

Syllabus BIOL 4199-005 – Independent Study

Fall 2025

Instructor:

Dr. Matthew J. Greenwold, HPR 117, Phone – 566-6303, Email – mgreenwold@uttyler.edu

Office Hours: Tuesday and Thursday 10:00 AM – 12:00 PM or by appointment.

Course Description: Independent study in specific areas of biology not covered by organized undergraduate courses. A maximum of six credit hours of independent study courses may be applied toward a graduate degree. This Independent study will focus on scientific communication.

Course Objectives/Student Learning Outcomes:

- Search and retrieve peer-reviewed research articles.
- Comprehend and summarize peer-reviewed research articles
- Formulate intelligent questions when presented scientific research.
- Effectively communicate peer-reviewed research to the public.

Required Texts: None

Evaluation: Students will be evaluated based on the following work:

Assignment 1 =	30%
Assignment 2 =	30%
Assignment 3 =	30%
Attendance =	10%
Total	100%

We will follow a 10-point scale for grading:

90-100% = A, 80-89% = B, 70-79 = C, 60-69% = D, 0-59% = F

Assignment 1: DUE Sept. 21st 11:59 PM. Pick a topic in any field of biology and find and download **three** peer-reviewed primary research articles. At least one of the articles must have been published in the past three years (2023-2025). Write a brief summary (250-300 words) on your topic that includes why you are interested in the topic and how each of your chosen articles relate to that topic. Please include in-text citations as well as a References or Works Cited section. Submit your summary and research articles (as **FOUR** PDFs) via Canvas. This will be your podcast topic, therefore, make sure you are interested in the topic.

How do I select a good topic? I suggest you visit a couple of the major journal websites and read recent titles/abstracts and see if one of them sounds interesting. Here are a few of my favorite journals:

Science (<https://science.sciencemag.org/>),

Nature (<https://www.nature.com/nature/research>),

Evolution (<https://onlinelibrary.wiley.com/journal/15585646>),

Ecology (<https://esajournals.onlinelibrary.wiley.com/journal/19399170>),
BMC Biology (<https://bmcbiol.biomedcentral.com>),
Molecular Biology and Evolution (<https://academic.oup.com/mbe>).

Assignment 2: DUE Oct. 12th 11:59 PM. Write a “news” article on your most recently published article from assignment 1. This “news” article (500-700 words) should relate the significance of the results to the general public. It should be formatted to appear like a news article and include at least one image or figure from the research article. Here are some questions to consider: What are the broader implications of this research to the public? How does this article further our knowledge in its research field?

You should **NOT use AI or Grammarly** for this assignment. I want you to develop your writing skills for public scientific communication.

Assignment 3: Write a personal reflection paper on what science communication means and how the student has used scientific communication in their life with friends, family, etc.

Academic Misconduct: Submitting plagiarized work to meet academic requirements including the representation of another’s work or ideas as one’s own; the unacknowledged word for word use of another person’s ideas; and/or the falsification, fabrication, or dishonesty in reporting research results shall be grounds for charges of academic misconduct. Any cheating or other type of academic misconduct will be reported to university administration and at minimum will result in automatic failure of the course.

TENTATIVE CLASS SCHEDULE

Class meeting time TBD. We will meet once per week for 1 hours (1 hours for each 1 hour of independent study). Weekly schedule will be set between the instructor and the student on an individual basis.