

Syllabus Fall 2024

PHRM 3010, Pharmacology and Therapeutics, 3 Credit Hours

This course is for Advanced Undergraduate Students

Course Director: Karen Lounsbury, PhD, Professor of Pharmacology

Contact: Formal contact by e-mail karen.lounsbury@med.uvm.edu

Office: HSRF 320 (office appointments will be held in person or remotely through Teams)

Other Pharmacology Faculty Instructors:

Fran Carr, Anthony Morielli, Benedek Erdos, Alan Howe

Contacts for other Instructors: <https://www.med.uvm.edu/pharmacology/directory>

Modality, Meeting Pattern, Location

Tu/Th 4:25-5:40 pm in LAFAYETTE HALL L108

For Fall of 2024, PHRM 3010 all sessions and exams will be held in person for all students in the class.

We will use Brightspace for announcements and posting of materials; there will be a Teams site for the course as well, but Brightspace is the predominant source for information.

Technical support for students

Students, please read this technology checklist to make sure you are ready for classes.

<https://www.uvm.edu/it/kb/student-technology-resources/>

Students should contact the Helpline (802-656-2604) for support with technical issues.

Pre-requisites or co-requisites

Advanced Undergraduate standing (Junior/Senior) or by permission. Introductory courses in Biology and Organic Chemistry are required.

Course Description

This course introduces topics in pharmacology including pharmacodynamics, pharmacokinetics, and physiological actions of medications used in the treatment and prevention of human diseases. The course is designed for advanced undergraduate students who have a strong background in biology and chemistry and wish to understand the mechanisms behind current pharmaceuticals. Topics covered include pathologies that require treatment, drug mechanisms and side effects, and drug metabolism by the body. Several Pharmacology faculty teach sessions in their area of expertise. Students with an interest in pursuing healthcare or biomedical research fields are particularly encouraged to take the course. This course is a core requirement for students pursuing the Pharmacology Minor and is an advanced elective for several undergraduate science majors (e.g., Neuroscience, Biological Sciences).

Course Learning Objectives

1. Outline the basic principles of pharmacodynamics that relate to receptor activity and the effects of binding by agonists and antagonists
2. Compare and contrast the pharmacokinetic properties of drugs with respect to their absorption, distribution, metabolism, and excretion
3. Recognize the specific uses of drugs to correct pathophysiologic states
4. Compare and contrast the drug mechanisms within the major classes of drugs
5. Discuss the important adverse effects associated with the major classes of drugs
6. Analyze specific case-based questions using basic diagnostic reasoning skills
7. Demonstrate communication skills and knowledge application through small group discussions

Pedagogy:

Classes will be taught through lectures and also application sessions using case-based learning. Students will also have the opportunity to solve clinical case scenarios by writing patient assessments and plans for therapy.

Required Course Materials:

All Course materials will be loaded onto Brightspace, including links to recordings of lectures. We will use the iClicker App (free for students) for case-based sessions, [UVM information on](#)

[iClicker](#)

An Optional Reference Text: Katzung & Trevor's pharmacology 15e 2021 [Katzung & Trevor's pharmacology \[electronic resource\]](#) (link to Dana Library, search CATQuest)

Attendance Policy and Classroom Environment Expectations:

Students are encouraged to attend all regularly scheduled classes. If a student needs to miss a class or exam due to illness or other excused absence, **please contact Dr. Lounsbury at karen.lounsbury@med.uvm.edu**. Student-athletes should meet with the instructor if they will miss more than 3 classes to work out an academic plan.

Each block of material (2-4 lectures) will have a case-based session that uses the previous lectures to apply material at a higher level. These sessions will be preceded by a closed-book readiness quiz on Brightspace that will be taken prior to class. Students will be expected to engage in group work in class or remotely in breakout rooms. A small number of attendance points will be given for the case-based sessions (see grading rubric).

Grading Criteria/Policies:

Grades will be based on **6 case study assignments, 5 readiness quizzes and 3 closed-book multiple choice question exams**. The final will NOT be cumulative. Exams will be multiple choice. Attendance at all classes and review sessions is highly recommended. **Participation** by iClicker in active learning sessions will contribute 4% of your grade.

Include:

- 3 Multiple choice exams (60%)
- 6 Case study assignments (25%)
- 6 Readiness quizzes (10%)
- 6 Case-based Attendance (5%)

Assessments (Graded Work):

- **Case Study Assignments:** *Students use class notes and text reference to answer questions related to a specific case. Length expected 2 pages; submit by 11:59 pm on the due date*
- **Readiness Quizzes:** *Students study lecture material and take a 10 question quiz on Bb prior to class*

- **Exams:** Exams are multiple choice and approximately 50 questions. Students will have 75 min to take the exams using Brightspace. The exams will be taken in class using your own personal laptop. Please contact the course director if you do not have access to a device to use for exams. The Final Exam is NOT cumulative.

Recording Class Sessions:

Our class sessions will be videorecorded using zoom for students to use for review. In the event that a session recording is not captured, a recording from last years' class may be posted.

Research and Citation Help

For help selecting research topics, finding information, citing sources, and more, ask a librarian. You may ask questions by phone, e-mail, chat, or text, or make an appointment for an individual consultation with a librarian.

Howe Library: <https://library.uvm.edu/askhowe>

Dana Medical Library: <https://dana.uvm.edu/help/ask>

Silver Special Collections Library: <https://specialcollections.uvm.edu/help/ask>

Course Evaluation:

All students are expected to complete an evaluation of the course at its conclusion using the Blue Application. Evaluations will be anonymous and confidential, and the information gained, including constructive criticisms, will be used to improve the course.

Intellectual Property Statement/Prohibition on Sharing Academic Materials:

Students are prohibited from publicly sharing or selling academic materials that they did not author (for example: class syllabus, outlines or class presentations authored by the professor, practice questions, text from the textbook or other copyrighted class materials, etc.); and students are prohibited from sharing assessments (for example homework or a take-home examination). Violations will be handled under UVM's Intellectual Property policy and Code of Academic Integrity.

Student Learning Accommodations:

In keeping with University policy, any student with a documented disability interested in utilizing ADA accommodations should contact Student Accessibility Services (SAS), the office of

Disability Services on campus for students. SAS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations, which are communicated to faculty in an accommodation letter. All students are strongly recommended to discuss with their faculty the accommodations they plan to use in each course. Faculty who receive Letters of Accommodation with [Disability Related Flexible accommodations](#) will need to fill out the Disability Related Flexibility Agreement. Any questions from faculty or students on the agreement should be directed to the SAS specialist who is indicated on the letter.

Contact SAS:

A170 Living/Learning Center;

802-656-7753

access@uvm.edu

www.uvm.edu/access

Important UVM Policies

Religious Holidays:

Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time. <https://www.uvm.edu/registrar/religious-holidays>

Academic Integrity:

The policy addresses plagiarism, fabrication, collusion, and cheating.

<https://www.uvm.edu/policies/student/acadintegrity.pdf>

Grade Appeals:

If you would like to contest a grade, please follow the procedures outlined in this policy:

<https://www.uvm.edu/policies/student/gradeappeals.pdf>

Grading:

For information on grading and GPA calculation, go to <https://www.uvm.edu/registrar/grades>

Code of Student Conduct:

<http://www.uvm.edu/policies/student/studentcode.pdf>

FERPA Rights Disclosure:

The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974.

<http://catalogue.uvm.edu/undergraduate/academicinfo/ferparightsdisclosure/>

Promoting Health & Safety:

The University of Vermont's number one priority is to support a healthy and safe community:

Center for Health and Wellbeing:

<https://www.uvm.edu/health>

Counseling & Psychiatry Services (CAPS)

Phone: (802) 656-3340

C.A.R.E. If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (802-656-3380). If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at <https://www.uvm.edu/studentaffairs>

Final Exam Policy:

The University final exam policy outlines expectations during final exams and explains timing and process of examination period. <https://www.uvm.edu/registrar/final-exams>