

Florida Atlantic University
Department of Exercise Science & Health Promotion
Exercise Physiology Lab
PET 4351L - Section 001 and 002

Class time: Wednesday 11:30am-2:30pm and 4:45pm-6:45pm
Location: GY 152
Instructor: Nina Markil, BS, CES
E-mail: nmarkil@fau.edu
Phone #: (561) 358-3233
Office Hours Posted on Blackboard under Staff Information

Course Prerequisites: Anatomy and Physiology 1 with lab (BSC 2085, BSC 2085L); Anatomy and Physiology 2 with lab (BSC 2086, BSC 2086L); General Chemistry with lab (CHM 2045, CHM 2045L).

Course Description:

The application of physiological principles toward understand the physiological adjustments that occur to maintain homeostasis in the exercising human.

Required Text: **Exercise Physiology Lab Manual** available online on **Blackboard**.

Recommended Text:

American College of Sports Medicine. ACSM's Guidelines for Exercise Testing and Prescription (8th edition). Philadelphia, PA: Lippincott Williams and Wilkins, 2009. (ISBN 0781769027).

Any general Exercise Physiology text, but preferably the one assigned to your Exercise Phys. Class.

Course objectives:

1. Familiarize students with the equipment and concepts related to Exercise Physiology.
2. Allow the students the opportunity to gain an in-depth knowledge and understanding of Exercise Physiology.
3. Supplement the Exercise Physiology concepts encountered in lecture with relevant lab experiments.

Disability Statement

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) located in Boca Raton - SU 133 (561-297-3880), in Davie - MOD I (954-236-1222), in Jupiter - SR 117 (561-799-8585), or at the Treasure Coast - CO 128 (772-873 305), and follow all OSD procedures.

Honor Statement:

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty, including cheating and plagiarism, is considered a serious breach of these ethical standards, because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see: http://www.fau.edu/regulations/chapter4/4.001_Honor_Code.pdf.

Recommended Software Competencies:

- Microsoft Word or WordPerfect (report preparation).
- Microsoft Excel (graphing and charting capabilities, basic statistical functions).
- Microsoft PowerPoint (graphing, charting, and illustrating capabilities).

Class requirements: Lab Sessions

Students **must** attend all labs. This is mandatory due to the participatory nature of this class. If you cannot make it to lab, please call or e-mail ahead of time. Medical or family emergencies and deaths will only be excused with written medical documentation or a copy of funeral arrangements. Labs start promptly on time, so make sure to arrive on time. Lab report grades will reflect participation. If you are late, one (1) point will be deducted from your participation grade. Remember to **dress for exercise**. If you do not dress appropriately for exercise, one (1) point will be deducted from your participation grade. If you are not actively participating, two (2) points will be deducted from your grade.

Class requirements: Lab Reports

Each week we will perform a lab (see lab schedule for specific lab dates). A corresponding report will be due **at the start of class** the following week unless otherwise specified.

Each Lab Report (*Text Only*) needs to be turned into **BLACKBOARD**, under **Submit Lab**, and submitted in the appropriate lab listing. Only one submission will be accepted per person. A copy of your lab including all graphs and tables needs to be handed in prior to the start of class as well. You will be graded on the lab handed in and receive points for submitting it to blackboard. **You cannot receive full credit for a lab unless it is both handed in and turned into Blackboard. If you DID NOT attend a lab, you will not receive the points for the corresponding lab report.**

Late reports will NOT be accepted. DO NOT wait until the last minute to work on your report.

Although most labs will be performed in groups, each individual is responsible for a separate lab report. This means each person's lab report **must be written in his/her own words**. The reports must be **typed and double-spaced**. All graphs must be computer-generated. Photocopies will NOT be accepted. See the sample lab format for details and specifics for each lab write-up.

Grading (tentative):

Lab reports:	(labs at 25 points each)	300 points
Midterm Exam:	(labs prior to midterm exam)	100 points
Final Exam:	(cumulative)	100 points
Participation:	(including appropriate attire)	<u>25 Points</u>
Total:		525 points

Grading scale:

A	= 93 - 100%
A-	= 90 - 92.99%
B+	= 87 - 89.99%
B	= 83 - 86.99%
B-	= 80 - 82.99%
C+	= 77 - 79.99%
C	= 73 - 76.99%
C-	= 70 - 72.99%
D+	= 67 - 69.99%
D	= 63 - 66.99%
D-	= 60 - 62.99%
F	= 0 - 59.99%

Lab safety guidelines:

1. Never use any equipment unless you are thoroughly versed in the method of operation.
2. Lab equipment is expensive. Do not use any equipment unless instructed to do so.
3. Subjects performing on the treadmill and ergometer are to be **supervised at all times**.
4. Use protective gloves when handling and /or coming into contact with any bodily fluids.
5. No eating or drinking in the lab
6. **Clean** the equipment and the lab area when you are done.

General information:

A good grade is attainable in this class by reading the lab packet prior to class, by attending all labs, and by actively participating. Success in the lab will also help your understanding of the lecture material.

Cheating policy:

Turn-it-in through Blackboard – Each lab that is submitted through Blackboard will automatically be checked for plagiarism. This process will identify any copied material from the online directory and all other student papers.

If caught cheating or plagiarizing on the lab reports (even partially), you will receive a score of zero (0) for that lab. All cheating incidents will be reported to the Head of the Department and may result in a note on your permanent transcript. Again, you may discuss a lab but your report must reflect your own words.

Sample Lab Format

All labs should be typed, double-spaced, and written with minimal usage of pronouns except in the conclusion. All writing, charts, graphs, and tables must be computer-generated.

Cover sheet: Includes the title of the lab, the investigator (that's you), the date, instructor's name, etc.

Introduction: A brief introduction into the background and purposes of the experiment. General description of the usefulness and potential or actual applications of the laboratory procedure in the study of Exercise Physiology and human performance. What is the purpose of the lab? What are you trying to prove, observe, discover, etc?

Methods: The procedure you used to do the lab. It should be reproducible by other investigators. Include all equipment and materials used for the lab. Participation helps in answering that question. Bulleting or number is unacceptable; the text should flow in paragraph form.

Results: List all lab data pertinent to the lab exercise. This may include data tables, graphs, and all calculations required for the lab. Make sure to use all of the appropriate measurement units. **Remember to explain all results and refer to them in your conclusion.**

Discussion questions: Each assignment has a series of questions that should be addressed in this section. Answer each question in complete sentences and proper English. Make sure each answered question is numbered and easy to understand. You do not have to restate the question. Some questions may require a small amount of research (e.g. exercise physiology books) while some may ask for an educated opinion. The results of the experiment should be used in answering the questions and the purposes of the study

Conclusion: Summarize the lab, what conclusion can be made regarding the results? Did you achieve the purpose of the lab? Briefly discuss any difficulties and problems encountered during the laboratory that could have compromised data accuracy; and interpretation of the numerical results in light of published norms whenever possible (e.g., maximal oxygen uptake of your subject compared to age-matched norms). References to published research in which techniques were evaluated or used to collect data are encouraged. Make a few insightful statements about the lab, or suggestions/questions you have about the lab.

Grade components:

Blackboard submission:	5 points
Neatness/grammar/spelling:	2 points
Cover sheet:	1 point
Introduction:	1 point
Methods:	2 points
Results:	4 points
Discussion questions:	6 points
Conclusion:	<u>4 point</u>
Total:	25 points



DEPARTMENT OF EXERCISE SCIENCE & HEALTH PROMOTION
PET 4351L – EXERCISE PHYSIOLOGY LAB

- 1. I have received the course syllabus and printed the Lab Manual.
2. I understand I must attend class (properly dressed for exercise), be on time, and participate in class.
3. I understand if I miss class, I am responsible for the material missed and for obtaining the notes and/or other assignments from another classmate, not the instructor.
4. I understand I cannot make up any exams, in-class work, or missed assignments.
5. I understand the absences, grading procedures, and point distribution.
6. I understand I must do out of class assignments.
7. I understand if assignments are not turned in at the beginning of class, I will not receive any points.
8. I understand my personal guests or children are not allowed during class.
9. I understand pagers, cellular phones, and other electronic devices are not to be used during class.
10. I understand I must maintain and use an active FAU email account during this course.
11. I understand no assignments will be accepted electronically for credit.
12. I understand all assignments due need to make it to class even if I do not attend.
13. I understand the concept of plagiarism and will adhere to academic honesty. I understand plagiarism or cheating on any assignment or exam will result in a fa5we+}.

I have read the course syllabus for PET 4351L – Exercise Physiology Lab, and agree to abide by the above.

Printed Name

Signature

Social Security Number

Date

Summer 2009- Wednesday 11:30am-2:30pm (50972) and 4:45pm-6:45pm (50971)

<u>Date</u>	<u>Topic</u>	<u>Lab Report Due</u>
May 13	<u>Lab #1</u> : Resting Metabolism	-
May 20	<u>Lab #2</u> : Substrate Utilization During Exercise	#1
May 27	<u>Lab #3</u> : Lactate Threshold	#2
June 3	<u>Lab #4</u> : Oxygen Deficiency and Oxygen Debt	#3
June 10	<u>Lab #5</u> : Progressive Exercise <u>Lab #6</u> : Heart Rate and Blood Pressure	#4
June 17	MIDTERM	#5/6
June 24	<u>Lab #7</u> : Electromyography	
July 1	<u>Lab #8</u> : Arm vs. Leg Exercise	#7
July 8	<u>Lab #9</u> : Isokinetic Strength Testing	#8
July 15	<u>Lab #10</u> : Maximal Oxygen Uptake	#9
July 22	<u>Lab #11</u> : Pulmonary Function <u>Lab #13</u> : Wingate	#10
July 29	<u>FINAL EXAM</u>	#11/13