Organismal Biology

Last Updated: Tue, 11/18/2025

Course prefix: BIOS

Course number: 1108

Section: A

CRN (you may add up to five):
88744

Instructor First Name: Onur

Instructor Last Name: Birol

Semester: Spring

Academic year: 2026

Course description:

In this course, you will learn how your biology is similar – and different – to the biology of all life on Earth. We will explore the evolutionary history of all life on Earth through the lenses of development and reproduction, signaling and communication, and physiology and organ systems. As we explore the diversity of life on Earth, you'll be able to identify biological patterns and explain how you both are similar and different to the breadth of diversity of life on Earth. You will also develop scientific skills in analyzing and interpreting scientific data to test hypothesis and communicate scientifically. Finally, you will develop and practice skills in metacognition to identify your best learning strategies that you will be able to employ in your future courses and career. This course will foster your learning by using reflective practice, accentuate your critical thinking skills, and develop your confidence in soliciting guidance when problem-solving.

Course learning outcomes:

By the end of this course, you will be able to:

1. Identify and explain patterns in organismal biology in the context of evolutionary history, growth and development, cell signaling and communication, and organ systems and physiology
2. Communicate effectively using appropriate scientific language in class settings
3. Appreciate commonalities and differences among people who practice science, and recognize that there are multiple pathways into science as a career

Required course materials:

This course is taught without a traditional textbook, and all course readings and videos are on the course website, https://organismalbio.biosci.gatech.edu/.

To complete your pre-class incoming knowledge evaluation (IKEs), team in-class activities (TICAs), and your weekly homework assignments, students are required to have a Learning Catalytics account. **The School of Biological Sciences has purchased access codes to Learning Catalytics, and we will email you instructions and an access code at the end of drop/add registration.**

Grading policy:

Your final grade will depend on the following combination of grades:

In-class exams (4 midterms)	40%
Final exam (Cumulative)	20%
Scientist Spotlights & Plagiarism assignment	20%
Participation*	20%

*equally weighted between Homeworks, TICAs, and IKEs

We will use the following procedure in calculating your final grade:

1. We will weigh your 4 midterms 6%, 10%, 10%, and 14%, where your lowest midterm score will count 6% and your highest midterm score will count 14% of your final grade.

2. We will combine your exams, writing assignments, and participation scores into a raw composite score (0 – 100%) using the weights shown above.

3. We will assign final letter grades using the following scale:

A: ≥ 90.0%

B: ≥ 80.0% and < 90.0%

C: ≥ 70.0% and < 80.0%

D: ≥ 60.0% and < 70.0%

F: < 60.0

Attendance policy:

Points earned in Learning Catalytics will contribute to the "participation" portion of your course grade. To participate in class, you will need to have a smartphone, tablet, or laptop

in class. Phone and computer use should be restricted to class-related material, and off-task use may result in loss of participation points for that day. ***ALL IKEs, TICAs, and weekly HW questions are graded for participation/completion NOT correctness. You must complete a minimum of 60% of the questions to receive participation credit. While correctness is not required, these are designed to be an opportunity to authentically test your understanding and highlight areas for additional study.***

Incoming Knowledge Evaluations (IKEs): Before each class, we'll expect you to complete the pre-class readings on the website. Once you've reviewed the material, log in to Learning Catalytics to complete that day's Incoming Knowledge Evaluation (IKE). IKE sessions will close at 9am before the start of class and will not be reopened for credit, but you can review closed sessions for study purposes. We'll use your responses to guide what we do in class. IKE questions are often not at the same level as you can expect to see on an exam; instead, they ensure that you come to class with effective baseline knowledge to work up to exam-level questions in class.

Lectures and Team In-class Activities (TICAs): Attendance and participation in lecture correlate strongly with performance in this course. We will make our lecture materials available and urge you to download them for use in active note-taking during class. Much of the material and application of ideas needed for success in this course will be presented only in lecture. Questions presented in class are usually at the same level as exam questions. TICA sessions in Learning Catalytics at the end of class, with a few exceptions, and will not be reopened for credit, but you can review closed sessions for study purposes.

Homeworks: Homework assignments will be made available each weekend in Learning Catalytics and are due by 9pm every Monday. Homeworks will not be reopened for credit, but you can review closed sessions for study purposes.

Missed Participation: IKEs and Homeworks are completed asynchronously and thus makeup IKEs and HWs are not typically administered without documentation to explain an extended period where you were unable to participate in course expectations (e.g. documented illness). TICAs are administered synchronously during class time, and you are expected to participate in person during regularly scheduled class. LC sessions cannot be re-opened for any individuals per technical limitations. *"Stuff Happens" Clause**:** We will drop your 6 lowest IKE/TICA scores to account for any absences you may have during the semester. There is no need to email us if you miss a session, just note that we will apply this adjustment at the end of the semester when calculating final course grades. Homework scores cannot be dropped.* If you have an extended absence or institute approved absence for missing class, we will discuss accommodations with you. If granted, these TICAs will be dropped from your participation calculation.

Academic honesty/integrity statement:

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of

academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.

Core IMPACTS statement(s) (if applicable):

BIOS 1108 Organismal Biology for Non-Majors

This is a Core IMPACTS course that is part of the STEM area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help students master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I ask scientific questions or use data, mathematics, or technology to understand the universe?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems, and explain natural phenomena.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Inquiry and Analysis
    - Problem-Solving
    - Teamwork