

Syllabus

Fall 2025

BIOL 5193.001 – Graduate Seminar: Omics Approaches in Biology

TIME: 9:00-9:55am Mon

LOCATION: BEP 140

INSTRUCTOR: Dr. Wei-Chin Ho (who@uttyler.edu)

Phone: 903-565-5824

Office hours: 10-noon Mon, 10-11am Tue at HPR 113, or by appointments.

E-MAIL POLICY: When sending an email, please add "**BIOL5193**" at the beginning of the title and clearly indicate your **name** in the first few sentences of the main text. Please note that the instructor may not be able to respond to emails in two working days.

COURSE FORMAT: This lab course is in a **face-to-face** format. Attendance is required in this course. You will find a calendar with the planned program in this syllabus. Please check Canvas frequently for changes and updates.

COURSE DESCRIPTION: This course is designed to expose students to scientific literature related to new omics technology and features student presentation on journal articles with omics.

COURSE GOALS:

- 1) To understand the role of omics in the current research of biology.
- 2) To use scientific literatures enhancing the outcomes of biological research.

LEARNING OUTCOMES: Upon completion the course, the student should be able to

- 1) find literatures related to using omics in their own research projects.
- 2) efficiently communicate about omics research to peer scientists.
- 3) evaluate the results of omics research from other scientists.

READING MATERIALS:

The reading materials will be available on Canvas.

COMMUNICATION

Announcements: Announcements are found on Canvas, and depending on your Canvas settings for this class, you will get notified if there is a new one. Please make a point of reading the announcements. This is how I will communicate with the class as a whole when there is important information you need.

Important Note: This syllabus, along with course assignments and due dates, are subject to change. It is your responsibility to check Canvas for corrections or updates to the syllabus. Any changes will be clearly noted in a course announcement.

GRADING: There are three components determining the final grade.

1. **Preview assignments (30%):** You will be asked to submit short answers about the readings on the discussion forum on Canvas before each class. The due time is typically 11:59PM on the

Friday before the class, so the next Monday's discussion leader has the chance to read the responses before the discussion.

2. **Class Participation (30%)**: You are expected to actively participate in the discussion of materials during each class.
3. **Leading Discussion (40%)**: You are expected to lead the discussion of one research paper at least one time and write sentences on why you chose the paper. The chosen paper must include omics approaches and be peer-reviewed, with primary research, and published within the last five years.

Letter grades will be assigned according to the following scale:

A = above 90.00%

B = 80.00-89.99%

C = 70.00-79.99%

D = 60.00-69.99%

F = below 59.99%

Excused Absence: Regular attendance is expected in this course. There are no make-up sessions in general. However, the attendance may be exempted if the excuse is legit (discussed below). If you will be absent due to a sport event or a religious event, please let me know in advance with an official document. If you will be absent due to attending a conference, going to field work, or other research related activities, please also let me know in advance and show me evidence that your mentor also knows (e.g., an email to me and your mentor). If you realize you will be absent because you or your significant family member is sick, please send me a notice as soon as possible. Please do NOT come to classes if you are ill.

Late Submission Policy: In general, late submissions are not accepted, as most works allow more than one week for students to finish. Please discuss with the instructor in advance if you think the situation is exceptional.

Corrupted File Policy: If any student turns in a corrupted file, after the instructor notices the situation, students will be given one more working day to turn in a file that can be successfully opened. Failure to do so will result in a grade of zero.

Use of Artificial Intelligence (AI): UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, AI tools are encouraged during the course unless otherwise noted, and appropriate acknowledgment is expected. For example, you are allowed to use AI tools for drafting and revising assignments as long as a note of acknowledgement to the AI tools is included. Below is an example of note: “ChatGPT and Copilot were used for drafting and revising this assignment.”

TENTATIVE SCHEDULE

Week	Date	Topic
1	08/25	Intro: why should we read scientific articles?
2	09/01	<i>Labor Day</i>
3	09/08	How do omics approaches help biological research? (Due: Choice of Research Paper)
4	09/15	How should we read scientific articles?
5	09/22	Review of new omics technology
6	09/29	Research Paper Discussion 01
7	10/06	Research Paper Discussion 02
8	10/13	Research Paper Discussion 03
9	10/20	Research Paper Discussion 04
10	10/27	Research Paper Discussion 05
11	11/03	Research Paper Discussion 06
12	11/10	Research Paper Discussion 07
13	11/17	Research Paper Discussion 08
14	11/24	<i>Thanksgiving Break</i>
15	12/01	Overview of omics approaches in biological research