COLLEGE OF SCIENCE
Department of Biological Sciences

Spring Semester 2025
SYLLABUS – HISTOLOGY BIOL 4300 (Class 001 and Lab 301)

Department of	Biological Sciences
Instructor Name	Dr. Anastasia Sacharidou
Office Location	Science Research Building #240
Email Address	Anastasia.sacharidou@unt.edu
Office Hours	After class on Monday OR by appointment
Virtual Office Hours	only by appointment
Class Format/Structure	In-person
Lab Format/Structure	Online only
Classroom Location	CHEM 352
Class Meeting Days & Times	Monday / Wednesday – 3:30- 4:50 pm
Course Catalog Description	Multicellular organisms are hierarchically organized, beginning with the cell as the fundamental building block. Cells assemble into tissues, tissues form organs, and organs work together to sustain the organism's function. While cell biology focuses on the structure and function of individual cells, and physiology examines how organs interact to maintain homeostasis, histology bridges these levels by exploring how cells are organized into tissues at the microscopic level. Importantly, this course emphasizes not only tissue structure, but also the functional and physiological relevance of these tissues within the context of the whole organism. Histology is the study of the microscopic organization of cells, tissues, and organs. This course will focus on tissue and organ microanatomy, with an overarching goal of relating structure to function. Successful study of histology requires both conceptual understanding and visual recognition; therefore, students will learn to identify tissues and organs using digital images of microscope slides. To support this goal, lectures and the laboratory are highly integrated. The concepts introduced in the lecture will be reinforced through tissue identification in the lab. Together, lectures and labs will cover the four basic tissue types (epithelium, connective tissue, muscle, and nervous tissue) and the major organ systems, including the integumentary, digestive, respiratory, urinary, reproductive, endocrine, and sensory systems.
Learning Objectives	Upon successful completion of this course, students will be able to: 1. Explain histological techniques, including tissue sample preparation, fixation, sectioning, and staining methods commonly used in histological analysis.

	2. Identify and describe microscopy approaches used to generate histological images and recognize the general principles underlying different imaging techniques. 3. Recognize and accurately describe cell types and tissue structures using appropriate histological nomenclature, based on morphology, anatomical location, and staining characteristics. 4. Understand the organization, structure, and function of the four basic tissue types (epithelium, connective tissue, muscle, and nervous tissue), and explain how cellular and tissue architecture relate to function. 5. Identify tissues and organs from histological sections and determine their tissue or organ system of origin. 6. Describe the structural organization and functional roles of organs and organ systems, including integumentary, digestive, respiratory, urinary, reproductive, endocrine, and sensory systems. 7. Interpret histological sections in three dimensions by analyzing multiple planes, stains, and microscopy modalities, and relate three-dimensional structure to physiological function. 8. Integrate factual and conceptual knowledge from cell biology and neuroscience to build a strong foundation for advanced coursework, research training, and professional careers. 9. Synthesize information across multiple histological preparations to evaluate tissue organization and function and appreciate the role of histology in addressing research questions across biomedical disciplines.
Prerequisites	Students must complete a Biology Foundation course. If a student has not completed this course but still wishes to attend the class, consent from the instructor is required.
Required Text and other material	Course material will be drawn from book chapters, review articles, scientific literature, and the instructor's expertise. Course material will be made available through CANVAS, or students will be given references to download their own material. Required textbook for the class and the lab is: **Wheater's Functional Histology** by O' Dowd, Bell & Wright – 7th Edition (ISBN 978-0-7020-8334-1) In addition, students may consider the use of: L.P. Gartner & J.L. Hiatt (2013) **Color Atlas and Text of Histology**, 6th Edition, Lippincott Williams & Wilkins (ISBN-10:1451113439; ISBN-13:978-1451113433).
Access to Learning Resources	**UNT Learning Center** Phone: 940-369-7006 Website URL: https://learningcenter.unt.edu/about-learning-center/index.html

	UNT Library: Phone: 940-565-2411 (1-887-872-0264) Website URL: https://library.unt.edu/ **UNT Bookstore** Email: https://unt.bncollege.com/
Website Resources: **Canvas** **Supported Devices:** • iPhone • Android • Chromebook *Note: Tablet users can use the Canvas app*	https://unt.instructure.com/ (CANVAS) is the official web portal for this course. It will be used for several key functions, including: • Gradebook management • Assignment of required course homework • Course Exams • Submission of digital assignments • Updates to syllabus, lecture material • Official communications deemed necessary by the instructor **Getting Help with Canvas:** **Canvas 24/7 Phone Support for Students: 1-833-668-8634** **Canvas Help Resources:** **Canvas Student Guide - https://community.canvaslms.com/docs/DOC-10701** For additional assistance, contact Student Assistance Phone: 940-369-7394 Email: https://lms.unt.edu/resources/index.html **If you are working with Canvas 24/7 Support to resolve a technical issue, please keep me updated on your progress in troubleshooting.** **If you have a course-related issue (e.g., course content, assignment trouble, quiz difficulties), please contact me during office hours or by email.**

Course Organization:

This course has both lectures and an online lab. Lectures will be based on the assigned text and the instructor slides and will involve discussion of histological structures as they pertain to function. Labs will be done online only and will require studying images from online websites and materials provided by the instructor.

COLLEGE OF SCIENCE
Department of Biological Sciences

BIOL 4300-001

The class will consist of lectures, discussions, and examinations. The instructor may change the class format at their discretion. This schedule is subject to change by the instructor. Any changes will be communicated through course announcements on CANVAS, in class, and in an updated syllabus.

Lect	Date	Topic	Primary Reference
1	01/12	Course Introduction/ Overview/ Cell Structure	Chapter 1& Appendix 1/2
2	01/14	Cell Structure and Function	Chapter 1/2& Appendix 1/2
	01/19	**Martin Luther King Jr HOLIDAY – NO classes**	
3	01/21	Cell Structure and Function	Chapter 1/2& Appendix 1/2
4	01/26	Epithelial Tissue	Chapter 5
5	01/28	Epithelial Tissue- Digestive Track	Chapter 14-15
6	02/02	Epithelial Tissue – Respiratory System	Chapter 12
7	02/04	Epithelial Tissue -Skin	Chapter 9
8	02/09	Epithelial Tissue – Urinary Track	Chapter 16
9	02/11	Epithelial Tissue - Diseases	
	02/16	**Exam I (Class/Lab) – Cell Structure & Function & Epithelial tissue**	
10	02/18	Connective Tissue	Chapter 4
11	02/23	Connective Tissue -Adipose tissue	Chapter 4
12	02/25	Connective Tissue – Bone - Cartilage	Chapter 4
13	03/02	Connective Tissue – Cartilage - Diseases	
	03/04	**Exam II (Class/Lab) – Connective tissue**	

	03/09	**SPRING BREAK – NO classes**	
	03/11	**SPRING BREAK – NO classes**	
14	03/16	Muscle Tissue	Chapter 6
15	03/18	Muscle Tissue	Chapter 6/8
16	03/23	Muscle Tissue – Circulatory System	Chapter 8
17	03/25	Muscle Tissue – Blood - Hemopoiesis	Chapter 3
18	03/30	Muscle Tissue – Immune System	Chapter 11
19	04/01	Muscle Tissue – Immune System	Chapter 11
20	04/06	Muscle Tissue - Diseases	
	04/08	**Exam III (class/Lab) – Muscle/Blood/Cardiovascular & Immune Systems**	
21	04/13	Nervous Tissue	Chapter 7
22	04/15	Nervous Tissue	Chapter 20/21
23	04/20	Digestive System	Chapter 14/15
24	04/22	Urinary System	Chapter 16
25	04/27	Nervous Tissue -Diseases	
26	04/29	Revision (Last regular class)	
	TBD	**Exam IV (class/Lab) – Nervous, Digestive, Urinary systems**	

COLLEGE OF SCIENCE
Department of Biological Sciences

BIOL 4300-301(Lab)

Lect	Date	Topic	Primary Reference
1	01/14	Histology methods of study	Instructor slides
2	01/21	Histological Stains & Artifacts (H&E, PAS & trichrome)	Instructor slides
3	01/28	Epithelial Tissue I	Instructor slides
4	02/04	Epithelial Tissue II & Glands	Instructor slides
5	02/11	Connective Tissue I	Instructor slides
	02/16	**Exam I (Class/Lab) – Cell Structure & Function & Epithelial tissue**	
6	02/18	Connective Tissue II	Instructor slides
7	02/25	Connective Tissue III	Instructor slides
8	03/04	**Exam II (Class/Lab) – Connective tissue**	
	03/11	**SPRING BREAK – NO classes**	
9	**03/18**	Muscle Tissue – Circulatory System	Instructor slides
10	**03/25**	Muscle Tissue – Blood - Hemopoiesis	Instructor slides
11	**04/01**	Muscle Tissue – Immune System	Instructor slides
	04/08	**Exam III (class/Lab) – Muscle/Blood/Cardiovascular & Immune Systems**	
12	**04/15**	Nervous Tissue	Instructor slides
13	**04/22**	Digestive System	Instructor slides
14	**04/29**	Urinary System	Instructor slides
	TBD	**Exam IV (class/Lab) – Nervous, Digestive, Urinary systems**	

Course Outline:

The material in this course is divided into four units. At the conclusion of each unit there will be a lecture (one hour) and lab (30min) exam. Therefore, there will be a total of **4 exams**, each worth 100 points. There will be NO cumulative exam at the end of the semester. Exams will cover both the class and the lab material. Exams will have the format of short answer questions and multiple-choice questions. On occasion students will be asked to label and/or draw simple structures/images. Each student is required to obtain a blue book (UNT Bookstore $0.75) for each exam. If there are issues with the purchasing of blue books, please notify Dr. Sacharidou at least a week prior to the exam date so a solution can be given. Exams will be taken ***in person in class*** based on the calendar set up by Dr Sacharidou. No electronic devices are allowed during exams.

Exams make-up policy:

Exams should be taken as scheduled. ***NO make-up exams*** will be allowed except for documented emergencies. See Policy Chapter 6 Faculty Affairs – Policy # 06.039 Student Attendance and Authorized Absences. (https://policy.unt.edu/policy/06-039). In the case of a medical emergency, you must notify Dr. Sacharidou as soon as possible and provide a doctor's note explaining the issue. Arrangements will be made for the make-up test at the discretion of Dr. Sacharidou. The make-up test must take place within a week after the original exam date.

NO EXTRA-CREDIT ASSIGNEMENTS WILL BE AVAILABLE!!! If an exam is missed then you will get a zero for that exam.

Grade Distribution:
Undergraduate Students

○ Class Attendance	50pts
○ EXAM #1	200pts
○ EXAM #2	200pts
○ EXAM #3	200pts
○ EXAM #4	200pts
Total	850 points

Grade Scale:

A	90 % or higher
B	80 – 89.99 %
C	70 – 79.99 %
D	60 – 69.99 %
F	below 60 %

Final grades are calculated based on the percentage of the total points earned. The instructor reserves the right to alter the grading scheme and apply a curve.

Attendance:

All students are responsible for all information and materials provided during class. Attendance is **mandatory** and, therefore, expected. Attendance will be recorded during each class. No more than 2 unexcused absences will be allowed. For excused absences, See Policy Chapter 6 Faculty Affairs – policy # 06.039 Student Attendance and Authorized Absences.

Getting Help out of the classroom:

- **Office hours:**

Monday after class. Dr. Sacharidou's office is located in SRB #240. Prior arrangements need to be made for office hours.

- **Email communication:**

I try very hard to respond to emails within 24 hours! If you do not hear from me within that time frame, please try resending your email or calling my office phone. In the event of high email volume, I may reply to you to acknowledge your message and give you a time frame for a full response.

Academic integrity:

The University (and the professors!) expects the highest standards of academic integrity. A description of the Code of Student Conduct and Discipline is in the student handbook and at:
http://www.unt.edu/csrr/student_conduct.htm.
Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the UNT Dallas Academic Integrity Policy in the appropriate Catalog at http://dallascatalog.unt.edu.

Academic dishonesty includes but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor or tampering with the academic work of other students.
Plagiarism of any sort on any assignment or exam **WILL** result in a grade of zero for that assignment.

Important dates (registering, dropping, etc)**:**

http://registrar.unt.edu/registration/fall-registration-guide

Last Day to Add a Class or Swap Sections	16-Jan
Last Day to Drop a Class Section Without a W (Census)	24-Jan
Drop with a Grade of W Begins	25-Jan
Last day to change to pass/no pass grade option (undergrads)	20-Feb
Midpoint of the semester	6-Mar
Last day for a student to drop a course or all courses with a grade of W	10-Apr

First day to request a grade of Incomplete	11-Apr
Pre-Finals Days	April 29-30
Last Regular Class Meeting	30-Apr
Reading Day - No Classes	1-May
Final Exams	May 4- 8
Last Day of Session	8-May
University Grade Submission Deadline 4pm	11-May
Grades/Academic Standing posted on the Official Transcript 6pm	13-May

Disabilities:

The Department of Biological Sciences complies with the Americans with Disabilities Act. If you qualify, please see the instructor by the 12th day of class for accommodation.
The University of North Texas makes reasonable academic accommodations for students with disabilities. Students seeking accommodations must first register with the Disabilities Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide you with an accommodation letter to be delivered to the faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time; however, DSO notices of accommodation should be provided as early as possible during the semester to avoid any delays in implementation. Note that a student must obtain a new letter of accommodation for every semester and must meet/communicate with each faculty member before implementation in each class. Students are strongly encouraged to deliver letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, see the Disability Services Office website at https://studentaffairs.unt.edu/office-disability-access/index.html

Prohibited Use of Generative AI (GenAI) Software

In this course, I want you to engage deeply with the materials and develop your critical thinking and writing skills. For this reason, the use of Generative AI (GenAI) tools like Claude, ChatGPT, and Gemini is not permitted. While these tools can be helpful in some contexts, they do not align with our goal of fostering your independent thinking. Using GenAI to complete any part of an assignment, exam, or coursework will be considered a violation of academic integrity, as it prevents the development of your own skills, and will be addressed according to the Student Academic Integrity policy.

For this course, tools like Grammarly, predictive text, speech-to-text, and translation tools are considered forms of GenAI, as they blur authorship and are therefore not allowed. All work must be your own.

Disruptive Behavior in an Instructional Setting:

Students are expected to engage with the instructor and other students in this class in a respectful and civil manner at all times to promote a classroom environment that is conducive to teaching and learning. Students who engage in disruptive behavior will be directed to leave the classroom. A student who is directed to leave class due to disruptive behavior is not permitted to return to class until the student meets with a representative from the Dean of Students Office. It is the student's responsibility to meet with the Dean of Students before class meets again and to provide the instructor confirmation of the meeting. A student who is directed to leave class will be assigned an unexcused absence for that class period and any other classes the student misses as a result of not meeting with the Dean of Students. The student is responsible for material missed during all absences and the instructor is not responsible for providing missed material. In addition, the student will be assigned a failing grade for assignments, quizzes, or examinations missed and will not be allowed to make up the work.

The Code of Student's Rights, Responsibilities, and Conduct (Policy 7.001) describes disruption as the obstructing or interfering with university functions or activity, including any behavior that interferes with students, faculty, or staff access to an appropriate educational environment. Examples of disruptive behavior that may result in a student being directed to leave the classroom include but are not limited to: failure to comply with reasonable directives of University officials, action or combination of actions that unreasonably interfere with, hinder, obstruct, or prevent the right of others to freely participate, threatening, assaulting, or causing harm to oneself or to another, uttering any words or performing any acts that cause physical injury, or threaten any individual, or interfere with any individual's rightful actions, and harassment. You are encouraged to read the Code of Student's Rights, Responsibilities, and Conduct for more information related to behaviors that could be considered disruptive.