

Syllabus for BIOL 4250/5150 - Pharmacology

Fall, 2025

General Information:

Instructor:	Amie K. Lund, Ph.D.	Course Number:	BIOL 4250/5150
Office:	ENV 310F	Section Number:	001
Office Phone:	940-369-8946	Semester/Year:	Fall, 2025
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Office Hours:	Tuesday & Thursday 9:30 - 10:15 a.m. or by appt. 12:30 - 1:00 p.m. or by appt.	Meeting Time:	Tuesday & Thursday 11:00 a.m. - 12:20 p.m.

Course Description:

This course aims to provide students with an introduction to the general principles of drug action and the pharmacology of therapeutic agents. The first part of this course will deal with general principles of pharmacology, including receptor theory, drug absorption, distribution, metabolism, and elimination (ADME). The second part of this course will focus on specific drug classes and agents, their mechanisms of action, and how they can be effectively used to alter physiological/disease states within an organ system.

Required textbooks/Materials/Resources:

1. "Pharmacology: An Introduction" (McGraw Hill, 8th Ed, 2021) by H. Hitner, B. Nagle, M. Kaufman, H. Ariel, Y. Lalehzarzadeh (ISBN: 978-1-260-02182-0).
2. Mandatory enrollment in iClicker course: FL25 BIOL 4250/5150.001 – Lund
3. We will also use both the Canvas Discussions section and problem-based learning (PBL) exercises for practice with determining appropriate pharmacotherapies, based on the mechanism(s) of action, in real-world clinical case studies.

Course Requirements:

Attendance: Because the information in this course builds with each successive class meeting, attendance heavily influences success. Thus, students are expected to attend lectures regularly. While I do not take formal attendance, I will utilize polling questions in the lecture to assess participation. Participation points will count toward the final course grade.

Religious Holidays: In accordance with Section 51.911 of the Texas Education Code, UNT will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time. Students must file a written request with the dates of the anticipated absence to qualify for an excused absence. A copy of the state rules and procedures regarding holy days and the form for notification of absence from each class under this provision are available from the Registrar's Office.

Final Exam. The final exam schedule for this course is Tuesday, December 9th from 10:30 a.m. - 12:30 p.m.

Grading.

The following scale will be used to assign final course grades. Letter grades reflect the level of understanding of environmental science principles, applications, and laboratory skills/techniques demonstrated:

Course Grading Scale:

For this class grade:	You need this percentage:	Level of understanding of material:
A	90 - 100%	Superior understanding
B	80 - 89%	Above-average understanding
C	70 - 79%	Average understanding
D	60 - 69%	Below average understanding
F	< 60%	Does not demonstrate a fundamental understanding

Graded Work:

- The course grade will be calculated from an average of four (4) exams. The exams will be formatted as short answer response questions. All exams will be given via Lockdown Browser in Canvas IN CLASS during regularly scheduled class hours **Make-up exams will only be permitted with a university excused absence.**

- Scheduled quiz dates will be listed on the syllabus in Canvas or announced in class at least 1 class period before the quiz date. The lowest quiz score will be dropped. Question format may include a combination of multiple-choice, true or false, matching, fill-in-the-blank, drop-down menu, diagramming/labeling, and/or short essay.
- All quizzes will be given via Lockdown Browser in Canvas IN CLASS during regularly scheduled class hours. **Make-up quizzes will only be permitted with a university excused absence.**
- Graded written and homework assignments will be introduced during the lecture period and throughout the semester and uploaded to Canvas. Assignment due dates and times will be listed in Canvas. **NO LATE ASSIGNMENTS will be accepted or graded.**
- We will utilize the Canvas Discussions forum for interactive problem-based learning (PBL) exercises. **All Discussion assignments are due by Sunday at 11:59 p.m. for the assigned week.**
- Graduate Students will have an additional written assignment due to satisfy the graduate-level credit they will receive for this course. Further information, instructions, and due dates will be provided to all graduate-level students (those enrolled in BIOL 5150).

The projected grading (point) distribution for the course grade is as follows (**estimate** only, actual points may differ from this depending on course flow):

Estimated Course Point Distribution			
	Points	Total Point	Percentage of Course Grade
Exams (including Final Exam) (4 total)	40 pts each	160 points	~44%
Quizzes (8 total) (7 quizzes will count)	15 pts each	105 points	~29%
Discussions, PBLs, Homework, Participation	varied	~100 points total	~27%
5150 Graduate-level project/presentation	<i>40 pts</i>	<i>40 points total</i>	<i>Grad: ~25%</i>
	TOTAL	Undergrad: ~365 possible points <i>Grad: ~405 possible points</i>	<i>Grad: ~10%</i>

Note: all points are equal and weighted the same for calculating the final course grade.

Other Requirements:

- Students are responsible for all materials covered in class and in the reading assignments. Some material that is not in the textbook, which is provided in class during the lecture, may appear on examinations.
- Students are expected to do their readings before class.
- Students may be expected to seek out information on websites or other books to further their understanding of the material covered in class.
- Students are responsible for knowing assignment due dates, as well as dates of quizzes and exams. This can be accomplished by checking the Canvas course page regularly. Please note the make-up policies on quizzes and exams listed above.
- Students must have access to a computer or compatible device to complete the course. Loaner laptops are available through the UNT Library, and loaner tablets are available through CLEAR for students who need them. Please contact your instructor for more information.

Expectations:

Disruptions and disrespectful behavior are damaging to the educational process. Therefore, all students are asked to meet the expectations listed below.

- Cell phones should be silenced before class.
- Talking during lectures is disrespectful to your classmates and to me. Offenders may be asked to leave the class.
- You are expected to do your own work for all graded material.
- You are expected to contribute to informal class discussions.
- Value differences in opinion. Keep an open mind and treat members of this class, guest speakers, and me respectfully.

Exam Policies:

- Quizzes and exams will be given during our normal class times and accessed through our Canvas course page using LockDown Browser. ***All exams must be taken in our regularly assigned classroom.***
- No books, notes, phones, or other devices (including headphones) can be used during quizzes or exams.
- No student may begin an exam after the due date/time has passed.
- Quiz and exam questions cannot be copied or photographed.
- Any behavior deemed cheating or academic misconduct via LockDown Browser or Respondus technology during a quiz or an exam can result in the student receiving a zero and/or being reported to the Dean of Students.

Any grade questions or disputes must be brought to the instructor's attention within one week of receiving the grade. After one week, grades will not be changed.

Academic Misconduct:

Students are expected to abide by the Student Code of Conduct as it appears in the UNT catalog. Academic misconduct will not be tolerated. **No cheating will be tolerated.** Anyone cheating (all forms) or exhibiting behaviors consistent with cheating, including, but not limited to, assisting other students with cheating: talking during a testing event, accepting credit for another's work, etc., will receive as a minimum punishment a grade of zero for the graded item. More severe punishment will be taken depending upon the circumstances. Any incidents of academic dishonesty will be reported to the appropriate authorities.

The following scenarios are examples of forms of cheating:

- Copying a fellow student's work or copying a previous student's work.
- Accessing or taking a quiz or exam outside of our classroom without permission
- Notes written on body parts, clothing, cheat sheets, etc., during a test.
- Listening to headphones (regardless of what is being played) during an exam
- Any form of communication with your neighbor during a test.
- Talking to anyone but the instructor or proctor during a quiz or examination.
- Communicating via cell phones with other people during a test.
- Notes or books open during in-class exams and quizzes.
- Disclosing or soliciting examination questions to those who may have been absent from an exam.
- Plagiarism (copying entirely or whole phrases from books or websites).
- Any two students handing in assignments with word-for-word responses

Release of Grades:

The Family Educational Rights and Privacy Act (FERPA) (1974), does not permit faculty or staff to report grades by phone or email. All grades will be posted on Canvas so students can see exactly where they stand in the course at any given time throughout the semester.

Incomplete Grades:

An incomplete (I), is a non-punitive grade, given only during the **last one-fourth of a semester** and only if a student is (1) passing the course; (2) has a **justifiable reason** why the class cannot be completed on schedule; and (3) arranges with the instructor to finish the course at a later date by completing specific requirements that the instructor must list on the grade sheet turned in at the end of the semester. **All work must be completed within the time specified by the instructor (not to exceed one year after taking the course).**

Important Withdrawal Dates:

- Last day to add a class: August 22, 2025
- Drop with a grade of "W" begins: August 30, 2025
- Last day to change to pass/no pass grade option: September 26, 2025
- First date available to request an "Incomplete" grade: November 8, 2025

A list of the above dates, as well as other important date/deadline information, can be found on the UNT Registrar's webpage at: [Fall Academic Calendar & Key Dates | University of North Texas \(unt.edu\)](https://www.unt.edu/registrar/fall-academic-calendar-key-dates)

SPOT Evaluations:

SPOT (Student Perception of Teaching) evaluations for the course will be available during course weeks 12-15 and can be accessed via a link provided through email or the course Blackboard home page. I will do my best to provide time during the class period to complete the SPOT (via laptop or smart device) and encourage your feedback on course content, teaching methods, resources utilized, exam structure, PBLs, etc. Please let me know what worked for you and what didn't, and why. Your opinions are valuable to me and will assist me in adapting the course for future semesters.

Disability Accommodations.

The University of North Texas makes reasonable academic accommodations for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA 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, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information, see the Office of Disability Accommodation website at <http://www.unt.edu/oda>. You may also contact them by phone at 940.565.4323.

Course Schedule* for BIOL 4250/5150, Section 001 Fall, 2025:

DATE	TOPICS	MATERIALS (Chapters)	Quiz/Exam Schedule
8/19	Class Intro / Introduction to Pharmacology	1	
8/21	Pharmacokinetics /ADME	2	
8/26	Geriatric Pharmacology	3	Quiz 1
8/28	Chemical Mediators and Intro to Autonomic N.S – review/exercise	5	
9/2	Pharmacology of the Sympathetic N.S.	6	Quiz 2
9/4	Pharmacology of the Parasympathetic N.S. Autonomic Nervous System	7	
9/9	Exam #1		
9/11	Cardiovascular Pharmacology / Heart Failure	21 22	
9/16	Cardiovascular Pharmacology / Antiarrhythmic drugs	23	
9/18	Cardiovascular Pharmacology / Antiarrhythmic drugs Cardiovascular Pharmacology/Antianginals	23 24	Quiz 3
9/23	Cardiovascular Pharmacology/Antihypertensives	26	
9/25	Cardiovascular Pharmacology/Antihypertensives Cardiovascular Pharmacology / Antilipidemics	26 29	Quiz 4
9/30	Cardiovascular Pharmacology / Antilipidemics Review	29	
10/2	Exam #2		
10/7	Pharmacology of the Central N.S. / Antipsychotics & Antianxiety Drugs	13	
10/9	Pharmacology of the Central N.S. / Antidepressants	14	
10/14	Pharmacology of the Central N.S. / Opioids	19	Quiz #5
10/16	Pharmacology of the Central N.S. / NSAIDs	20	
10/21	Endocrine Pharmacology Endocrine Pharmacology – Reproductive hormones	35 37	Quiz #6
10/23	Pancreatic Hormones - Diabetes	39	

10/28	Exam #3		
10/30	Respiratory Pharmacology / Asthma	32	
11/4	Antibacterial Drugs	41	
11/6	Pancreatic Hormones - Diabetes	42	Quiz #7
11/10	Cancer Pharmacology	45	
11/13	Cancer Pharmacology	45	
11/18	Pharmacology of Drugs of Abuse	15	
11/20	Cancer Pharmacology - Immunotherapies		Quiz #8
11/25	Thanksgiving Holiday – no classes		
11/27	Thanksgiving Holiday – no classes		
12/2	Graduate Student Presentations		
12/4	Graduate Student Presentations		
12/9	Final Exam 10:30 a.m. - 12:30 p.m.		

***Topics or assignments will change as needed. Announcements regarding such changes will be made during regular class hours. Students who are absent or tardy when such announcements are made will still be held liable for the changes.**