

Course Change Request

New Course Proposal

Date Submitted: 05/20/20 11:44 am

Viewing: **BIOL 429 : Biological Foundations of Pharmacology**

Last edit: 09/11/20 8:32 am

Changes proposed by: dpolayes

Are you completing this form on someone else's behalf?

No

Effective Term: Spring 2021

Subject Code: BIOL - Biology

Course Number: 429

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Biological Foundations of Pharmacology

Banner Title: Bio Foundation of Pharmacology

Will section titles vary by semester? No

Credits: 3

Schedule Type: Lecture

In Workflow

1. **BIOL Undergraduate Representative**
2. **SC Curriculum Committee**
3. SC Associate Dean
4. Assoc Provost- Undergraduate
5. Registrar-Courses
6. Banner

Approval Path

1. 05/28/20 9:02 pm
Geraldine Grant
(ggrant1): Approved for BIOL Undergraduate Representative

Hours of Lecture or Seminar per week: 3

Repeatable: May be only taken once for credit, limited to 3 attempts (N3) **Max Allowable Credits:** 9

Default Grade Mode: Undergraduate Regular

Recommended Prerequisite(s):

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):

BIOL124 and BIOL125 OR

BIOL430 and BIOL431 OR

BIOL483 OR

CHEM463

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(Course/Test Code	Min Grade/Score	Academic Level)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

An introduction to the basics of pharmacology that focuses on the human systems of the body and how drugs modulate these systems in order to maintain homeostasis. Disease states will be incorporated in the study of the major drug classes to strengthen the students understanding regarding medication use.

Justification:

The objective of this course is to further prepare students considering Pre-Health majors for professional school courses in pharmacology. The course is intended to provide an introduction to this complex subject, thereby enhancing students' likelihood of success in future professional school courses in pharmacology and also strengthen their candidacy for admission to highly competitive health sciences programs.

None of our existing classes cover the topics of Pharmacokinetics or Drug-receptor interactions and pharmacodynamics.

This course will broaden the range of courses available to students in the undergraduate Biology program.

Does this course cover material which crosses into another department? No

Learning Outcomes:

Understand drug interactions at a biological level.

Introduction to the complexity of disease and drug treatment.

Attach Syllabus

[BIOL429syllabus.pdf](#)

Additional Attachments**Staffing:**

Will be taught by Alexandra Masterson

Relationship to Existing Programs:

May be of interest to Kinesiology majors or anyone interested in pre-health

Relationship to Existing Courses:

Complements our courses on anatomy and physiology and biochemistry. Expands the students knowledge of medically important concepts

Additional Comments:**Reviewer Comments**

**BIOL 429 BIOLOGICAL FOUNDATIONS OF PHARMACOLOGY
COURSE INFORMATION AND POLICIES – SPRING 2021**

Dr. Alexandra Masterson
Email: amaster2@gmu.edu

Course: BIOL 429 M/W 10:30-11:45 am

Office Hours: Monday and Wednesdays at 9:00-10:30 am Exploratory Hall, Room 1207.

Gender identity and pronoun use: If you wish, please share your name and gender pronouns with me and how best to address you in class and via email. I use “she, her” for myself and you may address me as “Dr. Masterson, Professor Masterson” in emails and verbally.

Lecture Materials: PowerPoints and Outlines of lecture material will be available to you on Blackboard to assist you in note taking. Access Blackboard from the myMason portal, and click on Courses tab. Locate the course from the Course List. Lecture materials will be found in Course Content.

A. COURSE OBJECTIVES AND PREREQUISITES:

BIOL 429 will be focused on the student learning pharmacology for the first time as an undergraduate. Although numerous sciences are involved in understanding pharmacology, this course will approach the drug classes by studying their mechanisms of actions, building upon prior courses in the biological sciences. This course is not intended to provide professional training for nursing students. It does not, for example, seek to provide instruction on the calculation and administration of pharmaceutical dosages. Rather, this course is an introduction to the biological mechanisms of pharmaceuticals and may be particularly suited for undergraduates considering possible graduate/professional study in pharmacology-intensive fields such as medicine, dentistry, pharmacy and pharmacology. As time permits, we will examine some sample questions from the MCAT and PCAT that are relevant to the subject matter of this course. **Prerequisites:** Biology 124/125, or Biology 430/431, or Biology 425.

B. BOOKS AND MATERIALS REQUIRED:

1. *Lippincott Illustrated Reviews: Pharmacology*, by Karen Whalen, 7th edition, Wolters Kluwer.

C. MASON ALERT SYSTEM: This system serves to provide students with emergency information of various kinds. You may sign up for these alerts at <https://alert.gmu.edu>.

D. CAMPUS CLOSURE: If the campus closes or class is canceled due to weather or other concerns, students should check for an announcement and email from the instructor in Blackboard for instructions on making up lost class time.

E. EVALUATION/GRADING:

The final grade will be determined by the lecture instructor based on the percent of a possible 500 points that you earn from lecture. Points will be earned as follows:

LECTURE

4 Exams	@100 points each	400 Points
Quizzes	@ 10 points each	50 Points
Assignments	@ 5 points each	50 Points
		500 POINTS TOTAL

BONUS		@10 points each on Exams #1, #2, #3, #4		(+40 Points)			
A+	97--100%	B+	87--89%	C+	76--79%	D	60%--69%
A	95--96%	B	85--86%	C	70--75%	F	≤59%
A-	90--93%	B-	80--83%				

F. EXAMS:

1. **Exam Content and Format:** All aspects of the course are interrelated, so you may be asked to draw on what you have learned in any part of the course. In preparation for exams, you should utilize your textbook, lecture notes, and lecture handouts received during the course. Exams may include multiple choice, matching, fill in the blank, essay, and problem-solving questions.

2. If an exam date is cancelled for any unforeseen reason, the exam will be given during the next class period.

3. **Final Exam:** Please note that the Final Exam is NOT scheduled at the same time as your regularly scheduled class time. You must begin the exam promptly.

4. **Make-up exams:** If you must miss an exam, you should contact your instructor immediately. If a student has a valid and **DOCUMENTED** absence from an exam, a make-up exam will be provided. For documentation of medical absences from an exam, a health care provider must provide a signed note that includes the following:

- Name and contact information for the health care provider.**
- Date student was seen by the health care provider.**
- Dates for which the student is excused** – The dates for which you are excused must include the date the exam was given to qualify as a valid excuse.

No details of the student's medical condition are required. It is the student's responsibility to make sure all the above information is included in the documentation. Documentation that fails to provide ALL information outlined above will be considered inadequate to justify a make-up exam and the student will receive a zero for the exam.

5. If you are a member of a University-sponsored group (e.g., athletic team, debate team, musical, dance or drama group, etc.), it is important that your coach/director be aware of your academic responsibilities in this course. Please discuss the course and lab information and policies with your coach/director. Of particular importance are the Exam Schedule and Exam Policy.

G. ODS (Office of Disability Services) ACCOMMODATIONS:

a. All accommodations must be verified by proper and current documentation by ODS.

Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Disability Services is in Student Union Building I (SUB I), Suite 2500. Email:ods@gmu.edu | Phone: (703) 993-2474

b. You are required to meet with your instructor to discuss your accommodations at the beginning of the semester to insure proper coordination with ODS, you and your instructor. Accommodations will not be provided prior to the date provided on the ODS documentation, and no variations in accommodations will be accepted without additional documentation from ODS.

H. DIVERSITY AND INCLUSION:

We are an inclusive community, that promotes and maintains an equitable and just work and learning environment. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability.

I. SEXUAL HARRASSMENT:

As a faculty member and designated “Responsible Employee,” I am required to report all disclosures of sexual assault, interpersonal violence, and stalking to Mason’s *Title IX Coordinator* per *university policy 1412*. If you wish to speak with someone confidentially, please contact the *Student Support and Advocacy Center* (703-380-1434) or *Counseling and Psychological Services* (703-993-2380). You may also seek assistance from *Mason’s Title IX Coordinator* (703-993-8730; titleix@gmu.edu).

J. STUDENT RESOURCES ON CAMPUS:

1. Counseling and Psychological Services
2. The Learning Services Office or field-specific tutoring
3. The Office of Diversity, Inclusion, and Multicultural Education (ODIME)
4. University Career Services
5. University Writing Center

Information and links regarding these and other student support offices are available on our [Student Support Resources on Campus](#) page of the GMU website..

K. HONOR CODE:

The Honor Code is an integral part of university life and will be vigorously adhered to in this course. On the application for admission, students sign a statement agreeing to conform to and uphold the Honor Code. Students are responsible, therefore, for understanding the code’s provisions. If you do not recall the provisions of this Code, see the excerpts below and/or review them in the GMU

University Catalog – Student Rights and Responsibilities/Honor System and Code. If you ever have questions about what is and is not appropriate, be sure to ask for clarification.

Honor Code: *To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: **Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.***

Student Responsibilities: *Students should request an explanation of any aspect of the professor’s policies regarding the Honor Code that they do not fully understand. They also have an obligation not only to follow the code themselves, but also to encourage respect among their fellow students for the provisions of the code. This includes an obligation to report violations by other students to the Honor Committee.*

Failure to adhere to verbal and written instructions regarding evaluation protocol will be considered an Honor Code violation and may result in a grade of F for the course. It is the responsibility of the student to discuss with the instructor any actions that are questionable prior to those actions.

L. COURSE MATERIALS AND STUDENT PRIVACY:

1. All course materials posted to Blackboard or other course site are private; by federal law, any materials that identify specific students (via their name, voice, or image) must not be shared with anyone not enrolled in this class. All lecture materials, e.g. PowerPoint slides, are the property of George Mason University and will not be shared with students who are not registered for the class.

Date	Lecture Topic	Chapter
Week #1	An Introduction to Pharmacology: Principles of Drug Therapy	Chapter 1
Week #2	Drug-Receptor Interactions & Pharmacodynamics	Chapter 2
Week #3	Drug-Receptor Interactions & Pharmacodynamics	
Week #4	Drugs Affecting the Autonomic Nervous System	Chapters 3-7
	Exam #1	
Week #5	Drugs Affecting the Autonomic Nervous System	
Week #6	Drugs Affecting the Central Nervous System	Chapters 8-13
Week #7	Drugs Affecting the Central Nervous System	
Week #8	Drugs Affecting the Cardiovascular System	Chapters 16-22
	Exam #2	
Week #9	Drugs Affecting the Cardiovascular System	
Week #10	Drugs Affecting the Endocrine System	Chapters 23-27
Week #11	Drugs Affecting the Endocrine System	
Week #12	Histamine and Serotonin	Chapter 37
	Exam #3	
Week #13	Anti-inflammatory, Antipyretic, & Analgesic Agents	Chapter 38
Week #14	Drugs Affecting the Respiratory & GI Systems	Chapters 39-40
Week #15	Drugs Affecting the Urinary System	Chapter 41
	Exam #4	