



Department of Kinesiology

ATR 4020: Pharmacology

1 Unit

FALL 2019

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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

In the process, you will develop an emerging mastery of the *Educational Competencies* of the NATA's Educational Council (See Appendix D for details on these Competencies in preparation for the Board of Certification Examination for Athletic Trainers)

To be successful in this course, students must synthesize 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.

STUDENT LEARNING OUTCOMES

Upon completing this course, you will be able to:

1. Identify situations in which athletes may require therapeutic medication for treating certain symptoms associated with illness and injury.
2. Differentiate between the indications, contraindications, precautions, and adverse reactions of medications commonly used to treat athletes.
3. Analyze and defend the general therapeutic strategy, including drug categories used for treatment, desired treatment outcomes, and typical duration of treatment for various diseases and conditions.
4. Discuss the common methods used to administer medication and their advantages and disadvantages.
5. Outline the concepts related to bioavailability, half-life, and bioequivalence (including the relationship between generic and brand name drugs) and their relevance to the patient, the choice of medication, and the dosing schedule.
6. Review, critique and adhere to a policies-and-procedures manual as it relates to medications.
7. Understand and formulate the laws, regulations, and procedures that govern storage, transportation, dispensation, and recording prescription and nonprescription medications.
8. Detect the signs of drug abuse/dependency and explain the proper approach to intervention and referral.

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 1 unit class delivered over 7 weeks.

Example

It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their course work. The time expectations for this course are shown below:

Distribution of Credit Hours

ASSIGNMENTS	TOTAL HOURS
Reading & Videos	12
Online Participation in forums, groups, etc	8
Web assignments	5
Journals	2
Group Projects	6.5
Exams & Quizzes	4
Total	37.5

REQUIRED TEXTS AND RECOMMENDED RESOURCES

Textbook:

	Title	Therapeutic Medications for Athletic Trainers (2nd edition)
	Author	Micheal Koester
	ISBN	978-0-7360-6877-2
	Publisher	Human Kinetics
	Publication Date	August 3, 2007

Websites:

- [Drug Free Sport \(Links to an external site.\)](#)
- [Food and Drug Administration \(Links to an external site.\)](#)
- [\(Links to an external site.\)MEDLINEplus website \(Links to an external site.\)](#)

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STATE AUTHORIZATION

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>

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:

Discussion Boards:

Students will participate in online discussions with classmates to expand upon the topics raised during the week from the videos and readings. You will have the opportunity, via the Discussion Boards, to interact with your fellow students and with me and to discuss topics of interest to you. You are invited to become engaged with others in this class as you debate issues raised in the questions, examine and analyze case studies related to the content, and respond to the comments of your classmates.

For each Discussion Board topic, you will be required to post one response of your own and to post one reply to a classmate's response. Thus, you must respond at least **twice** to each Discussion Board topic on canvas. Your response to a classmate's post may include one or more of the following:

- Ask a probing question
- Share an insight from having read your classmate's post
- Offer and provide evidence to support an opinion
- Validate a classmate's idea with reference to your own experiences
- Make a suggestion for improvement
- Expand on your classmate's post.

To **receive full credit for your participation**, your posts **MUST** also be **MADE IN A TIMELY WAY**. Specifically, this means that you must post a response during the week after we first encounter a new chapter or topic. **Discussions represent 30% of the overall course grade.**

Web Assignments:

There will be two assignments where you will be given specific organization to look up on the web with scenarios included that you will complete. **Web assignments represent 12% of the overall course grade.**

NATA Position Statement Discussion Questions:

You will be assigned three NATA position statements to read and complete discussion questions related to each article. **Discussion questions will represent of the overall grade**

Journal Article Review:

You will be asked to find an article on specific topics. The article will contain important findings or conclusions relative to current topics discussed in lecture. The reviews should be 1-2 pages in length (double spaced, 12 pt. font, Times New Roman or equivalent). Journal article reviews should include the following information:

<ul style="list-style-type: none">• Purpose• Hypothesis• Purpose• Methods• Results• Conclusions	<ul style="list-style-type: none">• what were the significant findings and implications• Strengths and weakness of the article• Would you recommend this article
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Journals represent 9% of overall course grade

Pharmacology project:

With a partner you will be assigned specific over-the-counter medications (OTC). You will compare and contrast brand name and store name medications for each drug. A detailed guideline will be provided. **Pharmacology project represents 8% of overall course grade.**

Group Project - Service Announcement:

Students will be assigned to groups and given a specific prescription or over-the-counter analgesic medication. After reading the article by the FDA "A guide to safe use of pain medication", students will create a service announcement video on safety guidelines for their particular medication. **The video should include:** How that medication works as an analgesic; dosage; Indications/contraindications, active ingredients and misuse/abuse of drug. **Resources:** Smart Phone App - Epocrates, Website - www.fda.gov. **Submission of assignment:** Video needs to be uploaded onto youtube and the link sent to the professor. **Group project represents 8% of overall course grade.**

Quizzes

The quizzes will be designed to test the students' comprehension of the material presented via lectures and independent studying of the textbook. Questions will include: multiple choice, fill in the blank, matching, true/false, short answer, surveys, polls, and essay formats. **Quizzes represent 26% of overall course grade.**

Final Exam

The final exam will be cumulative and summative. Information from the entire semester will be tested. **Final exam represents 15% of overall course grade.**

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	

ATTENDANCE AND PARTICIPATION

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in 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. See [Academic Policies](#) in the Undergraduate Academic Catalog.

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.

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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 [Academic Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

ACADEMIC ACCOMMODATIONS

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[Links to an external site.](#) 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.

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. You'll

find faith integration activities throughout this course. In addition, there are resources for your Christian faith journey available on the [Graduate Student Life](#) webpage.

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.

USE OF TECHNOLOGY

In order to be successful in the online environment, you'll need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](#) information located in the [Important Course Information](#) Module.

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

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!*