations a student may need to leave a cell phone turned on. If that is the case, tell your instructor before class that you may be contacted.

### **Responsibilities to maintain frequent communication**

You should configure your Brightspace account to provide daily updates via email or text message, so you won't miss any updates or changes to the schedule.

Check the announcements section in Brightspace regularly. The best way to get in touch with your instructors is via e-mail. Please include your name (not just your email address) and the course name or number in all e-mails. To preserve work-life balance, we reserve the option to delay answering emails sent after 5 pm or on the weekends until the next business day.

### **Policy exceptions and changes**

Policies are designed to address common issues and ensure fairness for all. We cannot anticipate every possible problem that may arise, and therefore policies can have limits and exceptions! If you are experiencing problems in completing class work for any reason, please make an appointment to talk with one of us.

### **Diversity and equity**

It is our intent to create a learning environment that supports all students. We believe the diversity that you bring to this class should be viewed as a resource, strength, and benefit. We strive to present materials and activities that are respectful of gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture. Your suggestions are encouraged to improve the course's effectiveness personally, or for other students or student groups. For ideas, questions, or concerns related to diversity, equity, and inclusion in the Biology Department, please reach out to [bio-diversity@geneseo.edu](mailto:bio-diversity@geneseo.edu).

**Biology 398**  
**Biology Laboratory Pedagogy**  
**Course Syllabus – Fall, 2023**  
**Monday, 4:30 – 5:20 PM**  
**ISC 101**

**Instructors:**

**Dr. Robert Feissner**

Office: ISC 356

Phone: 245-5022

e-mail: [feissner@geneseo.edu](mailto:feissner@geneseo.edu)

Office hours: MWF – 11:30 - 12:20 PM, and by appointment

**Course description & Teaching Philosophy:**

Students enrolled in Biology 398: Biology Laboratory Pedagogy, will be concurrently enrolled in Biol 398: Biology Lab Instructor: General Biology, Human Biology, or Contemporary Biology. The pedagogy course will award one credit of pedagogy seminar. This course will provide a framework for preparing to teach introductory Biology labs and will provide discussion and class activities to cultivate reflective teaching practice. Classes will model appropriate instructional techniques for use in Biology laboratory classes. In addition, through readings and class discussion, we will explore relevant pedagogical issues.

**Class Meeting Times and Requirements:**

It is expected that all students will participate in class every week during the semester for which labs are in session. A general schedule of topics for discussion can be found on the last page of this syllabus.

**Text and materials:**

Lab exercises and ULI preparation guides for Biol 398 will be available on-line. While no textbooks are required for the course, an introductory biology textbook is often useful. In addition, for our seminar class meetings we will use journal and web-based articles that will be available through Brightspace or handed out ahead of time. Most of these will be quite short and are intended to stimulate reflection.

**Evaluation:**

|    |                                  |     |
|----|----------------------------------|-----|
| 1. | Online discussion of readings    | 30% |
| 2. | In Person pedagogy participation | 30% |
| 3. | Reflections                      | 30% |
| 4. | Teaching Observation             | 10% |

1. **Discussions.** Most weeks there will be a short reading to stimulate reflection and discussion. One student each week will be assigned to write a posting on the discussion board in Brightspace based on that reading or another prompt provided by the instructor (approximately 2 double-spaced page). All other students will use the first discussion board post to write a meaningful response. Follow-up posts should discuss and share ideas; Do you agree with the first poster's interpretation of the reading? Why? Do you

disagree? Why? Do you have an experience as a student or instructor that relates to this? Explain and reflect. What did you do in a similar situation? What would you have done differently? We are looking for evidence that you are thinking critically and reflectively about your experiences as a teacher and as a learner this semester.

All responses and replies must be logged prior to a set deadline to get credit. Elements of the online discussion will be utilized to guide activities and discussions during class. Therefore, participation on the discussion board is necessary to be adequately prepared for class! We are looking for evidence that you are thinking critically and reflectively about your experiences as a teacher and as a learner this semester. While we will not grade your reflection, we may make suggestions for engaging in deeper analysis.

2. **Reflections.** You will complete three online reflections about your experiences teaching/leading/working with students throughout the semester. A reflection prompt will be provided to focus discussion. These prompts will touch upon experiences and events from labs and are intended to stimulate reflection on your teaching practice. A meaningful post for each prompt will be due on Fridays, although discussion on a given topic may continue indefinitely.
3. **Class participation** will be assessed by direct observation during the pedagogy meetings, and by short writing assignments done either in class or outside of class.
4. **Teaching observation.** Once during the semester, ULI's taking the pedagogy course will visit and make observations of the ULI's from another course in Biology (e.g. ULI's from Biol 116: General Biology Lab will visit and observe the ULI's from Biol 104/106: Human/Contemporary Biology Laboratory). These observations will form the basis for discussions in class that focus on student motivation, teaching strategies, and class preparation. A reflective statement will be completed to accompany each student's observation notes.

**Grading scheme:** In order to receive an A, you must: (1) attend and participate enthusiastically in Monday night class meetings, (2) be consistently punctual and well-prepared for lab as well as class meetings, (3) turn in excellent assignments on time, (4) show evidence of reflective teaching practice, including efforts to improve based on your reflection and feedback from others, (5) show evidence of careful, fair and prompt assessment of students, (6) keep accurate records, maintain appropriate security and confidentiality, and provide readable summaries of grades to faculty supervisor or course coordinator when required, (6) maintain good communication with students throughout lab including initiating conversations with students, (7) work well with your faculty supervisor and lab assistant. You will receive a B if there are serious problems with one category or lesser problems in two categories. If you exhibit serious problems in two categories or minor problems across several categories you will receive a C. If you have serious problems in more than 2 categories, you will receive a D. If you are seriously negligent, or if you have problems in 3 or more categories you will fail.

**Tentative schedule of topics:**

The schedule below emphasizes pedagogical topics and centers on our seminar discussion for each week. In part, we will respond to your questions and interests you express during the

seminar sessions. Please be aware that this schedule is very loose and will change over the course of the semester as topics and issues arise from experiences in the classroom. Teaching is an endeavor that requires flexibility and adaptation to succeed. As you will see during the semester, your class will like a living organism that reacts to new situations in unpredictable ways. Moreover, your section will differ from other sections in demographic makeup, attitude, aptitude, and general behavior. This class *will* adapt to your changing needs throughout the semester and *will not* adhere to a rigid schedule that may not meet your needs as learning instructors.

**Course Goals:**

This course has two major main objectives; the primary objective is to teach the Biol 104/106/118 curriculum to one section of Biol 104/106/118 via direct instruction, weekly office hours, and graded assignments, the second is to develop leadership and management experience that will make you competitive for post-graduate education and career opportunities.

**Learning Outcomes for BIOL 398:**

Upon completion of this course, through the evaluation methods described above, students will:

1. Utilize strategies to guide students to an understanding of biological concepts.
2. Utilize personal reflection to modify their instructional approaches.
3. Recognize the role of the laboratory as a collaborative learning community.
4. Understand the learning objectives of the Biology Lab course they teach.

**Accommodations:**

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility will coordinate reasonable accommodations for persons with physical, emotional, or cognitive disabilities to ensure equal access to academic programs, activities, and services at Geneseo. Students with letters of accommodation should submit a letter to each faculty member and discuss their needs at the beginning of each semester. Please contact the Office of Accessibility Services for questions related to access and accommodations.

Office of Accessibility Services  
Erwin Hall 22  
(585) 245-5112  
[access@geneseo.edu](mailto:access@geneseo.edu)  
[www.geneseo.edu/accessibility-office](http://www.geneseo.edu/accessibility-office)

**Discussion Board Primary Reflection Assignments:**

Each week a reading will be posted on Brightspace that ALL students are required to read. Each week that a reading is assigned, two “primary respondents” will write a 1-2 page response and reflection based on the assigned reading on the Discussion Board thread created for the reading.

Following the post by the primary respondent, all other students will respond to the initial post and comment on thoughts that they agree or disagree with, and why. If another part of the reading was formative for you but was not discussed by the primary respondent, this would be

the place to discuss it. Follow-up posts do NOT have a length requirement, but must be of substance and show that each student has critically read the paper. The instructors will read the posts and draw upon them to help guide the class discussion on Monday afternoon.

| Class Date: | Discussion of Reading # | Respondent #1 | Assigned Reading                         |
|-------------|-------------------------|---------------|--|
| Aug 28      | <b>First Meeting</b>    | Student 1     | (1) Students Teaching Students           |
| Sept 4      | 1                       | Student 2     | (2) How to get the most out of studying  |
| Sept 11     | 2                       | Student 3     | (3) Flunking Exams                       |
| Sept 18     | 3                       | Student 4     | (4) Group Work                           |
| Sept 25     | 4                       | Student 5     | (5) Motivating the Unmotivated           |
| Oct 2       | 5                       | Student 6     | (6) Asking Questions to Improve Learning |
| Oct 9       | <b>No Meeting</b>       | ---           | <b>Fall Break</b>                        |
| Oct 16      | 6                       | Student 7     | (7) Increasing Student Participation     |
| Oct 23      | 7                       | Student 8     | (8) Grading Lab Reports                  |
| Oct 30      | 8                       | Student 9     | (9) TBA                                  |
| Nov 6       | 9                       | Student 10    | (10) TBA                                 |
| Nov 13      | 10                      | Student 11    | (11) TBA                                 |
| Nov 20      | <b>No Meeting</b>       | ---           | <b>Thanksgiving</b>                      |
| Nov 27      | 11                      | Student 12    | (12) TBA                                 |
| Dec 4       | 12                      | ---           | ---                                      |
| Dec 11      | No Meeting              | ---           | ---                                      |