PLNU forward

Department of Physician Assistant Education
Master of Science in Medicine
3 Units

MSM 6200 PHARMACOTHERAPEUTICS I

Course director: TBD	Term: Spring 2024
Email:	Meeting day & time: TBD
	Meeting location: Balboa campus, in-person

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 Hematology and Oncology, Dermatology, Infectious Disease, Cardiovascular and Pulmonology 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):

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

7. Form clinical questions and retrieve evidence to advance patient care. (MK, PC, PR, PB, SP)
9. 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:

1. Anticipate, recognize, and manage adverse effects of drugs including side effects, toxicity, allergies, contraindications, drug-drug and food-drug interactions. Analyze, B2.02d
2. Recognize and correct systems-based factors that could negatively impact therapy. Analyze, B2.02d
3. 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:

1. Integrate pharmacologic knowledge to optimize the medication management of common disease states covered in didactic courses 6100, 6101, 6102, 6103, and 6104. Synthesis, B2.02d
2. Locate, appraise and integrate evidence from scientific literature to ensure appropriate pharmacotherapy. Synthesis, B2.02d
3. 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:

1. Outline a plan for follow-up and monitoring of medication regimens. Synthesis, B2.02d
2. Assess effectiveness of the medication regimen in accordance with treatment goals. Evaluation, B2.02d
3. Provide medication counseling that is appropriate for the patient or caregiver to ensure therapeutic success. Synthesis, B2.02d

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

UNIT INSTRUCTION

UNIT	**HOURS**	**LECTURES** (subject to minor modifications)
Unit I	15	ORIENTATION 1. Introduction to Drug References 2. Pharmacodynamics, Drug Receptor Interactions 3. Pharmacokinetics Hematology and Oncology 4. Cancer Chemotherapy 5. Immunotherapy 6. Hematopoietic agents 7. Chemotherapy toxicities Dermatology 8. Common topical agents 9. Common dermatologic conditions 10. Allergic reactions Infectious Diseases 11. Principles of antimicrobial prescribing 12. Anti-bacterials
Unit II	14	Infectious Diseases (cont'd) 1. Anti-virals 2. Anti-fungals 3. Skin and soft-tissue infections 4. Misc anti-infectives 5. Opportunistic infections in the immunocompromised Cardiovascular 6. Antihypertensives and hypertension management 7. Endocarditis 8. Antiplatelets and PAD 9. Ischemic heart disease, acute coronary syndrome 10. Anticoagulants and fibrinolytics, venous thromboembolism
Unit III	17	Cardiovascular (cont'd)

		1. Antiarrhythmics and management of tach- and bradyarrhythmias 2. Atrial fibrillation and flutter 3. Shock - inotropes and vasopressors 4. Heart failure Pulmonology 5. COPD 6. Asthma 7. Vaccines for respiratory conditions 8. Smoking cessation 9. Pneumonia 10. Upper respiratory tract conditions - rhinitis, allergies, infections 11. Misc airway agents

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

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

- ** Katzung B. *Basic and Clinical Pharmacology.* 14th ed., McGraw-Hill Education; 2018. ISBN13: 978-1259641152
- ** 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)
- Sanford guide – available as mobile app and online (https://www.sanfordguide.com); you should have already subscribed to this resource when learning microbiology in fall semester

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 class sessions is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements.

If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university withdrawal date or, after that date, receive an “F” grade.

Students who anticipate being absent for an entire week of a course should contact the instructor in advance for approval and make arrangements to complete the required coursework and/or alternative

assignments assigned at the discretion of the instructor. Acceptance of late work is at the discretion of the instructor and does not waive attendance requirements.

Refer to Academic Policies for additional detail.

1. You MUST attend:
    1. lectures and quizzes having completed pre-class reading assignments
    2. examinations on the date and time for which they are schedule
2. We expect
    3. active participation in all class activities
    4. completion of all class preparatory assignments prior to commencement of class
    5. respect for the class, peers and faculty
    6. 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, and quiz content will be in line with pre-class reading.

Written examinations - MSM 6200 will include three (3) written examinations worth up to 25% each of the overall course grade.

Grading

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

Quizzes	10%
Written examination I	20%
Written examination II	25%
Written examination III	25%
Course learning interaction	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 to 100	C = 73 to <77
A- = 90 to <93	C- = 70 to <73
B+ = 87 to <90	D+ = 67 to <70
B = 83 to <87	D = 63 to <67
B- = 80 to <83	D- = 60 to <63
C+ = 77 to <80	F = <60

Letter grades will NOT be rounded up; for example, a final grade of 89.89% is considered a B+

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. Faculty should follow and students may appeal using the procedure in the university Catalog. See Academic Policies in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

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)