

KINS 4690/6690 Lab Syllabus

Lab Instructor: Albi Schifino

Class time: Monday at 3:35 – 5:30pm

Office: Ramsey Center, Room 109H

Office Hours: By appointment (via email)

Email: ags27911@uga.edu

Course Description: This course consists of hands-on experiences related to skeletal muscle physiology

Course Objectives:

- To learn various methods of assessing muscle strength and endurance
- To become familiar with various techniques, procedures, and equipment used in clinical research and physical therapy settings
- To develop skills related to data collection and analysis
- To practice interpreting and communicating experiment findings

ELC: Lab information will be posted on ELC. All prelab quizzes, reading material, and lab protocols will be available on ELC.

Grading: Your lab grade will contribute to 20% of the total course grade. 70% of your lab grade will come from the prelab quizzes and 30% will come from lab write-ups. There will be no make-up quizzes. Late assignments late will not be accepted. Every day that an assignment is late, 10 points will be taken from the assignment grade.

Assignments: Pre-Lab: Reading material (i.e. lab protocol and relevant literature) will be given to you prior to each lab. You will be expected to have read the literature and be very familiar with the lab protocol. You will be expected to complete a lab quiz posted to ELC prior to the lab that will cover the information from the required reading.

Post-Lab: You will be expected to turn in a write-up for each lab. See template below.

Course Policies

Attendance: Attendance is mandatory. You may attend the other lab section and make up assignments only with a university excused absence and approval from the instructor. For all other excuses, you will receive no credit for that week's assignments (i.e. lab quiz, lab write-up).

Dress: All students will be expected to participate in the lab testing/data collection and will be required to dress accordingly. Therefore, athletic clothing and shoes are required. Proper clothing includes athletic pants/shorts, T-shirts/sweatshirts, etc – clothing you feel comfortable exercising in. Jeans, dress shoes and pants, dresses, skirts, etc are not permitted.

Academic Honesty:

University Honor Code and Academic Honesty Policy.

All academic work must meet the standards contained in “A Culture of Honesty.”

Each student is responsible to inform themselves about those standards before performing any academic work. Copies of the honor code can be obtained from the Office of the Vice President for Instruction or may be viewed at the following web site: <http://www.uga.edu/ovpi/>

Course Outline: Laboratory topics will be covered as listed below. Lab reports will be turned in the following week. The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Laboratory schedules are tentative and may be subject to change at the accord of the instructor of record.

Week	Topic
1/7	No lab
1/14	Muscle Pennation Angles
1/21	No lab MLK
1/28	MVC and Length Tension
2/4	EMG
2/11	Force-Velocity Biodex
2/18	Electrical Stimulation and Frequency Force Curves
2/25	Low Frequency Fatigue
3/4	Muscle Metabolism (NIRS)
3/11	No Class Spring Break
3/18	Interpolated Contraction
3/25	Muscle Injury
4/1	Journal Club
4/8	Journal Club
4/15	NO LAB
4/22	NO LAB
4/29	NO LAB – Final Exams (5/2-5/8)

Laboratory Template:

Name:

Date:

Lab #

Lab Title:

Background

Several sentences to briefly describe the purpose and methods of the lab. Maximum of ~50-70 words.

Results

In this section present any graphs that you had to create from the data we collected in lab. These graphs should not be enormous, just big enough to properly display the data.

When creating graphs:

- a. Add an appropriate title
- b. Make sure figure legend is correct and clear
- c. Label the x and y axes appropriately
- d. Include units with labels
- e. Include error bars when appropriate

Discussion

Following the graph you will be expected to write the discussion portion of the lab report. In this portion of the report please explain (in more than just one or two sentences) the mechanism that explains the results of the graph. I can read a graph. Therefore, it is not necessary for you to explain what the graph looks like or what is happening in the graph. I am more interested in why the graph looks like it does.

For example you might collect data in lab and produce a graph that showed muscular force output decreased after eccentric contraction induced injury. For your report, you would be expected to critically evaluate the result that you obtained and explain the various mechanisms causing this phenomenon. Continually ask yourself why? or how? until you believe you have answered the questions fully. This explanation should be minimum of 150 words in length. Please include two peer-reviewed references to corroborate your explanation. **Two** citations are required, while each citation is worth 10 points on the lab report.