

POINT LOMA NAZARENE UNIVERSITY
Department of Kinesiology
KIN340L Physiology of Exercise Lab
Fall 2019

Instructor: Kirsten Thornhill, MS
Office: Kinesiology Department
E-Mail: kthornhi@pointloma.edu
Time: R 4:30-6:25pm
Location: Rohr Science 195
Office Hours: By appointment

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.

Catalogue Description:

Practical experiences in assessing human physiological responses to exercise and training.

Learning Objectives

After successful completion of this course students will be able to:

- Demonstrate an understanding of muscle physiology by testing the basic principles (and analyzing the results) including: active and passive length-tension relationships, types of contractions (eccentric, concentric, isometric)
- Measure and interpret the results of the following tests: resting energy expenditure, submaximal exercise test, and maximal exercise test.
- Calibrate and operate the following pieces of laboratory equipment: metabolic measurement system, Monark mechanically and electronically braked cycle ergometers, and a motor driven treadmill.
- Measure and interpret the results of both anaerobic power and capacity testing.
- Measure and interpret the results of an anaerobic/lactate threshold test.

- Apply the results of maximal oxygen uptake and anaerobic threshold testing to the prescription of continuous vigorous exercise as well as high-intensity interval training.
- Demonstrate mastery of graphing data in Microsoft excel.

Educational Opportunities

- **Hands on Laboratory Experiences:** Each week in lab you will either be exercising in some way or conducting physiological measurements on a lab partner while he/she is exercising. This will be your primary means of learning in the course. Take advantage of the wonderful equipment available to you and the laboratory experiences designed by your instructor.
- **Lab Worksheets and Integration Questions:** After completion of the laboratory activities during each lab section you will have some questions to answer that will guide you in analyzing and interpreting the physiological data that you collected during lab. The questions will also be designed to invite you to apply your individual data collected in the lab and the interpretations that you arrived at to a broader scale that may be applicable to your future careers in an exercise and sports science or allied health field.
- **Lab Practicals:** There will be two lab practicals in this course. Students will sign up for individual time slots and be asked to conduct laboratory measures that were learned in lab. Students will be graded on their ability to autonomously conduct the lab procedures as taught by the lab instructor. Students will also be asked to serve as subjects for their classmates to conduct the testing on.

Course Grading:

Learning Tool	Number and Point Value of Each	Points
Worksheets/Questions	4 @ 25 points and 4 @ 50 points	300
Practical	1 @ 100 points	100
Final Exam	1 @ 150 points	150
Total		550

Grade	Percentage Points
A	93-100
A	90-92

B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	0-59

Course Guidelines

- **Attendance:** Students are required to attend class every class period unless they notify the professor in advance. Since class only meets once per week missing class will drastically put you behind. Please make all efforts to come to every lab. If you miss a lab and are unable to complete the worksheet because of the lab missed you will receive a 0 on that lab. If the missed lab is one that you can complete even though you missed the lab (multiple meetings for the same lab, etc) session you will be docked 40% on your grade of the lab report.
- **Tardiness:** If you are late to lab (>5 min) you will be deducted 10% of your grade for the current lab write up.
- **Late Work:** Assignments not turned in the day they are due will immediately be docked 20% and no opportunity for “fixed work” will be given. If the assignment is over two weeks late students will receive a 0 for that lab.
- **Fixed work:** You will have one chance to correct your lab reports to still receive full credit. Corrected reports are due the week after they were returned. Again, assignments turned in late will not be eligible for this correction opportunity.
- **Make-Ups:** No make-up labs will be allowed.
- **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 on a daily basis. If you know of issues with your @pointloma.edu account please notify the professor immediately.

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.

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. No requests for early examinations or alternative days will be approved.

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 for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

If you have a diagnosed disability, please contact PLNU's Disability Resource Center (DRC) within the first two weeks of class to demonstrate need and to register for accommodation by phone at 619-849-2486 or by e-mail at DRC@pointloma.edu. See Disability Resource Center for additional information.

PLNU ATTENDANCE AND PARTICIPATION POLICY

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.

Tentative Course Schedule:

Date	Topic	Assignments Due
September 5th	Lab 1: Instrumentation,	

	calculations, and terminology	
September 12th	Lab 2: Muscle length tension relationship / 2 Mile Run	Lab 1
September 19th	Lab 3: Wingate	Lab 2
September 26th	Lab 4: Metabolic Cart Familiarization	Lab 3
October 3rd	Lab 5: Maximal Oxygen Uptake	Lab 4
October 10th	Lab 5: Maximal Oxygen Uptake	
October 17th	Review for Lab Practical #1 Critical Power Testing	Lab 5
October 24th	Lab Practical #1	
October 31st	Lab 6: Anaerobic / Lactate Threshold	
November 7th	Lab 7: ECG Lab	Lab 6
November 14th	Lab 8: Exercise Prescription Based on Exercise Tests	Lab 7
November 21st	Lab 8: Exercise Prescription Based on Exercise Tests	
November 28th	NO CLASS - HAPPY THANKSGIVING	
December 5th	Final Review / Make-Up	Lab 8
December 12th	Lab Final @ 4:30 PM	