



Department of Physician Assistant Education  
Master of Science in Medicine

3 Units

**MSM 6201 PHARMACOTHERAPEUTICS II**

<b>Course director:</b> Aileen Chu	<b>Term:</b> Summer 2025
<b>Email:</b> achu@pointloma.edu	<b>Meeting day &amp; time:</b> Wednesdays, 8:30am-12:00pm
	<b>Meeting location:</b> Balboa Campus

**PLNU Mission**

**To Teach ~ To Shape ~ To Send**

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

**COURSE DESCRIPTION**

---

This course provides an introduction to the science of pharmacologic therapy of the disease states covered in the Gastroenterology, Nephrology and Genitourinary, Neurology and Endocrinology didactic courses. In addition to pharmacokinetics and pharmacodynamics, students will learn the indications, contraindications, dosages and adverse effects of commonly prescribed medications for these disorders.

**COURSE GOALS**

---

The student will be provided:

1. instruction covering pharmacodynamics and pharmacokinetics to provide a basis for the student's understanding of drug classes and their mechanism of action;
2. instruction covering the precautions or contraindications to the use of a drug;
3. the opportunity to use resource materials for determining proper drug usage;
4. the opportunity to practice writing prescriptions and orders.

**PROGRAM LEARNING OUTCOMES**

---

***The content in this course will contribute to the student's proficiency in this/these area(s):***

1. Enter and discuss orders and prescriptions. (MK, IC, PC, PR, PB, SP)

2. Form clinical questions and retrieve evidence to advance patient care. (MK, PC, PR, PB, SP)
3. Collaborate as a member of an inter-professional team. MK, IC, PC, PR, PB, SB

Initials indicate PA core competency required to meet the PLO/CLO. PA Core Competencies:

MK = Medical Knowledge	IC = Interpersonal Skills & Communication	PC = Patient Care
PR = Professionalism	PB = Practice-based Learning	SB = Systems-based Practice

## COURSE LEARNING OUTCOMES

---

Successful completion of this course requires demonstration of the skills and knowledge outlined here at, minimally, the ADVANCED BEGINNER level:

1. Discuss pharmacotherapy as it relates to pharmacokinetics, and pharmacodynamics. (MK3, MK4)
2. Discuss common pharmacotherapies utilized in the treatment(s) of disease. (MK3, MK4)
3. Evaluate and manage patient's pharmacological therapies associated with acute and chronic disorders. (PC5, PC6)
4. Integrate the knowledge gained in basic science, clinical medicine, and other PA Program courses to develop clinical pharmacological treatment strategies. (PC5, PC6, PC7, SB3, MK4, MK5, PB1, PB2)

## INSTRUCTIONAL OBJECTIVES

---

Upon completion of the **Pharmacology Basics** section of this course, the student will be able to:

1. Evaluate the pharmacokinetic and pharmacodynamic properties of commonly used medications in order to rationalize their indications for use, dosing and adverse effects. Evaluation, B2.02d
2. Classify drugs according to currently accepted categories. Comprehension, B2.02d

Upon completion of the **Pitfalls in Pharmacotherapy** section of this course, the student will be able to:

3. Anticipate, recognize, and manage adverse effects of drugs including side effects, toxicity, allergies, contraindications, drug-drug and food-drug interactions. Analyze, B2.02d
4. Recognize and correct systems-based factors that could negatively impact therapy. Analyze, B2.02d
5. Identify patient-specific biases and challenges that affect therapeutic decision-making. Evaluation, B2.02d

Upon completion of the **Pharmacotherapy Selection** section of this course, the student will be able to:

6. Integrate pharmacologic knowledge to optimize the medication management of common disease states covered in didactic courses 6105, 6106, 6107, and 6108. Synthesis, B2.02d
7. Locate, appraise and integrate evidence from scientific literature to ensure appropriate pharmacotherapy. Synthesis, B2.02d
8. Apply cost-effective health care and resource allocation principles that do not compromise quality of care. Application, B2.02d

Upon completion of the **Follow-Up and Adherence** section of this course, the student will be able to:

9. Outline a plan for follow-up and monitoring of medication regimens. Synthesis, B2.02d

10. Assess effectiveness of the medication regimen in accordance with treatment goals. <sup>Evaluation, B2.02d</sup>
11. Provide medication counseling that is appropriate for the patient or caregiver to ensure therapeutic success. <sup>Synthesis, B2.02d</sup>

*Note: Superscripts identify the Bloom's Taxonomy level for each objective.*

## UNIT INSTRUCTION

UNIT	Hours	LECTURES (subject to minor modifications)
Unit I	22.5	Pharmacy fundamentals <ol style="list-style-type: none"> <li>1. Rx writing and calculations</li> <li>2. Medication safety</li> <li>3. Pharmacy law and DEA regulations</li> </ol> Gastrointestinal <ol style="list-style-type: none"> <li>4. Intraabdominal infections</li> <li>5. GI motility, anti-inflammatory, and acid-suppressive agents</li> <li>6. Liver disease – supportive agents and prescribing precautions, alcoholism</li> </ol> Nephrology and Genitourinary <ol style="list-style-type: none"> <li>7. Fluid &amp; Electrolytes</li> <li>8. Renal disease – supportive agents and prescribing precautions</li> <li>9. Urologic disorders, including infections</li> <li>10. Introduction to solid organ transplants</li> </ol>
Unit II	22.5	Neurology <ol style="list-style-type: none"> <li>11. Narcotics and sedative-hypnotics</li> <li>12. Seizure disorder</li> <li>13. Neuropathy</li> <li>14. Stroke</li> <li>15. Headache and migraine</li> <li>16. Parkinson's and Alzheimer's Disease</li> </ol> Endocrine <ol style="list-style-type: none"> <li>17. Diabetes mellitus</li> <li>18. Thyroid</li> <li>19. Corticosteroids and the HPA axis</li> <li>20. Hormonal replacement</li> </ol>

## REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

**Note: Texts prefaced with double asterisks are provided in Access Medicine.**

- \*\* Katzung BG, Vanderah TW. eds. *Basic & Clinical Pharmacology*, 15e. McGraw Hill; 2021
- \*\* Brunton LL, Hilal-Dandan R, Knollmann BC. eds. *Goodman & Gilman's: The Pharmacological Basis of Therapeutics*, 13e. McGraw Hill; 2017.
- Epocrates – available as mobile app and online (<https://online.epocrates.com>)
- Medscape – available as mobile app and online (<https://medscape.com>)

## LEARNING MODALITIES

---

Modalities include lectures, reading assignments, and community learning activities. The class schedule and assignments can be found in Canvas.

## PLNU ATTENDANCE AND PARTICIPATION POLICY

---

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. However, we recognize that as adults you have other life responsibilities and challenges that may interfere. Ultimately you are responsible for your education and your ability to demonstrate mastery of the course and program objectives.

1. You MUST attend:
  1. PE and clinical skills labs appropriately dressed and with all necessary equipment
  2. examinations on the date and time for which they are schedule
  3. Community learning group
2. We expect
  4. active participation in all class activities.
  5. completion of all class preparatory assignments prior to commencement of class.
  6. respect for the class, peers and faculty.
  7. on-time arrival for all classes, laboratories, learning groups or any scheduled activities.

Routine tardiness demonstrates a lack of professionalism and will not be tolerated

## INCOMPLETES AND LATE ASSIGNMENTS

---

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Failure to meet the deadline will result in a loss of 10% each day the assignment is not turned in to the requesting faculty member. Incompletes will only be assigned under extremely unusual circumstances. Students failing an examination or practicum must complete the designated remediation (See REMEDIATION below) within the assigned time.

## FINAL EXAMINATION POLICY

---

Successful completion of this class requires taking the final examinations **on their respective scheduled days**. No requests for early examinations or alternative days will be approved.

## ASSESSMENT AND GRADING

---

Quizzes- faculty will administer frequent quizzes prior to each lecture for each organ system discussed. Advanced reading of the material prior to the lecture is required.

Written examinations - MSM 6201 will include three (3) written examinations worth 25% each of the overall course grade.

### **Grading**

The final grade will be calculated based on the following distribution:

Quizzes	20%
Unit I exam	30%
Unit II exam	30%
Course learning interaction (including case assignments, discussions)	20%

All assignments and evaluations must be completed in the timeframe determined by the course director. Students receiving less than 70% on a quiz or examination must meet with the course instructor and faculty advisor to address remediation. For additional regarding the Remediation Policy refer to the PA Program Student Handbook.

Grading will be in keeping with Point Loma Nazarene University policy for graduate programs and grading will be as follows:

A=93-100	C=73-76
A-=92-90	C-=70-72
B+=87-89	D+=67-69
B=83-86	D=63-66
B-=80-82	D-=60-62
C+=77-79	F=0-59

### **REMEDIATION**

---

Remediation is the process by which both the student and the program are assured that performance indicating a deficiency in knowledge or skills is subsequently demonstrated to be satisfactory. This may include a re-test over missed material, a skills demonstration or a review of missed material with completion of corrected answers. It is important to note that this is content remediation, not grade remediation and no grade will be changed based on these activities.

Within 48 hours of the posting of a grade of <70%, the student MUST contact the course director to discuss the student's performance and create a remediation plan. Unless otherwise directed by the course director, remediation activities must be completed within 5 days.

### **PLNU COPYRIGHT POLICY**

---

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

## **PLNU ACADEMIC HONESTY POLICY**

---

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. For all student appeals, faculty and students should follow the procedures outlined in the University Catalog. See Graduate Academic and General Policies for definitions of kinds of academic dishonesty and for further policy information.

## **ARTIFICIAL INTELLIGENCE (AI) POLICY**

---

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, Grammarly, Perplexity, etc.) in this course. Any work that utilizes AI-based tools must be clearly identified as such, including the specific tool(s) used. Please use the following sources to guide your citations when using AI.

[MLA Style Center: Citing Generative AI](#)

[APA Style: How To Cite ChatGPT](#)

[Chicago Manual of Style: Citing Content Developed or Generated by AI](#)

## **PLNU ACADEMIC ACCOMMODATIONS POLICY**

---

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2533). Once a student's eligibility for an accommodation has been determined, the EAC will work with the student to create an Accommodation Plan (AP) that outlines allowed accommodations. Professors are able to view a student's approved accommodations through Accommodate.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course. Accommodations are not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC. Students cannot assume that

because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any accommodations.

**This syllabus is subject to change. Students are encouraged to check course messages and emails in order to remain current.**

**ARC-PA standards (5th edition) addressed in this course: B2.02(d)**