

[Download Course Syllabus Here](#)

 POINT ¹⁹  LOMA ⁰² NAZARENE UNIVERSITY	Department of Kinesiology College of Health Science KIN 3040-2 The Physiology of Exercise 3 units
Fall 2026	

Meeting days: M, W, F	Sophie Mirth Adjunct Professor of Kinesiology
Meeting times: 8:30 - 9:25am	Phone: 619-849-2918
Meeting location: Kinesiology 2	Email: smirth@pointloma.edu
Final Exam: Wednesday Dec 16th at 7:30 AM	Office location and hours:

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

A study of the effects of vigorous physical activity upon the systems of the body; development of an understanding of factors which constitute training of the human body for high levels of health and physical performance.

COURSE LEARNING OUTCOMES

After completion of this course you will be able to:

1. Demonstrate a working knowledge of the structure, function, and physiological concepts surrounding exercising skeletal muscle.
2. Demonstrate a working knowledge of the essentials of human metabolism and bioenergetics with a special focus on how they relate to physical activity.
3. Demonstrate a working knowledge of how the endocrine system functions to control fuel utilization, red blood cell formation, fluid and electrolyte balance, and drive skeletal muscle adaptations to resistance exercise.
4. Demonstrate the skills necessary to measure and compute energy expenditure.
5. Demonstrate a working knowledge of physical fatigue.
6. Demonstrate a working knowledge of the physiology of the cardiovascular system with special emphasis on how it works under conditions of vigorous physical activity.
7. Demonstrate a working knowledge of the physiology of the respiratory system with special emphasis on how it works under conditions of vigorous physical activity.
8. Demonstrate a working knowledge of the muscular, cardiovascular, and respiratory acute and chronic responses to physical activity.
9. Demonstrate a working knowledge of the general principles of endurance and resistance exercise training.
10. Describe the adaptations to resistance and endurance exercise training.
11. Manipulate a resistance training program to invoke different physiological responses.

12. Demonstrate a working knowledge of the effects of exercise in heat and altitude extremes.
13. Demonstrate a working knowledge of the immense health benefits of physical activity.
14. Describe the pathogenesis of type 2 diabetes and cardiovascular disease.
15. Describe the physiological effects of exercise on the pathogenesis of cardiovascular disease and type 2 diabetes.

Core Competencies Assessed in this course

1. Quantitative literacy is assessed with the “VO2max lab worksheet” (see assignments below)
2. Critical Thinking is assessed with the “Final Concept Map Paper” (see assignments below)
3. Information Literacy “Final Concept Map Paper” (see assignments below)
4. Writing Communication “Final Concept Map Paper” (see assignments below)

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

Students are responsible for having the required course textbooks prior to the first day of class.

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.

Note:

1. **Textbook:** Kenney WL, Wilmore JH, and Costill DL. Physiology of Sport and Exercise. Human Kinetics Publishing Co., Champaign, IL, **8th Edition**, 2022.

COURSE 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 3 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirement can be provided upon request. (Based on 37.5 hours of student engagement per credit hour.)

LEARNING OPPORTUNITIES AND ASSIGNMENTS

1. **Quizzes:** Quizzes will be administered via canvas. The quiz will be on the required reading for the day. Quizzes will be available on canvas 2 days before the quiz. Students are to complete the quiz at home while reading and record their answers on a sheet of paper. Students will have the first 5 minutes of class to “turn in” their quizzes via canvas on the day of the quiz. There will be 11 quizzes given over the course of the semester and the lowest quiz score will be dropped. **This will take the place of retaking quizzes for unexcused absences. If you are late you get a 0 on the quiz.**
2. **Team Based Learning (TBL):** TBL is an innovative teaching method that has proven to improve learning. You will all be placed into teams at the beginning of the semester. We will have 3 TBL days in which you will study on your own before class, take a short quiz by yourself (iRAT) on that material when you arrive to class, and then take the same quiz with your team (tRAT). We will follow up for the rest of the class and the following classes with some exercises based on that material that you just learned. The gallery walk days will also be part of the team based learning
3. **Physiology in the “reel” world:** each student will complete a 2 part physiology in the real world assignment. You will analyze an instagram influencer’s reel of a popular exercise intervention or supplement being used right now to enhance performance, improve health, lose weight, or change physiology in a positive way somehow. Then you will do your own “anti-influencer” reel in response. See assignment instructions for more details.
4. **Final Concept Map:** This will be a more detailed concept map explaining in detail the effects of prolonged (3 months at least) endurance exercise training on one of the following: atherosclerosis or blood glucose control. The map will be accompanied with a research paper. See assignment instructions for more details.
5. **Lab Reports:** There will be a short lab report due 1 week after each laboratory experience in the class. Most labs will consist of volunteers from class participating in the exercise testing then each student individually completing

the report. You will be given one chance to correct and return your first lab report after the first grading.

6. **Lecture Exams:** The exams will be designed to test the students' comprehension of the material presented via lectures and independent studying of the textbook. Questions will be all short answer format.
7. **Final Exam:** The final exam will be worth 50 points. The cumulative portion will be in a "Major Concepts" format. Information from the entire semester will be tested. The Major Concepts format means that student will only be tested on the large and most important concepts of the course

COURSE POINTS AND GRADING

Item	Name	Points	Total Points	% of Grade
1	Quizzes	11 @ 10 pts (drop lowest)	100	14.4
2	Exams	3 @ 75 pts	225	32.5
3	Physiology in the "reel" world	2 @ 25 pts	50	7.2
4	TBL: iRATs/tRATs	3 @ 20 pts	60	8.7
5	TBL: Gallery walks	6 @ 5 pts	30	4.3
6	TBL: Peer Evals	1 @ 10 pts	10	1.4
7	TBL: Kahoots	3 @ 5 pts	15	2.2
8	Lab Reports	2 @ 25 pts	50	7.2
9	Final Concept Map	1 @ 100 pts	100	14.4
10	Final Exam	1 @ 50 pts	50	7.2
11	Honorlock Practice	1 @ 3 pts	3	0.4
TBL Total			115	16.6
Exams Total			275	39.7
Total Points			693	

Your most up to date grade in the class will always be available for your viewing on canvas. As soon as I finish grading an assignment or exam I will post it to canvas.

A 93.5-100	B+ 87.5-89.4	C+ 77.5-79.4	D+ 67.5-69.4	F Less than 59.4
A- 89.5-93.4	B 83.5-87.4	C 73.5-77.4	D 63.5-67.4	
	B- 79.5-83.4	C- 69.5-73.4	D- 59.5-63.4	

Course and PLNU Policies:

FINAL EXAMINATION POLICY

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the [Traditional Undergraduate Records: Final Exam Schedules](#) site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for one of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

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 on [State Authorization](#) to view which states allow online (distance education) outside of California.

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. Incompletes will only be assigned in extremely unusual circumstances. An assignment will be docked 20% for being up to 2 weeks late then 40% if later than 2 weeks late.

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 RECORDING NOTIFICATION

In order to enhance the learning experience, please be advised that this course may be recorded by the professor for educational purposes, and access to these recordings will be limited to enrolled students and authorized personnel.

Note that all recordings are subject to copyright protection. Any unauthorized distribution or publication of these recordings without written approval from the University (refer to the Dean) is strictly prohibited.

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

PLNU Academic Behavior PolicyⓈ

Both faculty and students at Point Loma Nazarene University have the right to expect a safe and ordered environment for learning. Students are expected to take the initiative to learn and conduct themselves in a mature and civil manner in the classroom environment. Any student behavior that is disruptive or threatening is a serious affront to Point Loma Nazarene University as a learning community. Students who fail to adhere to these behavioral standards may be subject to disciplinary action, including removal from class or further university sanctions. For a full definition of disruptive behavior, response procedures, and the appeal process, please consult the [Academic Behavior Policy](#) in the [University Catalog](#).

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, [by email](#) or phone at 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 approved 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 approved accommodations in that particular course. Accommodations are not retroactive; as such, 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-related need should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. In accordance with ADA, accommodations cannot constitute a fundamental alteration to course outcomes; therefore, planning ahead is vital in establishing appropriate accommodations for equal access to this course. 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 eligibility 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.

SEXUAL MISCONDUCT AND DISCRIMINATION

In support of a safe learning environment, 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 accommodations and resources are available through the [Title IX Office](#). Please be aware that under Title IX of the Education Amendments of 1972, faculty and staff are 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](#) or [consult the list of campus pastors](#).

If you (or someone you know) has experienced other forms of discrimination or bias, you can find more information on reporting and resources via the [Nondiscrimination and Anti-harassment Policy](#).

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. 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.

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.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If you have questions, a desire to meet with the chaplain or have prayer requests you can contact your professor or the [Office of Spiritual Life and Formation](#).

CONTENT WARNING

I acknowledge that each of you comes to PLNU with your own unique life experiences. This contributes to the way you perceive various types of information. In [class name], all of the class content, including that which may be intellectually or emotionally challenging, has been intentionally curated to achieve the learning goals for this course. The decision to include such material is not taken lightly. These topics include [list topics]. If you encounter a topic that is intellectually challenging for you, it can manifest in feelings of discomfort and upset. In response, I encourage you to come talk to me or your friends or family about it. Class topics are discussed for the sole purpose of expanding your intellectual engagement in the area of [subject/major], and I will support you throughout your learning in this course.

Artificial Intelligence (AI) Policy

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro, GrammarlyGo, Perplexity, etc.) to generate ideas, as a learning tool, or in some cases generate portions of work you will submit. I will specify in individual assignments what constitutes appropriate use of AI for that assignment. Please use this [Purdue resource](#) to guide your citations when using AI.

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 nor allowable) 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.

LOMABOOKS INSTRUCTIONS FOR STUDENTS

For both digital and print materials, please add these student instructions to your syllabus and Canvas Course. Prior to the start of class, the PLNU Bookstore will also be sharing student instructions in a standalone email on how to access their content.

This course is part of our course material delivery program, [LomaBooks](#). The bookstore will provide each student with a convenient package containing all required physical materials; all digitally delivered materials will be integrated into Canvas.

You should have received an email from the bookstore confirming the list of materials that will be provided for each of your courses and asking you to select how you would like to receive any printed components (in-store pick up or home delivery). If you have not done so already, please confirm your fulfillment preference so the bookstore can prepare your [LomaBooks](#) materials.