BIOT 6325 **Biotechnology Internship** **Credit Hours: 3**

Semester:	Fall	**Year:**	2024
Class Day/Time:	Thursday 10:30 – 3:30	**Class Location:**	As Per Experience

Instructor of Record: Amy Tvinnereim, Ph.D.
Office: BMR 314
Office Phone: 903-877-5189
E-Mail: Amy.Tvinnereim@uthct.edu
Office Hours: By Appointment

Course Description: The Internship is an experiential learning opportunity with a company or a governmental organization. The internship allows students to gain knowledge in an applied work setting. Students who do an internship gain practical experience in a work environment. Students will develop an understanding of the internship site's work, mission, and audience and learn how these relate to their academic and thesis research based study.

Prerequisite: As per program entry. **Co-requisite:** None

Goals of Course & Course Objectives:

Student Learning Outcomes (Course Competencies):

1. The student will be able to compare and contrast working in an academic research lab with working in a company or governmental organization.
2. The student will be able to explain the principals and mechanisms of techniques used during their internship.
3. Student will be able to analyze data, interpret test results, and draw meaningful conclusions based on their findings.
4. Student will be able to effectively communicate in writing and orally.

Course Assessment/Methods of Evaluation:
Varies by Instructor. Student understanding and performance will be evaluated with a mechanism appropriate to the material and specific content. Students who successfully complete Biotechnology Internship will demonstrate the ability work at a company or governmental organization. Assessment will be as below unless otherwise indicated by the instructor of record.

Final exam – 50%
Assessment by Internship Site – 50%

Linked Program Learning Outcomes:
The student learning outcomes listed above address the following Biotechnology Program PLOs:

- PLO-1. The student will demonstrate English communication skills in both oral and written forms.
- PLO-2. The student will demonstrate mastery of basic and advanced biotechnology methods

- PLO-3. The student will demonstrate the ability to safely operate basic and advanced laboratory equipment, analytic devices and computers.
- PLO-4. The student will demonstrate independent and critical thinking skills integrated with the ability to utilize multiple informational resources.
- PLO-5. The student will explain the principles, mechanisms and interrelatedness of both in vivo and in vitro biochemical, molecular biological and genetic processes.

Textbook:
None

Course Content:
Biomedical research (varies by instructor and topic), maintaining a lab notebook, presenting & discussing research findings as assigned.

Other Class Policies:

Attendance:
Regular or punctual attendance is expected. If a student misses a class or lab, the student is responsible for obtaining any information distributed during those times. Make-ups are possible only under certain instances (labs cannot be made up). Arrangements for any make-ups and/or missed labs should be discussed directly with the instructor for that day's class.

Academic Honesty:
Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Cheating
Dishonesty of any kind involving examinations, assignments, alteration of records, wrongful possession of examinations, and unpermitted submission of duplicate papers for multiple classes or unauthorized use of keys to examinations is considered cheating. Cheating includes but is not limited to:

- Using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class.
- Falsifying or inventing any information, including citations, on an assigned exercise.
- Helping or attempting to help another in an act of cheating or plagiarism.

Plagiarism
Plagiarism is presenting the words or ideas of another person as if they were your own. Materials, even ideas, borrowed from others necessitate full and complete acknowledgment of the original authors. Offering the work of another as one's own is plagiarism and is unacceptable in the academic community. A lack of adequate recognition constitutes plagiarism, whether it utilizes a few sentences, whole paragraphs, articles, books, audio-visual materials, or even the writing of a fellow student. In addition, the presentation of material gathered, assembled or formatted by others as one's own is also plagiarism. Because the university takes such misconduct very seriously, the student is urged to carefully read university policies on Misconduct in Research and Other Scholarly Activity 05.00. Examples of plagiarism are:

- Submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another.
- Submitting a work that has been purchased or otherwise obtained from an Internet source or another source.
- Incorporating the words or ideas of an author into one's paper without giving the author due credit.

Adding/Dropping:
The official deadline for adding and dropping courses is as published in the academic calendar and Graduate Bulletin (typically the day before Census Day). However, students are strongly encouraged to meet with their graduate advisor or the Program Coordinator prior to adding/dropping courses. Movement into and out of classes after the 4th class day requires approval of the Program Director. Students can drop until mid-semester without a WP or WF. Drops after mid-semester require approval of the Dean. Each student is responsible for their own enrollment status with the university.

Disability Accommodations:
UTHSCT abides by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, which mandate reasonable accommodations be provided for students with documented disabilities. If you have a disability and may require some type of instructional and/or examination accommodations, please contact me early in the semester so that I can provide or facilitate provision of accommodations you may need. If you have not already done so, you will need to register with the Student Services Office (located on the UT Tyler Campus). You may call 903-566-7079 for more information.

Use of Artificial Intelligence:
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 is not permitted in this course at all.**
To best support your learning, you must complete all graded assignments by yourself to assist in your learning. Doing your own work, without human or artificial intelligence assistance, is best for your efforts in mastering course learning objectives. This exclusion of other resources to help complete assignments includes artificial intelligence (AI). Refrain from using AI tools to generate any course context (e.g., text, video, audio, images, code, etc.) for any assignment or classroom assignment.

Program:	Master of Science in Biotechnology
Degree:	MS
Department:	Cellular and Molecular Biology
School:	Medical Biological Sciences
Course:	**BIOT5150 - Internship**

Area	Marketable Skill*
TASKS	Maintain accurate laboratory records and data.
	Design molecular or cellular laboratory experiments, oversee their execution, and interpret results.
	Perform laboratory procedures following protocols.
TECHNOLOGY SKILLS	Analytical or scientific software; Graphics or photo imaging software - GraphPad, ImageJ, Adobe; Office suite software - Microsoft Office
SKILLS	**Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
	Writing — Communicating effectively in writing as appropriate for the needs of the audience.
ABILITIES	**Written Comprehension** — The ability to read and understand information and ideas presented in writing.
	Written Expression — The ability to communicate information and ideas in writing so others will understand.
WORK ACTIVITIES	**Documenting/Recording Information** — Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
	Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
	Processing Information — Compiling, categorizing, calculating, tabulating, or verifying information or data.
	Updating and Using Relevant Knowledge — Keeping up-to-date technically and applying new knowledge to your job.
WORK CONTEXT	Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, or PPE.
	Importance of Being Exact or Accurate

*All marketable skills listed for this course and program were drawn from the Knowledge, Skills, and Abilities identified by the US Department of Labor and Statistics for “Biological Technicians” and “Molecular and Cellular Biologists” as published on O*Net Online (www.onetonline.org)