BIOS 4697: Biology Undergraduate Teaching Syllabus

3 credit hours, enrollment by permit only

Prerequisite with concurrency for new TAs: CETL 2000 BIO (BY1 or BY2).

Instructors:

Dr. Emily Weigel, emily.weigel@biosci.gatech.edu; Clough 474E, 404-385-1713
Pronouns: she/her/hers
Virtual drop-in hours (link on Canvas): Mondays 11am-1pm or make an appt by email
Dr. Onur Birol, onur.birol@biosci.gatech.edu; Cherry Emerson 325 , 404.894.5918
Pronouns: he/him/his
Virtual drop-in hours (link on Canvas): Tuesdays and Thursdays 10am-11am or make an appt by email

Class meetings:

BIOS 4697 does not have a regularly scheduled meeting time. The contact time for this course comprises attending your teaching assignment, prep and grading for that assignment. As needed, individual meetings may be scheduled with your instructors to provide feedback on your Active Learning Proposal (ALP) for revision.

Course objectives:

This course is an introduction to teaching Biology for undergraduate teaching assistants, with a focus on effective teaching, active engagement of students, and development of innovative classroom activities. Your experiences and assignments in this course will enable you to:

- Practice quality classroom management skills (e.g., conflict response, creating engaging learning environments);
- Discuss and implement sound pedagogical practices to achieve course objectives (e.g., providing constructive feedback to students; using active learning strategies);
- Locate and understand educational policies (institutional, state, or national) that impact classroom instruction/facilitation.
- Access and make appropriate referrals for institutional student support services; and
- Integrate peer and colleague feedback toward improving instructional practices.

This course is for new and returning teaching assistants in the School of Biological Science. Only students selected to be teaching assistants are eligible to enroll in this course.

Course content:

A student's efforts in the course are divided among two core areas:

1: *Developing Teaching Skills*
Develop confidence and effectiveness in your teaching style; explore alternate methods in your teaching style to reach diverse audiences.

2: *Contributing to Course Content*
Design of a classroom assignment, exercise, and grading rubric; regular attendance and participation in class; one-on-one tutoring during student office hours.

Grading:

The final grade in this course is based on successful advancement of teaching skills and completion of all required TA duties. Specific course requirements include:

80%	Fulfilling expectations of TA contract and other duties as assigned by course instructor
20%	Production and revision of an active learning activity (Proposal & Revised Final Product)

Each student is expected to meet regularly with his/her course instructor to discuss progress in the course, and any performance concerns that develop will be raised in these meetings. Biology majors may use a maximum of 6 credit hours of BIOS 4697 as their Biology breadth electives. Remaining credits may be used as free electives. Each semester of BIOS 4697 credit must correspond to a different course assignment.

Evaluation

Attendance and participation: Attendance and participation are both critical to your development as an undergraduate TA. Anticipated absences from your class for official university activities should be communicated with the instructor at least one week in advance. Unanticipated absences should be discussed as soon as is possible given the circumstances. It is your responsibility to initiate and negotiate the terms of any make-up responsibilities.

Attendance and participation for BIOS 4697 will be evaluated in terms of:

(a) class participation both in and outside of class

(b) level of demonstrated engagement within the course, including the completion of any class assignments

Attendance in your TA'ed course meetings includes all lab sessions, TA prep meetings, and lecture classes (where appropriate – please see your course advisor for any questions).

Accessibility and assignment grading: This portion of your grade consists of timely, complete grading of assignments in alignment with your course instructor's directives (e.g. instructions, rubrics, keys, etc.), as well as maintaining regular accessibility to your students via office hours and other meetings. Infractions in either area will result in loss of 2% of your grade per instance.

Development of an Active Learning Proposal (ALP): This project will give you experience in developing teaching materials, and will become part of the resources used in your TA'ed course materials. You will be responsible for developing an active learning exercise to be used in the course you are currently TA-ing. This will include developing a brief (1-2 page) proposal to submit to the instructors for feedback. The final project will be submitted at the end of semester and shared with the course instructor and the Biological Sciences TA community at the conclusion of the semester. All components will be submitted via Canvas. Whenever possible, we encourage you to implement your activity during the current semester.

- **Proposal Components**: a learning objective, a description of a 10-15 min activity with students, instructor notes on how to implement, and a method to measure student learning. *The proposal should contain enough detail for another TA to run the activity and assessment from your notes alone*. **Due Monday February 28 at 11:59pm on Canvas.** The proposal should be organized as follows:
    - TA name, course name/number, and semester
    - 1-2 Learning objective(s); LOs must use a verb that you can *measure* (eg, 'list,' 'explain,' 'identify,' 'predict', etc.); 'understand' is not a measurable verb. *See the Bloom's taxonomy list on the last page of this syllabus for more information on LO verbs.*
    - A brief, 1-paragraph description of the activity (like an abstract) Include here the modality (online, face-to-face, etc.)
    - Instructor notes: detailed notes to the instructor including pre-activity preparation and step-by-step instructions for the instructor with timing for the activity
    - Student materials: collection of all materials distributed or presented to students, including handouts, PowerPoints, instructions, etc. Cookie-cutter labs/procedural steps are not suitable for this. The student materials should clearly align with the Learning Objectives (by the end of the activity, students should be able to accomplish the LOs) and be ORIGINAL. Borrowed content, if any, should be credited appropriately to distinguish what is your own work.
    - An assessment plan: a list of questions or other assessment for measuring how well students achieve the learning objective(s) after the activity; the assessment should be a separate, individual assignment that would be completed after the activity, not as part of the activity. The assessment should clearly match the Learning Objectives (should measure the same thing as the LOs)
    - An answer key: Provide, for any assessment, an answer key and/or rubric that defines what satisfying the assessment would look like.
    - References: This section should cite, in a format of your own choosing, the origins of any source material used.
- **Revision:** You will be given feedback on the quality and alignment between the learning objective, the activity, and the assessment, as well as feedback on aspects that the activity does well and constructive critique on ways the activity could be improved. Based on the feedback for your submission, your instructors may invite you to a meeting to discuss how to improve the work; if a meeting is necessary, you will be given ample notice to schedule a meeting at a mutually-agreeable time. The current target is for any meetings to occur March 7-March 18, as to give you time to revise/use the final product.
- **Final Product**: You should incorporate the feedback and reflections from implementing the activity (if you were able to do so in the current semester) to produce a final product that includes all proposal components and organizational structure described above. The final product should contain enough detail for another TA to run the activity and assessment from your notes alone. **Due April 22nd at 11:59pm on Canvas.**

Academic Integrity:
Students are reminded of the obligations and expectations associated with the Academic Honor Code and Student Code of Conduct, available online at: http://www.deanofstudents.gatech.edu/integrity/policies/honor_code.php http://www.deanofstudents.gatech.edu/codeofconduct.

Learning Accommodations:
If needed, we will make classroom accommodations for students with disabilities. These accommodations should be arranged in advance and in accordance with the Office of Disability Services (http://disabilityservices.gatech.edu/).

TA-ship Progress:
We are committed to providing a quality learning and developmental experience for each of our TAs, as well as course instructors and the students in our classes. As we welcome your feedback on how we can improve the experience, we may periodically check-in with both you and your course instructor during the duration of your TAship, and encourage you to do so with your students.

As there may be occasions where you or your course instructor may feel the need to reach out to us, we want to offer tips on how to make the experience as smooth as possible. ***It is important to recognize that we all work as a team and establishing positive, cordial and professional relationship is very important in helping avoid major issues that lead to major grievances.***

First, set expectations, and where you have questions, always ask. Being clear on your duties and how you are meeting them, as well as upfront with your instructor about any areas for which you'd like more support, can be key to developing a good working relationship. Keep this an open conversation, and deliberately discuss how you will inform one another regularly, including the frequency (e.g. as needed, after exams, at weekly meetings, after each class, etc.).

Should your expectations fall out of alignment, usually, an informal, open and honest discussion can solve most issues. When issues arise that cannot be dealt with in a direct manor, or for which a direct conversation is insufficient, the following formal procedure for grievances and complaints exists.

How to Make a Complaint
To register a formal complaint, please contact Dr. Weigel in writing providing a full description of the issue and resolutions that have been attempted to date. Please include each party's full name, and the date(s) of any events.

What Will Happen Next
Upon receipt, you will receive an acknowledgement of your complaint. We may contact you for further information. You will receive a formal response within five working days to your complaint. Any further required action taken will be determined on a case-by-case basis.

Misconduct and Major Grievances
If the complaint involves an allegation of misconduct or gross misconduct, we will contact you immediately to advise no further contact until the issue is resolved. This may be done in conjunction with your supervisor and/or HR at their unit or agency. Due to the nature of such complains, we cannot promise confidentiality, but we aim to keep matters private.

Achieving Resolution
If satisfactory resolution of an issue does not occur, a written, formal complaint should be directed to Dr. Spencer, Associate Chair for Undergraduate Education at Chrissy.Spencer@biosci.gatech.edu.

This is action is requested to occur only after sufficient time and all resolution options have been exhausted.

All complaints and grievances will be kept on file along with resolution outcome for a period of five years. Note that grievances lodged against you may affect your current and/or future ability to participate in the TA program.

As TAs, you are expected to discuss and share this syllabus, particularly the course objectives and progress sections, with your course instructor.

Backwards Design Principles:

In backwards design, developed by Wiggins and McTighe, you follow a three-step process to develop a learning activity:

1. Determine what you want students to know/be able to do (Outcome)
2. Determine what evidence will show that students do know and can do it (Assessment)
3. Determine what learning activity will facilitate student development of that knowledge/skill (Activity)

You will apply these principles to the development of your Active Learning Proposal

"Adopt and Adapt" Strategies:

Often a teaching best practice is to start with a published, validated learning activity and "adopt and adapt" it to fit the needs of your particular course and students. This approach is acceptable in this course, but as in any situation where you use ideas which are not originally your own, it is essential to give proper attribution (citation) to the original author. Representing the work and ideas of someone else as your own in any situation is a violation of the Georgia Tech Honor Code.

This exercise is intended to help you develop effective and innovative classroom practices in your own teaching. If you do choose to adapt an existing activity as you develop your Active Learning Proposal, be sure the adapted exercise reflects and incorporates your own teaching ideas.

Bloom's Taxonomy Verbs:

Definitions	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Bloom's Definitions	Remember previously learned information	Demonstrate an understanding of the facts.	Apply knowledge to actual situations.	Break down objects or ideas into simpler parts and find evidence to support generalizations	Compile component ideas into a new whole or propose alternative solutions.	Make and defend judgments based on internal evidence or external criteria.
Verbs	Cite Count Define Describe Duplicate Draw Identify Indicate Label List Match Name Order Outline Recognize Relate Recall Repeat Reproduce Select State	Arrange Classify Convert Defend Describe Discuss Distinguish Estimate Explain Express Extend Generalized Give example(s) Identify Indicate Infer Locate Paraphrase Predict Recognize Rewrite Review Select Summarize Translate	Apply Change Choose Compute Demonstrate Discover Dramatize Employ Illustrate Interpret Manipulate Modify Operate Practice Predict Prepare Produce Relate Schedule Show Sketch Solve Use	Analyze Appraise Breakdown Calculate Categorize Compare Contrast Criticize Diagram Differentiate Discriminate Distinguish Examine Experiment Identify Illustrate Infer Model Outline Point out Question Relate Select Separate Subdivide Test	Arrange Assemble Categorize Collect Combine Comply Compose Construct Create Design Develop Devise Explain Formulate Generate Plan Prepare Rearrange Reconstruct Relate Reorganize Revise Rewrite Set up Summarize Synthesize	Appraise Argue Assess Attach Choose Compare Conclude Contrast Defend Describe Discriminate Estimate Evaluate Explain Judge Justify Interpret Relate Predict Rate Select Summarize Support Value

Adapted from Allen, M.J., (2004)