## BIOL 495: Honors Seminar in Biology Spring 2025

Instructor: Dr. Allison Edgar (<u>allison.edgar@njit.edu</u>) Instructor office hours: by Google Calendar signup, link on course Canvas Time: Mondays 2:30 - 5:30 PM Location: CKB 106

**Description:** The honors seminar allows students the opportunity to work closely with an instructor in a specific area of the instructor's expertise. Students will be required to bring together interests and skills developed in previous courses. Students make in-depth oral and written presentations. This course satisfies NJIT's Honors Capstone requirement. 3 credits. Face-to-face.

Prerequisite: BIOL 320 with a grade of C or better. BIOL 320 with a grade of C or better.

## Materials:

Required:

- Student's NJIT account, for access Google Drive, Docs, Sheets, Slides, Forms, and related applications, and other tools/software available to NJIT students.
- A laptop.

Recommended:

- Writing Your Journal Article in Twelve Weeks, Second Edition: A Guide to Academic Publishing Success (Chicago Guides to Writing, Editing, and Publishing) Second Edition by Wendy Laura Belcher
- *Revising Prose* by Richard A. Lanham

**Course policies:** See dedicated Canvas pages for additional details. Biology Department policy on absences will apply. Please use the established process through the Dean of Students to verify absences.

## Grading:

30% Advisor intermediate assessments (Status Reports)
30% Advisor Final Manuscript evaluation
15% In-class process assignments (may need to be completed outside of class)
15% Out of class process assignments
10% Attendance and participation

See dedicated Canvas "Grading" page for more details. Weighted assignment groups will be converted into a percentage and standard NJIT grading cutoffs applied for a final grade.

Late assignments can be turned in anytime before the final project deadline but will be worth only half credit. However, many of these assignments build on each other, or are preparation for in-class activities, so please make every effort to complete them on time.

There can be no exceptions to the late assignment policy except for Dean of Students verified absences but each assignment is worth only a very small part of your grade.

Major writing and pre-writing assignments will use TurnItIn, including its LLM/AI-generated language detection features. Suspected plagiarism or undisclosed use of generative AI tools will be reported to the Dean of Students.

DATE	Description	DATE	Description
1/27	First class meeting; come with some ideas for projects	3/24	Figure rough draft due
1/30	Contact potential advisors	3/31	Meet with advisor sometime this week
2/5	Contact advisor with draft proposal; set up meeting	4/6	Highly detailed and cited outline due (Outline v3 assignment)
2/10	No class; meet with advisor sometime this week and work on your detailed project proposal	4/7	Status Report #3 due (advisor must submit based on your work to date and recent meeting)
2/19	Formal project proposal due	4/14	Complete first draft due
2/24	Status Report #1 due (advisor must submit based on your work to date and recent meeting)	4/20	Abstract booklet contribution due
2/26	Contact advisor to set up meeting	4/21	Meet with advisor sometime this week
3/3	Meet with advisor sometime this week	4/28	Status Report #4 due (advisor must submit based on your work to date and recent meeting)
3/10	Status Report #2 due (advisor must submit based on your work to date and recent meeting)	4/30	Final poster due
3/14	Detailed outline due (Outline v2 assignment with concept for figure)	5/5	Final manuscript due; Poster presentation session
3/16	Spring break begins	5/14	Advisor Final Assessment Due (advisor must submit based on your final manuscript)
3/22	Spring break ends	5/18	Final grades due to registrar

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Each student will choose a topic of biological research and develop a review paper in consultation with a relevant faculty advisor. The assignment parameters are: ~10,000 words (excluding references) plus an original figure (or table, with permission of advisor), with ~45 citations to primary literature (excluding reviews, textbook chapters, or similar). Students will also give a short (~10 minute) oral presentation on their project. In class and homework assignments relate to building relevant skills in research, writing, and presentation, and/or scaffolded creation of portions of the major assignments.

By the end of this course, students should be able to:

- · Find and evaluate scientific literature relevant to their interests
- · Read, analyze, and interpret scientific data within their area of focus
- Differentiate between different types of scholarly communications and the conventions and uses appropriate to each
- · Find and synthesize relevant data into a novel approach to a problem defined by the student
- · Write an effective piece of long-form scholarly writing
- · Give an effective oral presentation of a scientific result or concept
- · Manage a research collaboration extending across several months

As a capstone, this course meets many major NJIT institutional learning goals:

- Research-based inquiry: Students employ research methods appropriate to their disciplines. Students in this course perform extensive literature research and appropriate analysis
- Professional readiness: Students exhibit knowledge, skills, and experience necessary for professional growth. Many students in this course will go on to careers that involve reading and/or writing research articles or syntheses, public speaking, and communication of scientific concepts with a broad audience

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- Creativity: Students use heuristics to evaluate, analyze, and synthesize innovative solutions to existing and emerging problems. *Students in this course define a scientific problem or question, evaluate its significance, and develop an approach to solving it through research*
- Collaboration: Students work effectively in teams, applying multidisciplinary and global perspectives. Students in this course collaborate closely with a research advisor and learn to give and receive effective feedback through numerous peer feedback assignments
- Ethical conduct: Students demonstrate professional and civic responsibility, including respect for all individuals. *Students in this course are expected to uphold the highest standards of academic integrity, as well as interact respectfully with one another in small and large group settings*

## Academic integrity:

"Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: NJIT Academic Integrity Code.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu."

Al policy: Student use of artificial intelligence (AI) is permitted in this course for certain assignments and activities. These activities will be specified; use is prohibited for all other activities. Crucially, you must have a conversation with your advisor about any AI tools you wish to use in developing your project, use these tools only so far as your advisor approves, and you must cite them appropriately and report clearly on exactly how you used them. The AI must be cited as is shown within the NJIT Library AI citation page for AI: <a href="https://researchguides.njit.edu/AI/cite">https://researchguides.njit.edu/AI/cite</a> If you have any questions or concerns about AI technology use in this class, please reach out to your instructor prior to submitting any assignments.

**Student Absences for Religious Observance:** NJIT is committed to supporting students observing religious holidays. Students must notify their instructors in writing of any conflicts between course requirements and religious observances. There is a Canvas assignment that will allow you to report anticipated absences at the beginning of the semester so that we can proactively plan for you to receive accommodation.