SOUTHERN CALIFORNIA UNIVERSITY OF HEALTH SCIENCES
Accelerated Sciences Division

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COURSE INFORMATION

Course Number (Prefix Code): PHRM 102

Course Name: Introduction to Pharmacology

Course Description:

This course will introduce students to pharmacology, the study of drugs, beginning with an overview of drug actions, effects, safety, nomenclature, references, and terminology to establish a foundational understanding. The course will then describe pharmacokinetics and pharmacodynamics, examining their roles in drug distribution, efficacy, routes of administration, and toxicity. Students will learn to accurately calculate drug dosages for various drug classes, taking into account individual differences such as age, BMI, and comorbidities.
Building on this foundational knowledge, students will explore the mechanisms of action, physiology, pharmacodynamics, adverse effects, indications, and contraindications of drugs affecting the peripheral nervous system, cardiovascular system, vascular and renal systems, and respiratory system. By the end of the course, students will understand how different drug classes impact the body and their therapeutic applications in specific medical conditions.

Course Delivery Model(s): Online Live Interactive, Online

Time Requirement:

Lecture Hours per term:	45
Laboratory Hours per term:	0
Total Hours per term:	45
Course Duration (weeks):	5
Credits:	3

Credit Hour Verification:
This list represents the average amount of time a student is expected to spend to successfully complete this course.

	Activity Type	Online Interactive Hrs/wk	Online (Self-paced) Hrs/wk
Course Time	Lecture time	9	0
Academic Engagement	Video Lectures	0	0.5
	Supplemental Videos	3	5
	Discussion Boards	1	1
	Quizzes	2	2
	Homework	3	4
Preparation and Study	Study time (assessment prep)	5	8
	Reading (chapter readings, materials research)	4	6.5
Total	**For the Course per week**	**27**	**27**
	For the Term	**135**	**135**

Recommended Prerequisites: BIO 200 & BIO 203
Co-requisites: None

This course may be taken again for credit the following number of times (repeatable): 5

LEARNING OUTCOMES, OBJECTIVES, & ALIGNMENT

Student/Course Learning Outcomes
In successfully completing this course, students will be able to:

SLO/CLO
1. Describe basic terminology, actions, effects, interaction and safety protocols related to patient safety drug promotion.
2. Evaluate the practical applications of pharmacodynamics and pharmacokinetics in assessing drug distribution and administration.
3. Perform dosage calculations for various drugs using multiple measurement systems to ensure proper medication dispensing and prevent patient care errors.
4. Describe how pharmacological agents affect the autonomic nervous system.
5. Analyze the effect of antiarrhythmic and antianginal drugs on cardiovascular system.
6. Evaluate the effects, indications and contraindications of different drugs in the vascular and renal systems.

7. Assess the effects, indications and contraindications of different drugs on the respiratory system.

TEXTBOOKS & MATERIALS

Required Textbook(s): Pharmacology: An Introduction 8th edition by Henry Hitner (Provided e-Text). Other materials are provided on the Canvas course page.

Required Materials: Working on a computer with a strong internet connection, camera, and microphone. Scientific calculator.

Scientific Calculator*

*** Graphics or text-memory calculators are not allowed for use during quizzes or exams. If a student brings one, they will have to take the quiz without a calculator! Students are encouraged to obtain a scientific calculator with exponents and logarithms immediately rather than the day before a quiz or an exam. It is important to be comfortable with the calculator being used rather than to be struggling to locate the keys for certain mathematical operations. For example, a TI-30X IIS is acceptable.*

Provided Materials: The following materials will be provided:

Homework and quizzes platform (McGraw-Hill).

Technology Requirements

Click here to view the SCU technology requirements

External resources: McGraw-Hill

Learning Management System: Canvas. If a student is unfamiliar with the Canvas learning management system, please visit the manuals and learning guides available in the Canvas Student Guide. It is important that students are comfortable and competent in using this system, as all course material and communication will be done via Canvas.

Navigating Canvas – the Canvas site has a large set of Canvas tutorials and videos for students.

Browser and Computer Requirements for Canvas: This course requires that students have access to Google Chrome or Microsoft Edge.

Examination System: We will be using the Respondus Online Exam Proctoring Service in this course. Respondus is a software extension in Chrome that uses your computer's screen, webcam, and microphone to create a remote proctored environment and enables you to take exams via Canvas in the location of your choice. You must have a strong and stable internet connection for Respondus to work well. During the exam, you, your computer, and the environment you are taking the exam in may all be recorded.

In addition to the instructor(s) and Teaching Assistants(s) of this course, Respondus and SCU Respondus administrators are the only ones who will have access to the recordings. The Chrome browser extension must be installed before students can take an exam, and it can be removed once an exam is complete.

There will be a practice exam to become familiar with using Respondus and surface any issues you may encounter with Respondus.

Suggestions for completing online coursework: Save work often; this includes backing it up on multiple devices or cloud applications. When submitting final papers on the Canvas learning management system (LMS), ensure that all files have been uploaded properly. Also, make sure to keep a hard copy of all papers/projects in case of an unforeseen technological failure or outage.

EVALUATION OF STUDENT LEARNING

Grading scale: Letter grade
A = 90% - 100%
B= 80% - 89.99%
C= 70% - 79.99%
D= 60% - 69.99%
F= 0.0% - 59.99%

Assessments:

Assessment Name	#	Pts Each	Weight	SLO Linkage
Reading Assignments	14	0	0	1-7
Homework Assignments	5	60	15%	1-7
Module Quizzes	5	10	20%	1-7
Dosage Calculations Problems (chapters 23 and 26)	2	10	`10%	1-3, 5-6
Discussion Boards / Participation	5	10	15%	1-7
Exams	2	120	40%	1-7
Total			100%	

Course Topics:

Module	Title	Topics	Assessments	SLOs
1	Introduction to pharmacology	● Chapter 1: An Introduction ● Chapter 2: Pharmacokinetics and factors of individuals **(LO 2.1-2.4 in textbook)** ● Chapter 4: Math review and dosage calculations **(LO 4.1-4.4 in textbook)**	Homework assignment, Module quiz, Discussion board,	1-3

2	Peripheral Nervous System	• Chapter 5 – Introduction to the Autonomic Nervous System • Chapter 6 – Drugs Affecting the Sympathetic Nervous System • Chapter 7 – Drugs affecting the Parasympathetic nervous system	Homework assignment, Module quiz, Discussion board,	1-4
		Exam 1 (Mod 1 – 2)		1-2
3	Cardiology System	• Chapter 21: Review of cardiac physiology and pathology • Chapter 23: Antiarrhythmic Drugs • Chapter 24: Antianginal Drugs	Homework assignment, Module quiz, Discussion board, Dose calculation assignment	1-3, 5
4	Vascular & Renal Systems	• Chapter 25 – Diuretics • Chapter 26 – Antihypertensives • Chapter 29 – Hypolipidemic Drugs	Homework assignment, Module quiz, Discussion board, Dose calculation assignment	1-3, 6
5	Respiratory System	• Chapter 31 – Antihistamines and Mast Cell Stabilizer • Chapter 32 – Respiratory Pharmacology, Treatment of Asthma and COPD	Homework assignment, Module quiz, Discussion board,	1-3, 7
Exam 2 (Mod 4 – 5)				1-7

UNIVERSITY POLICIES

All university policies apply to this course and all others. For full policy information, please consult the SCU Catalog. Additionally, program policies apply to students in each program as described in the Catalog and in the SCU Health Handbook for clinical courses.

Drop Date: It is a student's responsibility to understand when to consider unenrolling from a course. Refer to the SCU Academic Calendar for dates and deadlines for registration. Also, refer to SCU Academic Policies for information about the drop period.

Incomplete Policy: Under emergency/special circumstances, students may petition for an incomplete grade. See the SCU Catalog for Policies about Incomplete Grades

Academic Integrity: Students at this university are expected to maintain the highest degrees of professionalism, a commitment to active learning, and display integrity both in and out of the classroom. See the SCU Academic Integrity Code.

Accessibility Services and Accommodations: The Office of Student Services provides support to students with disabilities requiring accommodation in concert with the lead faculty for this course. All students are encouraged to request accommodation as far in advance of when the accommodation will be required to allow the University to process the request and provide approved accommodation. To begin the process please request a consultation with the designated Accessibility Services Officer as soon as possible. Once the Office of Student Services approves the request, the letter of accommodation will be provided to the student and lead faculty member via email. The student should be certain to follow-up with the lead faculty member to plan for the specific accommodation needs for the course. Program requirements cannot be modified to accommodate a disability. Please see the catalog for details regarding Accessibility Services and Accommodations.

A complete list of University Services is available through MySCU, including:

- Tech Support information
- Veterans Support Services
- Resources for Title IX support through the Campus Safety tab
- Student Advocacy and Accountability resources

Learning Resource Center: Students can use the library's resources, which provide students with an excellent collection of books, journals, electronic databases, and websites, as well as consult with the librarian to help with the course.

Online Etiquette: In general, behavior in an online classroom should emulate the professional behavior expected in an on-ground classroom with a few additional requirements:

- Avoid using text slang and abbreviations such as "u" (instead of "you"), "TLDR" (Too Long, Didn't Read) or "TBH" (To Be Honest) - not everyone knows what they are. Do not use ALL CAPS for entire sentences or posts - this is seen as yelling at someone.
- Any form of personal attack or inappropriate response with other students or faculty is unacceptable. We will remove any discussion posts showing this and warn the author.
- If a student disagrees with someone's comments, they should do so respectfully and collegially and provide legitimate examples to support their side.
- Before pressing the submit button, review comments and make sure nothing is coming across as defensive, too "know-it-all," critical, or academically inappropriate. It is easy for someone to misinterpret the meaning when they cannot see facial expressions or hear the tone of voice.
- Avoid short, generic replies such as "I agree!", "I like it!" or "Funny!" – explain why, add another point in support of the idea, or raise a question to continue constructive dialogue.

Attendance: SCU policy defines attendance for all courses and specifies online courses as active, weekly participation in the course as described in the syllabus. Examples of activities could include, but are not limited to:

- Participating in weekly online chats or discussions
- Submitting or completing assignments
- Commenting on other student contributions
- Actively logged on and participating in class at least three times per week

See the Academic Policies page in the SCU Catalog for more details on Attendance Policy.

Accelerated Sciences Course Recommendations

- Read before and after each class. Skim the chapter before it is covered in the lecture to become comfortable with some of the terms associated with each topic. Review each chapter after it is covered in class to enhance your understanding of the material.
- Do not wait until the night before homework is due to start the assignment. Understanding of concepts will be enhanced if the time is taken to learn them beforehand and later review the material without being rushed.
- Stay focused by finding an environment to study with few distractions.
- Participate during class by taking notes and looking over them afterward.
- Any topics covered in the course could be presented in subsequent examinations, so it is critical to prepare and learn all presented material.
- Remember that procrastination in an accelerated course can quickly prove disastrous! Failure to learn foundational principles can make all future material seem nearly incomprehensible, so make sure to budget time wisely over the next five weeks.

Specifically for synchronous courses:

- Ask questions for clarification when not understanding the material being covered.
- *Do not skip class, arrive late, or leave early.* Given the accelerated nature of our courses, every minute of class missed can have a real impact on student success in a course.
- Work on assigned problems as close to the time as when the topic is covered in class to increase understanding of specific concepts.
- Find a group of students to study with. This makes studying more fun and helps to learn the material by teaching and learning from peers. Explaining these concepts to other students aids in mastery of what is covered.

Teaching Methods & Instruction

The course requires a significant time commitment from students. In the five weeks of classes, 14 chapters of the book will be covered. Students are expected to study each topic in greater detail through studying the textbook and participating in class and homework activities.

- **Reading Assignments:** These sections are created on "Connect" through SmartBook. They improve reading productivity and provide students with better knowledge retention. SmartBook is an intelligent eBook that applies the adaptive technology of LearnSmart to ensure a focus on content the student has not yet learned while also promoting long-term retention of already learned material.

- **Homework:** Students reinforce concepts learned in class by completing homework assignments. Homework assignments are open-book formative assessments where students can have unlimited attempts to practice problems. The highest score achieved is recorded in the gradebook. Homework must be completed by the due date – late submissions incur a 2% grade reduction for every day submitted late.

- **Discussion Board Posts**: Weekly discussion boards are asynchronous, however participation between students is required. Faculty will be active in all discussion boards and work interactively with students to build knowledge. Students must view the lecture material and PowerPoints on

Canvas before beginning discussion boards and assignments in each module to be better prepared to participate interactively with peers in the discussion boards to maintain the participation grade.

- **Dosage Calculations Assignments**: Students will complete a total of 2 dosage calculation worksheets (Modules 3 and 4). Students will be given 5 problems per worksheet to complete. You will use the knowledge gained in Module 1 (chapters 2 and 4) to apply what you have learned to solve these problems.

- **Exams:** There are two exams in each class, a mid-term and a final exam. There will be questions that are similar to all quizzes, homework, questions at the end of each chapter, and any other activity given. The Exams are all on Canvas. Please pay attention to the due dates. They are final and will not be extended. You must use the proctoring methods required by the instructor.