



BSC 427.01E -Pharmacology

Spring 2025
Texas A&M University at Commerce
T, Th 11:00 AM- 12:15 PM

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Office Location: NHS 331

Please e-mail me if you have a question. I will try to respond within 24 hours, except for weekends and holidays.

Office Hours: Thursday, 2-3:30 PM or by appointment.

I enjoy teaching and talking with you. If you have questions, drop by my office or join the Zoom session (link below) during office hours. If the time does not work for you, feel free to email me, and we can set up a time that does.

Office Hour Zoom link:

<https://tamuc.zoom.us/j/7032367457?pwd=RkFQZmtkcm90emNnUGNDL0E0Sjg0UT09>

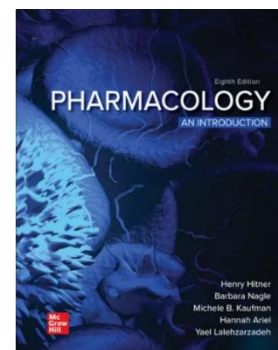
Meeting ID: 703 236 7457

Passcode: OH

Course Summary

Textbook(s) Required: Pharmacology, an Introduction ISBN-13: 978-1260470512

This book is available for purchase or rental at the TAMUC bookstore and can be bought or rented from various local and online retailers. Readings from the textbook will be announced and follow the course schedule's topic order. In order for you to get the most out of the lecture, it is important that you complete the assigned readings with each recorded lecture since lectures will build on the reading assignment.



ISBN10 1260470512 | ISBN13: 9781260470512

Course Description:

This course provides students with a greater understanding of general concepts of pharmacology. First, specific drugs and sites of drug action are examined, beginning with the autonomic nervous system. We will then focus on the pharmacology of organ systems. Finally, we examine the

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pharmacology of the central nervous system. This course is designed for students with a biology, cell biology, and chemistry background.

Course Student Learning Objectives (SLO):

Upon completion of this course, you should be able to:

1. Tell the primary groups of endogenous proteins bound by drugs, the effects of drug binding on their molecular targets, and methods for analyzing drug binding.
2. Discuss the chemical mediators and peripheral nervous system and their actions.
3. Explain the basic disease/disorder mechanisms of the central nervous system and know the major drugs acting on CNS.
4. Explain various adverse organ conditions and drugs used to treat these conditions.

Course Requirements

Minimal Technical Skills Needed:

Standard skills necessary to use web browsers to access course materials are required. Students should also be able to submit their work as required. Students should be able to use Microsoft Word and PowerPoint.

Instructional Methods:

This is a fully online course. All course materials will be posted in D2L. I will post announcements on the course's home page or send email notifications.

Student Responsibilities or Tips for Success in the Course

- ✓ **Checking both D2L and emails for course-related announcements.**
- ✓ Dedicated time to learn course materials.
- ✓ Attending classes
- ✓ Have the required technology (a computer, a secure and reliable internet connection, and other requirements detailed in this syllabus – please read the “Technology Requirements” section.
- ✓ **Take exams within the specified time.**
- ✓ **Submitting the homework and the assignment before deadlines.**
- ✓ If special accommodations are needed to be made, notify the instructor in advance.

Assessments:

There will be 4 types of assessments that will contribute to the grade. These are:

- ✓ Homework 1~9: 20 %
- ✓ Exam 1~4: 45 % (15 % each, lowest one dropped)
- ✓ Final Exam: 20 % Cumulative
- ✓ Assignment: 15 %

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Exams and homework consist of multiple-choice and short-answer questions. Questions are drawn from the same test pool. Therefore, some questions may be repeated. Students are expected to ensure they have the necessary device and a reliable connection.

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Important information:

1. It is the student's responsibility to check emails and D2L for exam dates and, homework/ assignment postings & deadlines

2. There will not be additional points or extra credits. A student's grade will come from the points they earn in the listed assessments.

3. Exams

There will be five exams during the semester = **Exams 1-4** and the **Final Exam** on the Final Exam day. The exams are **closed-book, in-class, and proctored**. The Final Exam will be cumulative, and taking it is mandatory! The lowest score you earn on **Exams 1-4** will be dropped. I recommend that you take ALL exams so you at least have the chance to practice answering questions on the material, even if you plan to drop that exam. Since you can drop one of Exams 1-4, there will be no make-up exams. The Final Exam may not be dropped.

EXAMS ARE SCHEDULED FOR THE FOLLOWING DATES

Assessment	Date/Time
Homework (10 total)	Various times
Exam 1	Feb. 6 12:00-12:50 PM
Exam 2	Mar. 6 12:00-12:50 PM
Exam 3	Apr. 3 12:00-12:50 PM
Exam 4	Apr. 29 12:00-12:50 PM
Final Exam	May 6 10:30 AM-12:30 PM

4. Homework: in a quiz format; open-book and open notes

(a) You will be typically given 1 hour to finish the homework.

(b) Homework is usually open on Thursdays 6:00 PM and due on next Tuesday at 11:59 PM.

(c) The same rules apply for missed homework as do for exams.

5. The assignment should be submitted before the deadline. The assignment will be checked for plagiarism. **Due: April 22nd 11:59 PM**

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TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are the technical requirements.

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you need to know your CWID or need to remember your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all coursework in a timely and satisfactory manner. Each student needs a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's house, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or need help with the course material, please contact your Instructor.

Technical Support

If you have technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

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COURSE AND UNIVERSITY PROCEDURES/POLICIES

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may require the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information about interacting with students online: <https://www.britannica.com/topic/netiquette>.

TAMUC Attendance

For more information about the attendance policy, please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their academic work. For more details and the definition of academic dishonesty, see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

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Statement Regarding AI Use

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

13.99.99.R0.10 Graduate Student Academic Dishonesty

<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/graduate/13.99.99.R0.10.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/)

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Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

COURSE OUTLINE / CALENDAR

Week 1 Jan 13

Chapter 1. INTRODUCTION

Pharmacology, protein targets of drug binding, agonist, drug antagonism, desensitization.

Week 2 Jan 21

DRUG RECEPTORS AND PHARMACODYNAMICS

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drug binding, drug-receptor interactions, measurement of drug binding, receptor groups, structure, and signal transduction mechanisms, ion channels, G-protein coupled receptors, receptor tyrosine kinases, nuclear receptors

Homework 1

Week 3 Jan 27

Chapter 2 PHARMACOKINETICS

translocation of drug molecules, drug disposition, special delivery systems.

Homework 2

Week 4 Feb 3

Chapter 5: INTRODUCTION TO AUTONOMIC PHARMACOLOGY

peripheral nervous system, chemical transmission, mechanisms of transmitter release, termination of transmitter action.

Exam 1 on Feb 6

Week 5 Feb 10

Chapter 6. SYMPATHETIC NERVOUS SYSTEM

Classification, physiology and drugs

Homework 3

Week 6 Feb 17

Chapter 7 PARASYMPHATHETIC NERVOUS SYSTEM

classification, physiology, and drugs.

Homework 4

Week 7 Feb 24

HISTAMINE, SEROTONIN, PURINES, LOCAL HORMONES, CANNABINOIDS
PEPTIDES AND PROTEINS AS MEDIATORS AND NITRIC OXIDE SIGNALING
ANTI-INFLAMMATORY DRUGS

Homework 5

Week 8 Mar 3

Selected from Chapters 21~24. DRUGS AFFECTING THE HEART, CIRCULATORY SYSTEM, AND
BLOOD

Exam 2 on Mar 6

Week 9 Mar 17

Chapter 31, 32. RESPIRATORY SYSTEM

Homework 6

Week 10 Mar 24

Chapter 25. URINARY SYSTEM

Chapter 33 39 GI TRACT, GLUCOSE METABOLISM, AND OBESITY

Homework 7

Week 11 Mar 31

Selected from Chapters 37~40, 42. PITUITARY, ADRENAL CORTEX, THYROID, REPRODUCTIVE
SYSTEM, AND BONE METABOLISM

Exam 3 on Apr 3

Week 12 Apr 7

Chapter 21. DRUGS ACTING ON THE CENTRAL NERVOUS SYSTEM

Homework 8

Week 13 Apr 14

Chapter 17. NEURODEGENERATIVE DISEASES

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Homework 9

Week 14 Apr 21

Chapter 12-13. ANXIOLYTIC AND HYPNOTIC drugs

Chapter 13-14 ANTIPSYCHOTIC AND ANTIDEPRESSANT DRUGS.

Chapter 15. DRUGS OF ABUSE

Assignment due on Apr 22

Homework 10

Week 15 Apr 28

Exam 4 on Apr 29

Week 16

Final Exam* on May 6 10:30 AM-12:30 PM

*The final exam is a comprehensive exam that will cover all the chapters.

- ✓ ***Please check the academic calendar for details on holidays and the current semester's start and end dates. The semester begins on January 13, 2025.**
- ✓ ***ALL DATES AND CHAPTERS COVERED ARE TENTATIVE AND SUBJECT TO CHANGE.**

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