

KINE 3311 PHYSIOLOGY OF EXERCISE

Course Syllabus

Course:	KINE 3311 - Physiology of Exercise (Summer I)
Meets:	Online in Canvas (asynchronous)
Instructor:	Scott Spier, Ph.D. (last name rhymes with <i>fire</i>)
Office:	Herrington Patriot Center (HPC) 2186 (Inside the Exercise Physiology Lab) Office phone: 903-566-7427 Email: sspier@uttyler.edu (do NOT include “patriots” in email address)
Office hours:	Mon/Wed 1:00 - 2:00 p.m.; Also by appointment or via Zoom (call or email to schedule)
Canvas:	All course materials and announcements will be provided in Canvas
Contact:	The best method of contact is through email (sspier@uttyler.edu) or during office hours. You can send me email from either your Patriots account or through Canvas. Any email you send should have your first and last name, your course and section number (e.g., KINE 3311.001), and proper punctuation. Failure to do so may delay the response time. I will try to respond to appropriately addressed emails within 1-2 business days.

COURSE DESCRIPTION

This course is designed to examine the physiological adjustments to a single bout of exercise (i.e., the transition from rest to exercise) and the physiological adaptations to repeated exercise (i.e., exercise training). Particular attention will be given to the neuromuscular, metabolic, cardiovascular, and respiratory responses to exercise.

COURSE PREREQUISITES

Prerequisites: BIOL 2301/2101, BIOL 2302/2102, KINE 3306

Corequisite: KINE 3112 Physiology of Exercise Lab

COURSE MATERIALS

Textbook: *Exercise Physiology: Theory and Application to Fitness and Performance* (11th ed.) by Powers, Howley, & Quindry. You have **free** electronic access to this text through the UT Tyler library. The link to access the textbook will be available in Canvas.

Additional resources: Additional course materials and resources will be made available in Canvas, including the syllabus, Tips for Success in this Class, How Knowledge and Skills Relate to Final Grades (or How to Get an A), assigned readings, additional videos, and a detailed schedule.

Sharing of course materials: Handouts used in this course, including those delivered via Canvas, may **NOT** be shared online or with anyone outside of the class, without me granting express written permission. The term handouts refers to all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, assignment sheets, recorded lectures, outlines, lab problems, in-class materials, review sheets, and additional problem sets. The unauthorized sharing of class materials outside of the class constitutes academic dishonesty and disciplinary action may be taken (see Policy on Academic Dishonesty below).

REQUIRED DEVICES

All content and assessments, including proctored exams, will be delivered online in Canvas. Therefore, you will need access to a computer with a working webcam.

STUDENT LEARNING OUTCOMES

Upon successful completion of this course, students should be able to:

- Describe the separate and integrated responses of the neuromuscular, metabolic, cardiovascular, and respiratory systems to acute and chronic exercise
- Discuss the effect of exercise intensity and duration on the physiological responses to acute exercise
- Explain the mechanisms of physiological adaptations in response to exercise training
- Analyze physiological responses to exercise with respect to potential limitations in exercise performance
- Describe the health and performance implications of the physiological adaptations to exercise training

COURSE GRADING

Your final grade will be determined by your performance on exams and quizzes.

Exams (75%): There will be 4 non-cumulative midterm exams during the semester. All exams will consist of multiple-choice, true-false, matching, short answer, and/or short essay questions over material from lectures, discussions, and assigned readings. All exams are closed-notes/closed-book and will be proctored on **Responds LockDown Browser + Webcam**. I will count your 3 highest exams and drop the lowest score. If you miss an exam for any reason, it will count as your dropped score.

***Note:** Your enrollment in this course requires the use of Responds LockDown Browser + Webcam for online proctoring of exams. Your activities are recorded while you are logged into or taking your assessment. The recordings serve as a proctor and will be reviewed and used in an effort to maintain academic integrity.*

Canvas Quizzes (25%): There will be several graded *Check for Understanding* quizzes. These quizzes are *not* proctored and there are *unlimited* attempts, with only the highest score counting. You may use your notes to complete these. Students are encouraged to take these until a perfect score is achieved. The Canvas quizzes will remain open until the day of the test.

Final letter grades will be assigned according to the following scale:

A: 89.5 - 100 B: 79.5 - 89.49 C: 69.5 - 79.49 D: 59.5 - 69.49 F: < 59.5

POLICY ON ACADEMIC DISHONESTY

At the University of Texas at Tyler, students and faculty are responsible for maintaining an environment that encourages academic integrity. Students and faculty members are required to report an observed or suspected case of academic dishonesty immediately to the faculty member in charge of an examination, classroom, or laboratory research project, or other academic exercise.

Since the value of an academic degree depends on the absolute integrity of the work done by the student for the degree, it is imperative that students maintain a high standard of individual honor in scholastic work. Scholastic dishonesty includes but is not limited to cheating, plagiarism, and collusion.

This class will be conducted in full compliance with the UT Tyler “no tolerance” policies concerning documented cases of plagiarism and/or academic dishonesty. Any act of cheating or plagiarized work submitted will result in a grade of zero for that assignment and further disciplinary action may be taken. Extreme cases or repeated violations may result in an F in the course and/or exclusion from the university. Please make use of the [UT Tyler Writing Center](#) if you have concerns about plagiarism.

Chat GPT OR OTHER AI SOURCES

Under no circumstances is a student allowed to use any AI-based writing program to generate answers to exams, quizzes, assignments, homework, or any other graded assignment in this course. Any use of AI will be considered cheating according to the Academic Dishonesty policy above.

TENTATIVE COURSE SCHEDULE

Note: The following schedule is *recommended* to stay on track during the semester. You may work ahead or get caught up if you miss a day. However, you must take the exams during the schedule availability windows..

UNIT 1 - Exercise Metabolism

- 6/1 Lesson 00 - Introduction to KINE 3311 / Homeostasis / Bioenergetics (Chapter 2, 3)
 - 6/2 Lesson 02 - Anaerobic Metabolism (Chapter 3)
 - 6/3 Lesson 03 - Aerobic Metabolism (Chapter 3)
 - 6/4 Lesson 04 - Substrate Utilization (Chapter 3, 4)
 - 6/5 Lesson 05 - Metabolic Response to Exercise (Chapter 4)
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- 6/8 Lesson 06 - Determinants of Endurance Success (Chapter 4,5)
- 6/9 UNIT 1 EXAM (due 11:59 p.m., Thursday, June 11)**

UNIT 2 - Neuromuscular Exercise Physiology

- 6/10 Lesson 07 - Hormonal Response to Exercise (Chapter 5)
 - 6/11 Lesson 08 - Introduction to the Nervous System (Chapter 7)
 - 6/12 Lesson 09 - Skeletal Muscle Structure & Function (Chapter 8)
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- 6/15 Lesson 10 - Skeletal Muscle Mechanics (Chapter 8)
- 6/16 UNIT 2 EXAM (due 11:59 p.m., Wednesday, June 17)**

UNIT 3 - Cardiorespiratory Exercise Metabolism

- 6/16 Lesson 11 - The Heart (Chapter 9)
 - 6/17 Lesson 12 - Hemodynamics/Vascular Function (Chapter 9)
 - 6/18 Lesson 13 - Cardiorespiratory Response to Exercise (Chapters 9, 10)
 - 6/19 **University Closed - No Classes (Juneteenth holiday)**
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- 6/22 Lesson 14 - Respiratory System (Chapter 10)
- 6/23 Lesson 15 - Ventilatory Response to Exercise (Chapter 10)
- 6/24 UNIT 3 EXAM (due 11:59 p.m., Thursday, June 25)**

UNIT 4 - Adaptation to Training and the Environment

- 6/25 Lesson 16 - Adaptations to Aerobic Training (Chapter 13)
 - 6/26 Lesson 17 - Adaptations to Resistance Training (Chapter 14)
 - Lesson 18 - Adaptations to Detraining and Aging
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- 6/29 Lesson 19 - Thermoregulation and Adaptations to Heat (Chapter 12, 23)
 - 6/30 Lesson 20 - Adaptations to Altitude (Chapter 23)
 - 7/1 Lesson 21 - Musculoskeletal Adaptations to Spaceflight (Canvas article)
 - 7/2 Lesson 22 - Physiological Adaptations to Spaceflight (Canvas article)
 - 7/3 UNIT 4 EXAM (due 11:59 p.m., Sunday, July 5)**
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HOW DO I SUCCEED IN THIS CLASS?

- Take good notes. My lecture slides, by themselves, won't help you.
- Don't fall behind. Start studying on day 1. Repetition is the key to understanding physiology.
- Form study groups. Teach the material to each other. If you can't explain it simply, you don't understand it.
- Complete and review the study guides that are provided in Canvas. These are provided at the beginning of each major section so you can complete them as you learn the material.
- Come see me if you are having difficulties with the material.
- Review the "How to get an A (or other grade) in this Class" handout in Canvas.

COURSE EXPECTATIONS

Professionalism: Students are expected to display a professional attitude in all aspects of the course, including discussions and communication with the instructor and classmates.

Quality of Work: ALL assignments will be graded with rigor appropriate for upper-level undergraduate course work. All written assignments should incorporate correct grammar, spelling, and a logical flow of ideas. I have little tolerance for bad grammar and spelling mistakes. Please use the Spelling & Grammar tool.

Late Work: It is imperative that you complete your assignments on time. Assignment instructions and due dates will be clearly posted and students will be given adequate time to complete work. There will be a one hour grace period after the due date/time for late submissions. Once the assignment is closed, it cannot be made up.

Makeup policy: Make-up exams and assignments will be given only according to University policy. On rare occasions (and for a valid reason), make-up exams can be scheduled by pre-arrangement with the instructor *before* the date of the exam. If any exam is missed due to illness, injury, or family emergency, the instructor should be notified by email *prior to* the missed exam and documentation will be required.

Feedback on exams/assignments: I will strive to give timely feedback on all assignments. You should expect feedback on discussion posts within a couple of days and feedback on papers and exams within 1 week (I will notify you if I expect feedback to take a little longer for a particular assessment).

GETTING HELP

Poor Class Performance: If you find yourself struggling in the class, you should meet with me as soon as possible so that we can determine what steps you need to take to succeed in the class. I'm available during my office hours or by appointment. I also have an open door policy.

UT Tyler Counseling Center: Contact the [UT Tyler Student Counseling Center](#) if you need mental health or psychiatric support (24/7 Crisis Line: 903-566-7254).

UT Tyler Health Clinic: If you find yourself physically unwell, contact the [UT Tyler Health Clinic](#) (903-877-7935).

Technical support: For technical problems with Canvas, contact **UT Tyler 24/7 Canvas Support**, which can be accessed by clicking **Help** at the bottom of the Global Navigation menu on the far left side of the browser window. For login/password problems or support for other technical issues, contact Campus Computing Services at 903-565-5555 or itsupport@uttyler.edu.

Writing Center: If you have trouble with writing assignments, please contact the Writing Center on campus at 903-565-5995. They have tutors and other resources available to assist you with your written assignments.

STUDENTS WITH DISABILITIES

For students with disabilities, the **UT Tyler Student Accessibility and Resource (SAR) Office** provides needed accommodations to students with documented needs related to access and learning. More information can be found in the [Accessibility and Disability Resources](#) page.