

Principles of Biology I

Last Updated: Tue, 07/29/2025

Course prefix: BIOS

Course number: 1107

Section: B

CRN (you may add up to five):
88742

Instructor First Name: Shana

Instructor Last Name: Kerr

Semester: Fall

Academic year: 2025

Course description:

An introduction to biological principles, including biomacromolecules, bioenergetics, cell structure, genetics, evolution, and ecological relationships for STEM majors and prehealth students.

Course learning outcomes:

- Explain biological principles of modern biology, including biomacromolecules, bioenergetics, cell structure, genetics, evolution, and ecological relationships
- Use scientific skills to test hypotheses, design experiments, analyze and interpret data, and communicate scientifically
- Communicate effectively using appropriate scientific language
- Appreciate commonalities and differences among people who practice science, and recognize that there are multiple pathways into science as a career
- Reflect on the usefulness of your study strategies and identify new strategies and practices to achieve your best learning strategies

Required course materials:

This course is taught without a commercial textbook, and all course readings and videos are on the course online textbook at <https://bioprinciples.biosci.gatech.edu>. Required pre-class, in-class, and homework activities will be conducted through Learning Catalytics (learningcatalytics.pearson.com). *A code will be sent to your GT email to access Learning Catalytics; you do NOT need to purchase access yourself.*

Grading policy:

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

Midterm exams (approximately 10% each, see #1 below): 40%

Final exam (cumulative): 20%

Writing Assignments (10 total, equally weighted, 2.5% each): 25%

Participation* (equally weighted; see # 2 below): 20%

*all participation sessions are graded for completion, not accuracy.

Note that these components add up to 105%, and scores will be calculated out of 100% (not normalized over 105%), meaning that there is 5% extra credit built into the course components. We will use the following procedure for calculating your final grades:

1. We will weight 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 grades
2. Each IKE, TICA, and HW is worth 1 point; the total score you earn is divided by the total number of assignments offered (dropping the lowest scores per the missed LC session policy described under Late/Missed assignments)
3. We will assign final letter grades using the following scale:

A: $\geq 90.0\%$

B: $\geq 80.0\%$ and $< 90.0\%$

C: $\geq 70.0\%$ and $< 80.0\%$

D: $\geq 60.0\%$ and $< 70.0\%$

F: $< 60.0\%$

Attendance policy:

Regular attendance and active participation during class time are correlated with better performance in the course. Some Learning Catalytics activities are delivered during class time. If you miss class, you should get notes from a peer and meet with a TA to get your content questions answered. If you experience any situation that causes you to miss more than one consecutive class or otherwise interferes with your ability to keep up with course assignments, we ask that you request assistance from the Dean of Students using this link: <https://studentlife.gatech.edu/request-assistance>. Select "Class Absence Verification" for documentation of an absence, including missed exams.

Academic honesty/integrity statement:

All students are expected to abide by the Academic Honor Code, which can be viewed online at <https://policylibrary.gatech.edu/student-life/academic-honor-code>. Plagiarism is the unattributed use of the words or ideas of others; plagiarism on any assignment, including laboratory reports and the group project, will be referred to the Office of Student Integrity for adjudication. If you have any questions regarding your assignments and

plagiarism, we encourage you to consult with any of us before you submit the assignment. Cell phones may not be used during exams, and any indication of unauthorized cell phone access during the exam may be referred to the Office of Student Integrity.

Core IMPACTS statement(s) (if applicable):

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