EXSC 2250 – EXERCISE PHYSIOLOGY

Fall 2024
M/W 10:00 - 11:20 AM
LAC 110
Department of Exercise Science
School of Science, Math, and Engineering
Salt Lake Community College

Instructor:
Office Location:
Student consultation hours:
E-Mail Address:

COURSE DESCRIPTION

The purpose of this course is to examine the physiological basis of exercise. The focus will be on the energy systems necessary for human movement, and the acute responses and chronic adaptations of the neuromuscular, endocrine, cardiovascular, and respiratory systems when exposed to the stress of exercise.

Prerequisites: EXSC 2500 or BIOL 1610
Credit Hours: 3
Required Text: Physiology of Sport and Exercise by Kenney, Wilmore and Costill, Human Kinetics, 8th Edition
Supplies & Tools: Labs require workout clothes and shoes
Canvas Link:

COURSE OUTCOMES

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

1. Explain the importance of exercise physiology as it relates to health, physical fitness, and athletic performance.
2. Evaluate current research for reliability, validity, and application in the context of exercise physiology.
3. Describe the energy systems of the body and classify each according to its contribution to differing durations and intensities of exercise.
4. Describe muscle structure and function and illustrate how the muscular system produces human movement.
5. Describe the structure and function of the body systems involved in exercise (neural, endocrine, cardiovascular, and respiratory).
6. Compare acute responses and long-term adaptations to the stress imposed by exercise.

7. Apply exercise physiology concepts explored in lecture in a laboratory/practical setting.

COURSE REQUIREMENTS

This Exercise Physiology course provides 3 credit hours per week in a traditional lecture format with laboratories and hands on activities. Students should expect to devote at least 6-9 hours per week of preparation and study outside of class to successfully accomplish the course outcomes.

All students are required to:

- Log in to the Canvas site on a regular basis.
- Attend and participate in class. If you choose not to attend, you accept the responsibility for what occurs during your absence.
- Complete reading assignments and view content on weekly Overview pages prior to attending class.
- Complete and pass all quizzes, exams, and assignments based upon required reading, lectures, and activities.

COURSE POLICIES

This syllabus contains the policies and expectations that have been established for this course. These policies and expectations are intended to create a productive learning atmosphere for all students. Please bring any concerns or suggestions you may have to my attention. To create and preserve a course atmosphere that optimizes teaching and learning, we all share the responsibility of working together to cultivate a positive learning environment. A positive learning environment includes embracing the diverse identities, viewpoints, and experiences that you all bring to the class. The concepts and ideas we discuss in Exercise Physiology can be applied to everyone, but we must consider the differences in contributions to the field, access to healthcare and exercise opportunities, genetics, and social or cultural beliefs and backgrounds. By sharing your experiences, you will be adding to the story of Exercise Physiology.

- Most assignments will be submitted electronically on Canvas. There will also be activities/assignments completed in class.
- It is assumed that if you are taking this course, you have access to a reliable, up-to-date computer and consistent internet access. Have a backup computer arranged with a friend or family member in case of computer malfunction. Computers are available at the public library and in Salt Lake Community College libraries. If there is a problem with Canvas, the instructor will be the first to know and will adjust due dates if necessary. If you have difficulty accessing the Canvas course site, contact the Salt Lake Community College Help Desk at 801-957-5555.
- Messages will be posted on the course "**Home**" page or in the "**Announcements**" tab in Canvas. Please be sure you read these messages as they contain pertinent information.
- Communication is key! If you have a question, email me through the Canvas Inbox. I typically respond to messages within 24-48 hours during the work week. I also check messages periodically on weekends. Please do not wait to contact me if you are having

any issues in or out of the course. It is much easier for me to work with you if I know what is going on as soon as possible.

- To create and preserve a positive learning environment, students are expected to conduct themselves in a manner that does not disrupt teaching or learning, and they are expected to follow these standards: Course discussions (whether in-person or online) should be civilized and respectful to everyone and relevant to the topic we are discussing. Discussion forums are meant to allow for a variety of viewpoints, this can only happen if we respect one another and our differences. Please see the **Netiquette** Page in Canvas for tips on how to interact with others in an online environment.
- Please see Canvas for the **Institutional Syllabus** with important institutional policy and services information.

GRADING POLICIES

- Due dates for assignments, discussions, quizzes, and exams are provided on the **Course Calendar** and in **Canvas**.
- Late work policy: Assignments should be submitted on time. **A 5% deduction will be taken for each day that an assignment is late.** Assignments submitted more than one week after the due date will not be accepted. *Some assignments (Exams, In-class activities) may not be submitted late.*
- Exams will be completed on Canvas within a 4-day window. Make-up exams will not be allowed unless there are extenuating circumstances. This will be evaluated on a case-by-case basis.
- Quizzes will be completed on Canvas and the lowest quiz score for the semester will be dropped.
- Attendance for in-person labs and activities is required unless there are extenuating circumstances. Lab worksheets will be submitted on Canvas and the lowest lab score for the semester will be dropped. There will be 10 extra credit points available for completing all lab worksheets. If you have any doubts about your health in relation to this course, consult with the instructor before participating in the lab assignments.

Grades: Student performance is based on a percentage of the possible points. Scores are available in the Canvas gradebook and ***should be monitored on a regular basis***. Contact me to discuss grade concerns throughout the semester.

Point Breakdown:

Assessment*	**Points**
Topic Quizzes (14 x 10 points each – lowest score dropped)	130
Exams: (300 points total)	
Exam 1 – Multiple Choice, T/F, Short Answer	50
Exam 2 – Multiple Choice, T/F, Short Answer	50
Exam 3 – Multiple Choice, T/F, Short Answer	50
Exam 4 – Multiple Choice, T/F, Short Answer	50
Final Exam (cumulative) – Multiple Choice, T/F	100

Lab Worksheets (6 x 25 points each – lowest score dropped)	125
Library Research Quiz	15
Research Assignment: (190 points total)	
Research articles Summary Papers (3 x 25 points each)	75
Final Paper	75
Peer Review Participation (4 x 10 points each)	40
In-class activities & assignments TBD	TBD
Extra credit opportunities TBD	TBD
Approximate Total	**760**

***Detailed instructions and requirements for each assessment can be found in Canvas.**

Instructor reserves the right to modify dates and/or points for assignments, quizzes, labs, and/or exams. There may also be additional in-class quizzes and/or assignments. *Extra credit may be available throughout the semester.*

Grade breakdown by percentage:

A	95-100%	**C**	73-75
A-	90-94	**C-**	70-72
B+	86-89	**D+**	66-69
B	83-85	**D**	60-65
B-	80-82	**D-**	55-59
C+	76-79	**E**	Below 55%

Incompletes: An incomplete is a conditional grade given only in extraordinary cases where a student has completed a major portion of the class but is unable to complete coursework due to circumstances beyond their control such as a major illness/injury or a death in the family. Written documentation will be required, and the student and instructor will sign an incomplete contract with a timeline for completing coursework.

COURSE SCHEDULE

This class meets for **3** lecture/lab hours per week. Please see class **Calendar** for a detailed schedule.

Course Topics:

- Introduction to Exercise Physiology and Research
- Common Measurements in Exercise Physiology
- Control of the Internal Environment
- Structure and Function of Exercising Muscle
- Bioenergetics: Fueling Exercise
- Neural Control of Exercising Muscle
- Hormonal Control During Exercise
- Energy Expenditure and Exercise Metabolism
- Fatigue
- The Cardiovascular System During Exercise

- The Respiratory System During Exercise
- Principles of Training
- Adaptations from Training
- Exercise Prescription for Health
- Environmental Influences on Performance

SLCC is committed to fostering and assessing the following College-wide student learning outcomes across the curriculum:

- Acquire substantive knowledge in the intended major and throughout General Education
- Communicate effectively
- Develop quantitative literacies required for the chosen field of study
- Think critically
- Express themselves creatively
- Develop civic literacy and the capacity to be community-engaged learners who act in mutually beneficial ways with community partners
- Develop the knowledge and skills to work with others in a professional and constructive manner
- Develop information literacy
- Develop computer literacy

The Core Themes of SLCC's Mission to provide quality Higher Education to the Broader Community are:

- Access and Success
- Transfer Education
- Workforce Education

STUDENT CODE OF CONDUCT:
Each student is expected to follow the SLCC Code of Student Rights and Responsibilities found at: https://www.slcc.edu/policies/policies/student_affairs/8.1.050.aspx.

Use of artificial intelligence (AI) in this course:
"Generative artificial intelligence (AI) software is a rapidly emerging tool that students may be interested in using. If doing so, SLCC students are expected to adhere to the same standards as the Code of Student Rights and Responsibilities statement on plagiarism. Presenting generative AI software content as your own is a violation of academic integrity. If you use generative AI in your work, you must indicate that you have done so." -*SLCC Dean of Students*

Generative AI can be an excellent resource, but your own thoughts and words must be used on all assignments and discussion posts. If any sources are used, including generative AI, they must be properly cited.

SLCC STUDENT RESOURCES:

A recent study conducted by the University of Wisconsin and Temple University found that 36% of college students nationwide are food insecure. SLCC has a food pantry for students. Check it out here: https://www.slcc.edu/thaynecenter/programs-services/bruinpantry.aspx

For childcare assistance, look here: http://www.slcc.edu/childcare/index.aspx

Please be aware that stress, anxiety, and other mental health issues are extremely common among students and seeking help is very important! Counseling services at SLCC are confidential and low cost. Counseling appointments are $15/session. Please contact SLCC Center for Health and Counseling: http://www.slcc.edu/chc/

If you are having trouble with meeting basic needs, please visit http://www.slcc.edu/student/, or http://www.slcc.edu/oss/housing/crisis-circumstances.aspx if you are in crisis. SLCC has a number of resources. Furthermore, if you are comfortable with doing so, please consider notifying your instructor so that she can provide you with any resources she may have access to.