

BIOL 4000/6000
Credit Hours 3-0-3

Topics in Biology I: GENERAL PHARMACOLOGY
Department of Biology

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Office Hours: Monday 2.00pm – 5.00pm
Tuesday & Thursday 5.00pm – 6.00pm

Lecture: Tuesday & Thursday 3.30pm – 4.45pm BC 1014

Textbook: Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy, 4th Edition
Golan, DE, Armstrong EJ, & Armstrong AW

Course Description: This course will provide students with an introduction to general pharmacology. Fundamental concepts of pharmacodynamics (drug-receptor interactions, signaling mechanisms, and dose-effect relationships) and pharmacokinetics (drug absorption, distribution, metabolism, and elimination) will be addressed. Emphasis will be placed on the physiological basis of drug action on major systems of the body.

Prerequisites BIOL 4000: BIOL 1107/1107L, BIOL 1108/1108L, BIOL 3200, CHEM 1211/1211L, and CHEM1212/1212L, or permission of instructor.

Prerequisites BIOL 6000: Admission into the graduate program or permission of Instructor.

Course Objectives:

By the end of this course, students will be expected to:

- (1) Demonstrate an understanding of the general principles of pharmacology.
- (2) Relate the functioning of individual drugs to the overall functioning of the human body.
- (3) Demonstrate competency in factual content / interpretation of the major areas of general pharmacology.

These objectives support in part the Department of Biology Undergraduate Educational Outcomes # 3, the Department of Biology Graduate Educational Outcomes #1 and the Valdosta State University General Educational Outcomes #'s 4, 5, and 7.

Attendance: Attendance of lectures is expected of all students. Student attendance of classes will be recorded.

Conduct: Students are expected to arrive on time and behave with respect in lectures. Students should not talk during lectures, but if you do not understand or do not hear something please ask for clarification. Use of cell phones during lectures is not permitted. Cell phones must be turned off during lectures. If your cell phone activates during a lecture you will be asked to leave. If your cell phone activates during an exam you will be asked to leave and receive 0% for that exam.

Cheating / Plagiarism: Please refer to the Student Code of Ethics in the Valdosta State University Student Handbook. Any student caught cheating will be penalized, ranging from receiving a zero for that assignment or test, to failure and expulsion from the course. Please refer to the Valdosta State University, Department of Biology Plagiarism Policy.

Non-Discrimination and Title IX Statement: Valdosta State University (VSU) upholds all applicable laws and policies regarding discrimination on the basis of race, color, sex (including sexual harassment and pregnancy), sexual orientation, gender identity or expression, national origin, religion, age, veteran status, political affiliation, or disability. The University prohibits specific forms of behavior that violate Title IX of the Education Amendments of 1972. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs and activities that receive federal funding. VSU considers sex discrimination in any form to be a serious offense. Title IX refers to all forms of sex discrimination committed against others, including but not limited to: sexual harassment, sexual assault, sexual misconduct, and sexual violence by other employees, students or third parties and gender inequity or unfair treatment based on an individual's sex/gender. The designated Title IX Coordinator for VSU is Ms. Selenseia Holmes. To view the full policy or to report an incident visit: <https://www.valdosta.edu/administration/student-affairs/title-ix/>

Accommodations Statement: Students with disabilities who are experiencing barriers in this course may contact the Access Office (<https://www.valdosta.edu/student/disability/>) for assistance in determining and implementing reasonable accommodations. The Access Office is located in University Center Room 4136 Entrance 5. The phone numbers are 229-245-2498 (V), 229-375-5871. For more information, please visit VSU's Access Office or email: access@valdosta.edu. To request reasonable accommodations for pregnancy and childbirth, contact Ms. Myia Miller, Title IX Compliance Officer, at maburden@valdosta.edu. Please note, you will be required to provide documentation from an appropriately licensed medical professional indicating the requested accommodations are medically necessary.

Privacy Act: Due to the Buckley Amendment, or Privacy Act, an individual's personal information cannot be released to anyone but that individual. As such, grades will not be discussed over the phone, by email, or released to a friend or relative.

BIOL 4000 Assessment:	Lecture: 3 Exams @100 points each	: 300	points
	Cumulative Final	: 200	points
	Drug Characteristics Assignment	: 100	points
	Poster or 3 minute video assignment	: 50	points
		TOTAL:	650 points

BIOL 6000 Assessment:	Lecture: 3 Exams @100 points each	: 300	points
	Cumulative Final	: 200	points
	Drug Characteristics Assignments	: 200	points
	Poster or 3 minute video assignment	: 50	points
		TOTAL:	750 points

- Any assigned work submitted late will **NOT** be graded.
- Any assigned work submitted electronically will **NOT** be graded, unless prior permission is granted.
- Make up examinations will only be given if an acceptable documented reason (determined by the instructor) is provided.
- Exams: Question styles will vary depending on the topics being examined and may include (but are not limited to), multiple choice, fill in the blank, diagrams, short answer and essays.

Tentative Sequence of Lecture Topics

Section I: Fundamental Principles of Pharmacology (Chapters 1-7)

Drug-receptor Interactions; Pharmacodynamics; Pharmacokinetics; Drug Metabolism / Toxicity

Section II: Principles of Neuropharmacology (Chapters 8-19)

Cholinergic and Adrenergic Pharmacology; Pharmacology of GABAergic, Glutamatergic, Dopaminergic & Serotonergic Neurotransmission; Analgesia; Local / General Anesthetics; Drugs of Abuse

Section III: Cardiovascular Pharmacology (Chapters 20-26)

Cholesterol and Lipoprotein Metabolism; Volume regulation / Vascular tone; Hemostasis and Thrombosis; Cardiac Rhythm / Contractility; Hypertension / Ischemic Heart disease / Heart Failure

Section IV: Principles of Endocrine Pharmacology (Chapters 27-32)

Hypothalamus / Pituitary Gland; Thyroid Gland; Adrenal Cortex; Reproduction; Pancreas & Glucose

Section VI: Principles of Inflammation / Immune Pharmacology (Chapters 42-49)

Section V: Principles of Chemotherapy (Chapters 33-41)

<u>Tentative Exam Dates:</u>	Examination #1: 17 th September
	Examination #2: 17 th October
	Examination #3: 12 th November

Final Examination: Friday 13th December 2.45pm - 4.45pm