

[Download Course Syllabus Here](#)

 <p><b>POINT LOMA</b> NAZARENE UNIVERSITY</p>	<p>Department of Kinesiology and Health Sciences College of Health Science KIN 3002 Clinical Exercise Testing and Prescription 3 units</p>
<p>Spring 2026</p>	

<p><b>Meeting days:</b> T/R</p>	<p><b>Instructor:</b> Sophie Mirth</p>
<p><b>Meeting times:</b> 1:30 - 2:45 pm</p>	<p><b>Phone:</b> 619-849-2918</p>
<p><b>Meeting location:</b> KIN 1</p>	<p><b>Email:</b> smirth@pointloma.edu</p>
<p><b>Final Exam:</b> Tuesday, May 5 1:30pm</p>	<p><b>Office location and hours:</b> By appointment</p>

## 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**

In-depth study of the principles and techniques used to assess health and physical fitness and to design and prescribe exercise programs and physical activities. Students will acquire the knowledge and skills necessary to address the fitness needs of apparently healthy populations, those with medical considerations, and athletic populations.

### **Program and Course Learning Outcomes**

Upon completion of this course, the student will:

Have the opportunity for practical experiences using field and laboratory tests for the appraisal of physical fitness status and the design of individualized exercise programs in the following areas:

- A) health screening & risk stratification
- B) cardiorespiratory fitness
- C) muscular strength & endurance
- D) body composition & weight management
- E) clinical exercise physiology & special population considerations

Analyze assessment results in the context of normal and pathological responses.  
Apply ACSM standards to your own life- activity assessment, fitness journaling.

### **Prerequisites:**

Recommended Junior/Senior Standing

### **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.

Title: ACSM's Resources for The Exercise Physiologist  
Author: ACSM: American College of Sports Medicine  
ISBN-13: 978-1496329264  
Publisher: Lippincott, Williams, Wilkens  
Publication Date: 2017

Supplemental  
Title: ACSM's Guidelines for Testing and Prescription  
Author: ACSM: American College of Sports Medicine  
ISBN: 9781975150181  
Publisher: Woulters Kluwer  
Publication Date: 2021

### Email

Email will be the **MAIN** form of communication used by the professor outside of class. Students are expected to check their email at least **ONCE A DAY**. If you know of issues with your @pointloma.edu account please notify the professor immediately.

### Assessment and Grading

Grades will be based on the following:

#### Course Grading

A	B	C	D	F
A 94-100	B+ 88-89	C+ 78-79	D+ 68-69	F Less than 59
A- 90-93	B 84-87	C 74-77	D 64-67	
	B- 80-83	C- 70-73	D- 60-63	

### 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 [Class 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.

### **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 and assessments posted in Canvas. Late work (assignments, article reviews) will be accepted up to **2 days** past the posted deadlines with the following automatic deductions (20% 1 day, 30% 2 days). Deductions are made prior to assessment of other elements. Incompletes will only be assigned in extremely unusual circumstances. *No Quizzes will be accepted late.*

### **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.

### **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 distance education outside of California.

### **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.

## **Artificial Intelligence (AI) Policy**

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc) to **generate ideas** (i.e. brainstorming), but **you are not** allowed to use AI tools to generate content (assignment text, video, audio, images) that will end up in any work submitted to be graded for this course. If you have any doubts about using AI, please gain permission from the instructor.

## **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](mailto: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.

### **Language and Belonging**

Point Loma Nazarene University faculty are committed to helping create a safe and hospitable learning environment for all students. As Christian scholars we are keenly aware of the power of language and believe in treating others with dignity. As such, it is important that our language be equitable, inclusive, and prejudice free. Inclusive/Bias-free language is the standard outlined by all major academic style guides, including MLA, APA, and Chicago, and it is the expected norm in university-level work. Good writing and speaking do not use unsubstantiated or irrelevant generalizations about personal qualities such as age, disability, economic class, ethnicity, marital status, parentage, political or religious beliefs, race, gender, sex, or sexual orientation. Inclusive language also avoids using stereotypes or terminology that demeans persons or groups based on age, disability, class, ethnicity, gender, race, language, or national origin. Respectful use of language is particularly important when referring to those outside of the religious and lifestyle commitments of those in the PLNU community. By working toward precision and clarity of language, we mark ourselves as serious and respectful scholars, and we model the Christ-like quality of hospitality.

If you (or someone you know) have experienced other forms of discrimination, you can find more information on reporting and resources at [www.pointloma.edu/nondiscrimination](http://www.pointloma.edu/nondiscrimination).

## **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 at [pointloma.edu/Title-IX](http://pointloma.edu/Title-IX). 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 at [counselingservices@pointloma.edu](mailto:counselingservices@pointloma.edu) or find a list of campus pastors at [pointloma.edu/title-ix](http://pointloma.edu/title-ix).

If you (or someone you know) have experienced other forms of discrimination or bias, you can find more information on reporting and resources at [www.pointloma.edu/bias](http://www.pointloma.edu/bias)

## **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 drop date or, after that date, receive an “F” grade.

## **PLNU Course Modality Definitions**

1. Online Courses: These are courses with class meetings where all instruction and interaction is fully online.
  - a. Synchronous Courses: At least one class meeting takes place at a designated time.
  - b. Asynchronous Courses: All class meetings are asynchronous.
2. Hybrid Courses: These are courses with class meetings that take place both in the classroom and online synchronously and/or asynchronously.
3. In-Person Courses: These are courses that meet in person with the instructor and students in a physical classroom setting. With approval by the area dean, this may

include up to 25% of qualified class interactions through a Learning Management System (such as Canvas).

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 Undergraduate Academic Catalog.

### **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.

### **Use of Technology**

#### **There will be a few asynchronous course meetings throughout the semester**

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**

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 materials.

For more information about **LomaBooks**, please go: [HERE](#)

### **Important Dates**

Sept 2nd - Classes Begin  
Sept 12th – Last day to add/drop semester classes  
Oct 23-24th – Fall Break  
Nov 26 - 28th - Thanksgiving Recess  
Dec 12th- Classes End  
Dec 15-19th – Final Examinations

**This course helps prepare students to sit for the ACSM Certified Personal Trainer or Certified Exercise Physiologist certification.**

### **Course Assignments**

#### **Article Review Assignments ( 30 points each)**

Throughout the course students will read, critique, and analyze multiple peer-reviewed journal articles about various measurement techniques in clinical exercise physiology and populations of importance to an exercise physiologist.

#### **Reading Quizzes (10 points each)**

Multiple quizzes will be given throughout the course. These will be administered in-class or on canvas. In-class quizzes will have individual and group components. These quizzes will cover required readings and asynchronous lecture material.

#### **Class Participation (50 points each)**

Multiple class sessions will require rich discussion, short oral presentations, and group discussion. You must be in attendance to earn class participation credit.

#### **Metabolic Practice Equations (30 points each)**

Students will complete a set of metabolic equations reflective of the ACSM fitness prescription calculations for: walking, running, and cycling.

### **Course Examinations**

Rev 12/16/25

**Exams (2 @ 50 points each)**

The exam will be designed to test the students' comprehension of the material presented via lectures and independent studying of the textbook and peer-reviewed articles. Questions will include: multiple choice, true/false, and short answer. Exam 1 and 2 will take place within class. Scantron will be required for each.

**Final Exam (100 points)**

Exam 3 will serve as the final exam for the course. This exam will be hosted via Canvas honor lock in class.

**Knowledge, Skills, and Abilities (KSAs) for students in Exercise Science ACSM  
Certified Health Fitness Specialist**

**KIN 3001: Fitness Assessment & Exercise prescription**

KSA#'s	KSA description
	<b>GENeRAL POPULATION/CORE:EXERCISE PHYSIOLOGY AND RELATED EXERCISE SCIENCE</b>
1.1.8	Knowledge of biomechanical principles that underlie performance of the following activities: walking, jogging, running, swimming, cycling, weight lifting, and carrying or moving objects.
1.1.9	Ability to describe the systems for the production of energy.
1.1.10	Knowledge of the role of aerobic and anaerobic energy systems in the performance of various physical activities.

1.1.14	Knowledge of the anatomic and physiologic adaptations associated with strength training.
1.1.15	Knowledge of the physiologic principles related to warm-up and cool-down.
1.1.16	Knowledge of the common theories of muscle fatigue and delayed onset muscle soreness (DOMS).
1.1.17	Knowledge of the physiologic adaptations that occur at rest and during submaximal and maximal exercise following chronic aerobic and anaerobic exercise training.
1.1.18	Knowledge of the differences in cardiorespiratory response to acute graded exercise between conditioned and unconditioned individuals.
1.1.28	Knowledge of and ability to describe the implications of ventilatory threshold (anaerobic threshold) as it relates to exercise training and cardiorespiratory assessment.
1.1.29	Knowledge of and ability to describe the physiologic adaptations of the pulmonary system that occur at rest and during submaximal and maximal exercise following chronic aerobic and anaerobic training.
1.1.34	Knowledge of and ability to describe the changes that occur in maturation from childhood to adulthood for the following: skeletal muscle, bone structure, reaction time, coordination, posture, heat and cold tolerance, maximal

	oxygen consumption, strength, flexibility, body composition, resting and maximal heart rate, and resting and maximal blood pressure.
1.1.35	Knowledge of the effect of the aging process on the musculoskeletal and cardiovascular structure and function at rest, during exercise, and during recovery.
1.1.36	Knowledge of the following terms: progressive resistance, isotonic/isometric, concentric, eccentric, atrophy, hyperplasia, hypertrophy, sets, repetitions, plyometrics, Valsalva maneuver.

1.1.37	Knowledge of and skill to demonstrate exercises designed to enhance muscular strength and/or endurance of specific major muscle groups.
1.1.38	Knowledge of and skill to demonstrate exercises for enhancing musculoskeletal flexibility.
1.1.42	Knowledge of the primary action and joint range of motion for each major muscle group.
1.1.43	Ability to locate the anatomic landmarks for palpation of peripheral pulses and blood pressures.

	<b>GENERAL POPULATION/CORE: PATHOPHYSIOLOGY AND RISK FACTORS</b>
1.2.1	Knowledge of the physiologic and metabolic responses to exercise associated with chronic disease (heart disease, hypertension, diabetes mellitus, and pulmonary disease).
1.2.6	Knowledge of the risk-factor thresholds for ACSM risk stratification, which includes genetic and lifestyle factors related to the development of CAD.
	<b>GENERAL POPULATION/CORE: HEALTH APPRAISAL, FITNESS AND CLINICAL EXERCISE TESTING</b>
1.3.1	Knowledge of and ability to discuss the physiologic basis of the major components of physical fitness: flexibility, cardiovascular fitness, muscular strength, muscular endurance, and body composition.
1.3.2	Knowledge of the value of the health/medical history.
1.3.3	Knowledge of the value of a medical clearance before exercise participation.
1.3.4	Knowledge of and the ability to perform risk stratification and its implications toward medical clearance before administration of an exercise test or participation in an exercise program.

1.3.6	Knowledge of the limitations of informed consent and medical clearance before exercise testing.
1.3.8	Skill in accurately measuring heart rate and blood pressure, and obtaining rating of perceived exertion (RPE) at rest  and during exercise according to established guidelines.
1.3.9	Skill in measuring skinfold sites, skeletal diameters, and girth measurements used for estimating body composition.
1.3.15	Ability to explain the purpose and procedures and perform the monitoring (heart rate, RPE, and blood pressure) of clients before, during, and after cardiorespiratory fitness testing.
1.3.16	Ability to instruct participants in the use of equipment and test procedures.
1.3.17	Ability to explain the purpose of testing, determine an appropriate submaximal or maximal protocol, and  perform an assessment of cardiovascular fitness on the treadmill or cycle ergometer.
	<b>GENERAL POPULATION/CORE: EXERCISE PRESCRIPTION AND PROGRAMMING</b>
1.7.6	Knowledge of the differences in the development of an exercise prescription for children, adolescents, and  older participants.

1.7.7	<p>Knowledge of and ability to describe the unique adaptations to exercise training in children, adolescents,</p> <p>and older participants with regard to strength, functional capacity, and motor skills.</p>
1.7.8	<p>Knowledge of common orthopedic and cardiovascular considerations for older participants and the ability</p> <p>to describe modifications in exercise prescription that are indicated.</p>

1.10.17	<p>Ability to identify the components that contribute to the maintenance of a safe environment, including</p> <p>equipment operation and maintenance, proper sanitation, safety and maintenance of exercise areas, and overall facility maintenance.</p>
1.10.18	<p>Knowledge of basic ergonomics to address daily activities that may cause musculoskeletal problems in the workplace and the ability to recommend exercises to alleviate symptoms caused by repetitive movements.</p>
	<p><b>GENERAL POPULATION/CORE:PROGRAM ADMINISTRATION, QUALITY ASSURANCE, AND OUTCOME ASSESSMENT</b></p>
1.11.1	<p>Knowledge of the Health Fitness Specialist's role in administration and program management within a</p> <p>health/fitness facility.</p>

1.11.2	<p>Knowledge of and the ability to use the documentation required when a client shows signs or symptoms during an exercise session and should be referred to a physician.</p>
1.11.8	<p>Ability to create and maintain records pertaining to participant exercise adherence, retention, and goal setting.</p>
<p><b>CARDIOVASCULAR: PATHOPHYSIOLOGY AND RISK FACTORS</b></p>	
2.2.1	<p>Knowledge of cardiovascular risk factors or conditions that may require consultation with medical personnel before testing or training, including inappropriate changes of resting or exercise heart rate and blood pressure, new onset discomfort in chest, neck, shoulder, or arm; changes in the pattern of discomfort during rest or exercise; fainting or dizzy spells; and claudication.</p>
2.2.2	<p>Knowledge of the pathophysiology of myocardial ischemia and infarction.</p>