



# Fundamentals of Biology

BIOL 100 - Fall 2025

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Instructor	Dr. John R. Taylor
E-mail	TaylorJr@suu.edu
Course Meeting Days and Time	Monday & Wednesday 2:30-5:00 pm in the MuR/SLAB
Office Hours	Email for Appointment (Generally MW 12:30-2:00 pm; TR 3:30-4:30 pm)
Office Location	Harlaxton Manor
Office Phone	N/A
Course Mode	In-Person

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## Catalog Description:

Course for non-science majors that explores fundamental concepts of biology and relates them to social issues. UE Outcome 8. Course fee \$50.

## Credit Hour Policy Statement:

Combination of standard lecture and other academic activities:

“This class meets the federal credit hour policy through a combination of lecture + laboratory (or lecture + practicum) for a total of 45-75 hours of supervised learning activities for each credit.”

## General Education Requirements:

This course meets the General Education requirements for Outcome 8 Overlay D Social Responsibility-Environmental.

## Course Learning Objectives:

In one of my favorite movies, the lead female character describes how her father taught her that 90% of the world goes through their life with their eyes closed. The other 10% live in constant amazement. My objective is to give you a chance to be one of the 10%. I firmly believe that a sound understanding of the principles of biology will enrich all lives, making a person a better parent, a more informed voter and citizen, and a happier person. Specifically, I intend for you to gain biological knowledge and then be able to apply that knowledge in your critical thinking, problem-solving, and decision-making. We will be working on bolstering reading comprehension, writing skills, and oral communication skills. My hope is to get you fully engaged in biology so that you will see how it impacts every facet of your life.

Specific Objectives

- ***Inquiry and Analysis:*** Students will be able to collect and analyze evidence systematically to reach informed conclusions; in doing so, they will break down complex issues to gain a better understanding of them.
  - Assessment Tools: Quizzes, POMS, Exams, Science & News

# HARLAXTON



- **Critical Thinking:** Students will be able to explore issues comprehensively before accepting or formulating a conclusion, synthesizing existing ideas in original and imaginative ways.
  - Assessment Tools: Quizzes, POMS, Exams, Science & News
- **Written Communication:** Students will be able to develop and express their ideas in writing.
  - Assessment Tools: POMS, Get Involved
- **Knowledge of the Natural World:** Develop students' understanding of the principles and procedures of science and cultivate their abilities to apply the empirical methods of scientific inquiry. Specifically, students will be able to 1) explain how to use scientific methods to develop/test hypotheses and to draw defensible conclusions, 2) describe concepts of the nature, organization, and evolution of natural systems, 3) demonstrate relationships between science and the application of scientific knowledge, and 4) explain how humans interact with natural systems.
  - Assessment Tools: Quizzes, POMS, Exams, Science & News, and Get Involved

### Methods of Instructions:

A combination of in-class discussion, group work, in-class activities, lectures, and laboratory exploration.

### Textbooks and Required Reading:

Free Online Resource: Concepts of Biology. Openstax. Fowler, Roush, and Wise.

- Download for free at <https://openstax.org/details/books/concepts-biology> [Links to an external site.](#)

### Course Schedule:

#### WEEK 1

Chapter 1: How is Science Different?

Activity 1: What is Science Survey—The Myths of Science

Activity 2: Nature of Science Blocks

#### WEEK 2

Quiz 1: Bring completed to class

Topic 1: Forces, Matter, and Energy (A Primer)

Topic 2: The Characteristics of Life

POMS 1: Due before Tuesday Class: *Take This Fish and Look At It*

#### WEEK 3

Chapter 2 Chemistry of Life (Atoms, Water, & Macromolecules)

Activity 3: The Journey to My Tree (Nature Journaling)

Science & News: Discuss assignment and configure groups



#### **WEEK 4**

Chapter 2: Continued Exploration of Chemistry of Life

Activity 4: Potato Lab

POMS 2: On Being the Right Size

#### **WEEK 5**

Quiz 2: Bring completed to class

Chapter 3: Cells and Small Things of Life

Activity 5: Cells and Tissues (Microscopy)

#### **WEEK 6**

Quiz 3: Bring completed to class

Exam #1: Chapters 1-3

Chapter 4: The Flow of Energy & The Cycling of Matter in Systems

#### **WEEK 7**

Quiz 4: Bring completed to class

Chapter 5: Plants & Photosynthesis

Activity 6: Plant Diversity & Dissection (Let's hit the garden!)

#### **WEEK 8      MID-TERM BREAK   No Classes**

#### **WEEK 9**

Science & News: Powerpoint scaffold due

Quiz 5: Bring completed to class

Chapter 6: Cells and Small Things of Life

Activity 7: Photosynthesis/Cellular Respiration Model lab

#### **WEEK 10**

Quiz 6: Bring completed to class

Chapter 7: Death & Reproduction (Cellular & Organismal)

Activity 8: Mitosis (DNA Models)

POMS 3: Thinking Like a Mountain

#### **WEEK 11**

Science & News: Making a Movie

Chapter 7: Continuing Death & Reproduction (Cellular & Organismal)

Quiz 7: Bring completed to class



## WEEK 12

Exam #2: Chapters 4-7

Chapter 9: DNA Replication/Protein Synthesis

POMS 4: The Futility of Global Thinking

## WEEK 13

Quiz 9: Bring completed to class

Chapter 8: Patterns of Inheritance

Activity 9: Build a Baby (AI)

## WEEK 14

Quiz 8: Bring completed to class

Chapter 11: Evolutionary Concepts

Activity 10: Hardy Weinberg (Big Populations)

## WEEK 15

Exam #3: Final Exam

Watch Science & News Videos

Get Involved: Due

*Information contained in this syllabus, other than the grading, late assignments, make-up work, and attendance policies, may be subject to change with advance notice, as deemed appropriate by the instructor.*

## Grading Criteria:

### UNIT EXAMS (40% of Grade)

Three tests will consist of approximately 50-70 questions (M.C., short answer, T/F and matching) equally covering all chapters discussed within the designated time period. Questions are based upon concepts also covered in readings and quizzes. The date and time of these exams are listed below in the course outline and plans should be made well in advance to be in attendance. **There are no exceptions for missed tests.** Tests cannot be taken late, though arrangements can be made to take a test early. It is your responsibility to make these arrangements and I reserve the right to deny your petition.



## SCIENCE IN THE NEWS (25% of Grade)

For many college students in America today, the news is an overwhelming hodgepodge of headlines, posts, alerts, tweets, visuals, and conversations that stream at them throughout the day. While some stories come from news sites students choose to follow, other content arrives uninvited, through social media, tracking the digital footprints that many searchers inevitably leave behind.

Most students know a free press is essential in a democracy, and, yet, the deep political polarization occurring in this country has made them suspicious of biased reporting. Some question the proliferation of “fast news” — oversimplified and fragmentary coverage spewed across social media platforms, and especially blatant “fake news” that is founded mostly on opinion and unsubstantiated information. For many, engaging with news has become hard work, requiring students to evaluate everything they hear or read for truth and objectivity, whether it’s from a social media post, a conversation with a friend, or a news tweet on their smartphones. The challenge, therefore, is the difficulty of differentiating “fake news” from “real news.”

Your assignment is to find and focus on a single topic that conveys a message containing a biological component in the popular media or even social media. For example, you may see a meme or a news story on social media that says, “Don’t take the COVID-19 vaccine because it is the government trying to track you.” Once identified and PASSED off with Dr. Taylor, start digging. Find out where that “news” came from. Is it based on fact? What facts? Are they credible? How do you know if the information is reliable? Find the WHOLE story. You will then create a 3-5-minute video that describes the initial story, your journey of finding the answer, and what you found out.

All of these videos will be uploaded into a Google folder. You will then be assigned to watch and take a few notes on a group of these movies as part of our final.

## POMS READING ASSIGNMENTS (20% of Grade)

You will receive 4 reading assignments spread out through the course. Each article must be thoroughly read and digested. Once confident with the material, you must write a POM (Point of Most Significance).

Your written POM will be turned in via email by the date listed in the syllabus. The email must be written with the following pieces and format. **Do not** submit a WORD document. Your POM must be written as part of the message body.

To: [taylorjr@suu.edu](mailto:taylorjr@suu.edu)

Subject: Biology 1010 (Title of Article) POM

Message body:

Name of Student

Type of POM ( Type I, II, or III)

Title of Article



One-hundred well selected words describing your POM

- TYPE 1: You then have 100 words to describe what you think was the point of most significance from the reading. It can be less than 100 words, but NO MORE! Maximum score for this is 8 points.
- TYPE 2: You have 100 words to briefly state the point of most significance and then RELATE it to something in your life, previously discussed concept or reading assignment. This is more difficult than Type 1 and so you can earn a maximum of 10 points. Any citations should be placed on the bottom left side of the card.
- Type 3: You have 100 words to discuss what is being implied by the article. So you have to fully understand what the article is saying, and then discuss what course of action would be necessary if one were to abide by what is being implied by the author. Due to the increased level of difficulty, this is also worth 10 points.

### **GET INVOLVED (15% of Grade)**

You're living at Harlaxton Manor, hopefully spending a semester abroad exploring. Make one of those explorations to something that is science (especially biologically) based. A museum? An aquarium? Get creative and get involved in something new and science-y. Write a short paper describing what you did and a reflection of what you learned.

Make sure to plan ahead with other obligations to attend one of these Get Involved Assignments.

**A=93%, A- =90%, B+ =87%, B=84%, B- =80%, C+ =77%, C = 74%, C- =70%, D+ =67%, D =64%, D- =60%**

### **Withdrawal and Attendance policies:**

Harlaxton College expects regular class attendance by all students. Students are considered sufficiently mature to appreciate the necessity of regular and punctual attendance, to accept this personal responsibility and to accept the consequences of failure to attend. When absences occur due to emergency or medical reasons, students are expected to notify their instructors of the absence prior to class or to seek the assistance of the College nurse or a member of the Student Experience Team for help in notifying instructors.

Instructors have the authority to grant excused absences for medical, psychological, or personal reasons upon review of appropriate documentation and professional recommendation supporting such a request. In the event of long-term illness, reasonable accommodations will be made to allow a student to complete a course. In these cases, the Dean will need to approve the long term nature of the accommodation.

The Dean of Harlaxton College has the authority to grant excused absences for medical, psychological, or personal reasons.



Each instructor is expected to maintain an attendance policy in keeping with the nature of the Harlaxton program and may consider it in evaluating performance in their courses.

### **Policy Governing Unexcused Absences:**

Harlaxton College operates an attendance policy that is binding on all faculty and students. The number of unexcused absences that are allowed before incurring a penalty is related to the number of times a class meets each week. For courses which meet three times a week, students are allowed a maximum of three unexcused absences during the semester without attracting penalty points. For courses meeting twice a week two such absences are permitted, and for courses meeting once a week a single absence is allowed. More than two unexcused absences will attract a grade penalty of third-letter grade penalty (A- would drop to a B+, and so forth, for each additional absence).

### **Policy Governing Excused Absences.**

- Excused absences are not given to facilitate student travel independent of College-sponsored travel.
- Students may be permitted to miss class because of participation in academic field trips.
- Instructors must co-ordinate and confirm academic fieldtrips with the Dean, prior to the commencement of the Semester to ensure their inclusion in the Semester timetable.
- Where authorization for an academic fieldtrip is requested after the commencement of the semester, the request must be submitted to the Dean.

The following information is required:

- Purpose and brief description of the official Harlaxton event or academic fieldtrip.
- Dates, location, and times (as applicable).
- Alphabetical list of students involved [Last Name/First Name] along with their student identification number.

If approval is granted:

- Instructors affected will be notified at least one week prior to the class period during which absence is anticipated, or as soon as possible.
- Missed class time due to student participation is to be considered an excused absence.
- The grade of a student may not be lowered in any class due to excused absences.
- It is the student's responsibility - to take the initiative by consulting with their instructors before the absence occurs, and - to do what is required by the instructor to make up all missed assignments and/or examinations.
- Instructors are required to assist students in these occasional situations of excused absences.

### **Honor Code:**

All students at the University of Evansville agree to the University honor code: *I will neither give nor receive unauthorized aid, nor will I tolerate an environment that condones the use of unauthorized aid.*



**AI may be used only with prior permission or direction by the instructor.**

- All work submitted in this course must be your own.
- The use of generative AI composition tools, such as those offered by ChatGPT, Google Gemini etc. is prohibited in this course except for specific assignments and subject to the instructor's guidelines.
- Work generated by such tools without proper attribution is plagiarism and, thereby, a breach of the University's Plagiarism and Academic Honesty policy.

### **Disability Policy:**

It is the policy and practice of the University of Evansville to make reasonable accommodations for students with properly documented disabilities. Students should contact Disability Services within the Office of Counseling Services by calling 812-488-2663 to seek services or accommodations for disabilities. Written notification to faculty from Disability Services is required for academic accommodations.

The University of Evansville Disability Services office will share the request for academic accommodations with the Academic Support team at Harlaxton College. Staff members at Harlaxton will meet individually with students to discuss needs and provide additional information related to examinations or other assessments.

Students from partner institutions should provide the appropriate letter of accommodation from their institution to the Academic Support team at Harlaxton College.





### **Non-Discrimination Statement**

The University of Evansville expects all members of its community to treat each other with respect and civility. Harassing behaviors directed towards any member of our community will not be tolerated. As part of its commitment to non-discrimination, the University specifically prohibits harassment based on any other characteristics set forth in its nondiscrimination statement as follows: including race, color, gender, gender identity and expression, sexual orientation, creed or religion, national origin, age, disability, veteran status and all federally protected groups/classes. Any form of harassment undermines the mission of the University and negatively impacts the University community as a whole.

### **Prohibited Conduct and Confidentiality**

The University of Evansville is committed to fostering an atmosphere free from harassment and discrimination. This commitment includes identifying problems that may lead to sexual harassment and misconduct, as well as other forms of harassment and discrimination, by creating an atmosphere in which the entire University community is sensitive to preventing prohibited conduct. Additionally, the University is committed to providing support and resources to individuals who have experienced prohibited conduct. This commitment includes effectively responding when a student, visitor, guest or program participant is the victim of prohibited conduct.

All campus employees, students, and guests are required to abide by the Title IX and Other Sexual Harassment and Misconduct Policy, the Harassment and Discrimination Policy, and the Consensual Sexual or Romantic Relationships Between Employees and Students Policy. Violation of these policies could result in disciplinary action, up to and including expulsion for students and termination for employees.

Faculty members at the University of Evansville are considered “Responsible Employees” under the applicable federal guidelines and the University’s policies. This means that I am unable to offer you confidentiality if you report any incidence of prohibited conduct to me as defined by Title IX statute. If I am made aware of a violation, I am required to report any known information to the Office of Institutional Equity.

You may choose to report the violation yourself the following ways:

Email: · Annie Sills, Assistant Director of Institutional Equity and Title IX Coordinator:

[cs175@evansville.edu](mailto:cs175@evansville.edu) ·

Keith Gehlhausen, Executive Director of HR and Institutional Equity: [kg77@evansville.edu](mailto:kg77@evansville.edu) ·

Title IX: [titleix@evansville.edu](mailto:titleix@evansville.edu)

Phone: 812-288-5261

Online: <https://www.evansville.edu/safety/report.cfm>

You may also choose to speak with a Confidential Resource. Confidential Resources are required to maintain confidentiality and cannot report violations to the Office of Institutional Equity:

**[University of Evansville](#)**



- Counseling Services: [counselingservices@evansville.edu](mailto:counselingservices@evansville.edu), 812-488-2633
- Health Center Professionals: [healthcenter@evansville.edu](mailto:healthcenter@evansville.edu), 812-488-2033
- University Chaplain: [chaplain@evansville.edu](mailto:chaplain@evansville.edu), 812-488-5262

### **Harlaxton College**

- College Nurse: Lesley Selby, RGN, +44 01476 403027, [lselby@harlaxton.ac.uk](mailto:lselby@harlaxton.ac.uk)
- Counselling Services: [counselling@harlaxton.ac.uk](mailto:counselling@harlaxton.ac.uk)