



Department of Kinesiology
ATR6020: Pharmacology

Summer 2023

Meeting days: Online

Instructor: Nicole Cosby

Meeting location/times: Online

E-mail: ncosby@pointloma.edu

Term: Summer 2023 Quad 2

Class dates: 07/03 - 08/27

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 becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COURSE DESCRIPTION AND AIM

This course will provide an overview of drug classifications and medical-legal aspects of therapeutic and pharmacological treatments.

This course provides an in-depth study and eventual mastery of the knowledge and skills you will need as a health professional to utilize the appropriate OTC and prescription medication to treat pain, inflammation and other illnesses and disorders. Students will gain a working knowledge of pharmacological principles in athletic training:

- OTC's
- Indication/contraindication
- Side effects of drugs
- Prescription drugs
- Pharmacology of drugs

To be successful in this course, students must synthesize the information presented in the lecture and laboratory and apply it to the clinical setting. Specifically, this means that studying for quizzes and tests should involve reviewing and integrating the essential ideas contained in both the lectures and the textbook. Where possible, we will do

activities in class or have study sessions to improve your retention. Graded assignments (e.g., tests, quizzes, assessment outlines and review of literature paper) will be used to help students identify, recall, synthesize and apply the key concepts in therapeutic modalities and pharmacology.

INSTITUTIONAL LEARNING OUTCOMES

1. **Learning, Informed by our Faith in Christ**
Students will acquire knowledge of human cultures and the physical and natural world while developing skills and habits of the mind that foster lifelong learning.
2. **Growing, In a Christ-Centered Faith Community**
Students will develop a deeper and more informed understanding of others as they negotiate complex professional, environmental and social contexts.
3. **Serving, In a Context of Christian Faith**
Students will serve locally and/or globally in vocational and social settings.

CAATE STANDARDS COVERED IN THIS COURSE

| | |
|----|---|
| 75 | Educate patients regarding appropriate pharmacological agents for the management of their condition, including indications, contraindications, dosing, interactions, and adverse reactions. |
| 76 | Administer medications or other therapeutic agents by the appropriate route of administration upon the order of a physician or other provider with legal prescribing authority. |
| 84 | Educate clients/patients about the effects, participation consequences, and risks of misuse and abuse of alcohol, tobacco, performance-enhancing drugs/substances, and over-the-c |

PROGRAM LEARNING OUTCOMES (PLO)

1. To prepare students to demonstrate competency in interpreting evidence-based research and improving clinical standards and practice through clinical question development and research methodology
2. To prepare students to develop expertise in the athletic training domains through an integrative experiential clinical model
3. To equip students with appropriate knowledge and educational foundation required for an entry-level Certified Athletic Trainer
4. To prepare students to establish and understand the importance of inter-professional relationships, while collaborating with other health care professionals to become effective communicators

- To prepare students to demonstrate preparation, knowledge and skill in the delivery of comprehensive health care to a diverse set of patients with musculoskeletal injuries and conditions and illnesses in a distinctly moral and ethical manner, integrating Christian faith with clinical practice.

COURSE LEARNING OUTCOMES (CLO)

Upon completing this course, you will be able to:

| Course Learning Outcome | Program Learning Outcome(s) | CAATE Standard(s) |
|--|-----------------------------|-------------------|
| Identify prescription drugs and common uses | 2, 3 | 74, 75, 84 |
| Recognize common effects, interactions, and side-effects of drugs | 2, 3 | 74, 75 |
| Recognize the legal aspects implicated with drugs and therapy | 2, 3 | 74, 75 |
| Identify the role of the FDA in drugs and regulated substances | 2, 3 | 75 |
| Recognize proper dosing, storing, and dispensing of drug therapies | 2, 3 | 74 |
| Explain how participation in sport might alter drug efficacy | 2, 3 | 74 |

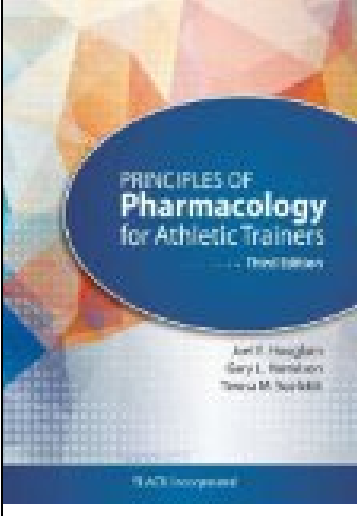
CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 2 unit class delivered over 8 weeks. Specific details about how the class meets the credit hour requirement can be provided upon request.

REQUIRED TEXT & RECOMMENDED RESOURCES

Textbook:

| | Title | Principles of Pharmacology for Athletic Trainers (3rd Edition) |
|--|-------|---|
| | | |

| | | |
|---|-------------------------|---|
|  | Author | J. Houghlum, G. Harrelson & T. Seefeldt |
| | ISBN | 978-0-8036-4029-0 |
| | Publisher | FA Davis |
| | Publication Date | 2016 |

Websites:

- [Center for Disease Control](#)
- [Drug Free Sport](#)
- [Food and Drug Administration](#)
- [MEDLINEplus website](#)

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. All supplemental materials posted on this course site (including articles, book excerpts, or other documents) are provided for your personal academic use. These materials may be protected by copyright law and should not be duplicated or distributed without permission of the copyright owner.

ASSESSMENT AND GRADING

Your grades will be posted in the Canvas gradebook no later than midnight on Tuesday of each week beginning in Week Two of this course. It is important to read the feedback provided in the gradebook as these comments are intended to help you improve your work. Final grades will be posted within ten days of the end of the class. Multiple measures of evaluation are used in the course, allowing students opportunities to demonstrate their learning in more than one way, and giving consideration to individual learning styles. Course components that will be evaluated include:

| Category | Description | Percentage of Grade |
|---------------|--|---------------------|
| Participation | Attendance and active participation are required for fully online course. The expectation is that you are turning assignments in on time and participating in discussions. | 15% |

| | | |
|-------------|--|-----|
| Discussions | Students will participate in weekly discussions about the week's content and topics. | 20% |
| Assignments | Students will need to submit assignments including case studies and discussions not classified as video lectures. Some assignments will involve collaboration with a group. | 20% |
| Quizzes | Students will complete a quiz at the end of each week to demonstrate comprehension of that week's content. Some weeks, students will also complete graded lessons containing brief quiz questions. | 40% |
| Surveys | Students will complete surveys throughout the semester that include course evaluations and group evaluations. | 5% |

| Standard Grade Scale Based on Percentage of Points Earned | | | | |
|---|----------|----------|----------|--------|
| A | B | C | D | F |
| A 93-100 | B+ 87-89 | C+ 77-79 | D+ 67-69 | F ≤ 59 |
| A- 90-92 | B 83-86 | C 73-76 | D 63-66 | |
| | B- 80-82 | C- 70-72 | D- 60-62 | |

Students must complete the required program hours in the major (program) from Point Loma Nazarene University with a minimum grade of “C” in each course and an overall 2.00-grade point average.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all **synchronous** class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions (virtual or face-to-face), 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 drop date or, after that date, receive the appropriate grade for their work and participation. In some courses, a portion of the credit hour content will be delivered **asynchronously** and attendance will be determined by submitting the assignments by the posted due dates. See [Academic Policies](#) in the Graduate and Professional Studies Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

Asynchronous Attendance/Participation Definition

A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

Note: The above attendance and participation information is required on all syllabi. Additional details aligned to your specific course format are optional and included below. Please delete all sections below that are not applicable to your course.

Note: Fully online courses (synchronous or asynchronous)

Students taking online courses are expected to attend each week of the course. Attendance is defined as participating in an academic activity within the online classroom which includes posting in a graded activity in the course. (Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.)

Students who do not attend at least once in any 3 consecutive days will be issued an attendance warning. Students who do not attend at least once in any 7 consecutive days will be dropped from the course retroactive to the last date of recorded attendance.

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.

STATE AUTHORIZATION (⊗ FOR FULLY ONLINE COURSES ONLY)

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map using the below link to view which states allow online (distance education) outside of California. <https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures>

INCOMPLETE AND LATE ASSIGNMENTS

All assignments are to be submitted by the due dates posted. There will be a 10% reduction of possible points for each day an assignment is late. If missing assignments result in the your failure to meet learning outcomes, this instructor may give up to a letter grade reduction on the final grade in addition to the loss of points for missing work. No assignments will be accepted after midnight on Sunday night, the last day of class.

While there are due dates for weekly assignments, you are welcome to post your work earlier in the week. In our discussions, late work means that others may not have the opportunity to respond to your comments. It also means that you will not have the benefit of as much interaction with other students as you will have if your assignment is

posted on time. If you know you will be away on the day your assignment is due, please post your work before you leave.

Assignments will be considered late if posted after midnight Pacific Standard Time on the day they are due.

PLNU SPIRITUAL CARE

Balboa Campus:

PLNU strives to be a place where you grow as whole persons. To this end we provide resources for our graduate students to encounter God and grow in their Christian faith. At the Balboa campus we have an onsite chaplain, Rev. Kevin Portillo who is available during class break times across the week. If you have questions, desire to meet with Rev. Portillo or prayer requests you can contact him directly at KevinPortillo@pointloma.edu.

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.

ACADEMIC HONESTY

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 the [Academic Honesty Policy](#) in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY⊕

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. 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 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

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 and/or if they do not wish to utilize some or all of the elements of their AP in that course.

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.

SEXUAL MISCONDUCT AND DISCRIMINATION

Point Loma Nazarene University faculty are committed to helping create a safe learning environment for all students. If you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that help and support are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, it is required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu or find a list of campus pastors at pointloma.edu/title-ix

COURSE MODALITY DEFINITIONS

1. **In-Person:** Course meetings are face-to-face with no more than 25% online delivery.
2. **Online:** Coursework is completed 100% online and asynchronously.
3. **Online Synchronous:** Coursework is completed 100% online with required weekly online class meetings.
4. **Hybrid:** Courses that meet face-to-face with required online components.

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USE OF TECHNOLOGY

In order to be successful in the online or hybrid environment, you'll need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](#) information. Additionally, students are required to have headphone speakers, microphone, or webcams compatible with their computer available to use. Please note that any course with online proctored exams requires a computer with a camera (tablets are not compatible) to complete exams online.

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

SPIRITUAL CARE

PLNU strives to be a place where you grow as a whole person. To this end, we provide resources for our Graduate students to encounter God and grow in their Christian faith. At the Balboa Regional Center, College of Health and Sciences, Rev. Kevin Portillo, M.Div. serves as Graduate Chaplain. If you have questions, have a desire to meet, or share a prayer request with Rev. Portillo, you can contact him directly at kevinportillo@pointloma.edu.

ACTIVE LEARNING AND EVIDENCE-BASED MEDICINE

Your active participation in this class will be required. You will be responsible for your own learning by reviewing class material before and after class. I will guide you in this process; however, in the end, the onus of learning will be your responsibility. **Become intrinsically motivated to improve yourself and your understanding of prescription and OTC medication and application of;** if you do this you will succeed every time.

Here are some KEYS to success:

- EFFORT (Work hard)

- APPROACH (Work smart)
- ATTITUDE (Think positively)

Evidence-based medicine (EBM) is the integration of clinically relevant research, clinical skills and experience, and patient preferences and values (Sackett et al 2000). The increased awareness **and focus on the practice of Evidence-Based Medicine comes from our daily need for valid information about diagnosis, prognosis, therapy, and prevention.** We want to ask local questions about the effectiveness of therapeutic modalities and design ways to find answers. The EBM portion of this course is **designed so students can explore therapeutic modalities commonly used in the athletic training setting** and determine what evidence is available to support their current uses.

COURSE REQUIREMENTS

**Please Note: The PLNU Catalog states that 1 semester unit represents an hour of class per week, and 2 hours of preparation are normal for each hour of class. Therefore, if you spend about 6 hrs per week outside of class in preparation, you will significantly increase your chances of doing well!*

| Date | Topic |
|--------|--|
| Week 1 | <ul style="list-style-type: none"> • Chapter 1 - Introduction to Pharmacology <ul style="list-style-type: none"> ◦ Chapter 1 PowerPoint Slides • Chapter 4 - Medication Management in an Athletic Training Facility <ul style="list-style-type: none"> ◦ Chapter 4 PowerPoint Slides |
| Week 2 | <ul style="list-style-type: none"> • Chapter 2 - Pharmacokinetic Principles <ul style="list-style-type: none"> ◦ Chapter 2 PowerPoint Slides • Chapter 3 - Pharmacodynamic Principles <ul style="list-style-type: none"> ◦ Chapter 3 PowerPoint Slides |
| Week 3 | <ul style="list-style-type: none"> • Chapter 5 - Drugs for Treating Infection <ul style="list-style-type: none"> ◦ Chapter 5 PowerPoint Slides |
| Week 4 | <ul style="list-style-type: none"> • Chapter 6 - Drugs for Treating Inflammation <ul style="list-style-type: none"> ◦ Chapter 6 PowerPoint Slides (Part 1) ◦ Chapter 6 PowerPoint Slides (Part 2) |
| Week 5 | <ul style="list-style-type: none"> • Chapter 11 - Drugs for Treating Gastrointestinal Disorders <ul style="list-style-type: none"> ◦ Chapter 11 PowerPoint Slides |
| Week 6 | <ul style="list-style-type: none"> • Chapter 7 - Drugs for Treating Pain <ul style="list-style-type: none"> ◦ Chapter 7 PowerPoint Slides |

| | |
|---------------|---|
| | <ul style="list-style-type: none">• Chapter 10 - Drugs for Treating Colds and Allergies<ul style="list-style-type: none">◦ Chapter 10 PowerPoint Slides |
| Week 7 | <ul style="list-style-type: none">• Chapter 14 - Drugs for Treating Diabetes Mellitus<ul style="list-style-type: none">◦ Chapter 14 PowerPoint Slides |
| Week 8 | <ul style="list-style-type: none">• Chapter 9 - Drugs for Treating Asthma<ul style="list-style-type: none">◦ Chapter 9 PowerPoint Slides |