



## **HHPK 450.01E EXERCISE PHYSIOLOGY**

COURSE SYLLABUS: SUMMER II 2022

### **INSTRUCTOR INFORMATION**

**Instructor:** Dr. Michael Oldham  
**Office Location:** NHS 133  
**Office Hours:** By appointment, virtually or in office  
**Email Address:** [michael.oldham@tamuc.edu](mailto:michael.oldham@tamuc.edu)

### **COURSE INFORMATION**

#### **Course Description**

Topics include neural control during physical activity, skeletal muscle contraction, pulmonary and circulatory physiology, gas exchange and transport, aerobic and anaerobic energy sources for muscular activity, temperature regulation during exercise, body composition and weight control.

Prerequisites: BSC 2401 and 2402 with C or better. 2.5 minimum GPA required. Co-requisites: HHPK 450L.

#### **Student Learning Outcomes**

Upon successful completion of this course, you will be able to

1. Describe and explain immediate responses to exercise and long-term adaptations to training, including cardiorespiratory and neuromuscular systems.
2. Describe the effects of internal and external factors on sport performance (e.g., temperature, hydration, altitude, ergogenic aids).
3. Design a specific exercise prescription based on ACSM guidelines.
4. Execute and interpret laboratory and field tests used in exercise and fitness.

# COURSE REQUIREMENTS

## Required Materials

### Textbook:

**Powers & Howley. Exercise Physiology-Connect Access. 11<sup>th</sup> edition. McGraw-Hill. ISBN: 9781260813470.**

**You are required to purchase McGraw-Hill Education Connect access.** Connect access includes the e-book and several other learning features (such as practice quizzes and content animations). Note that if you purchase a used textbook you will still need to purchase Connect access to complete required assignments.

To register for and access Connect, go to the D2L module “McGraw Hill Connect” and find the video describing the process to register as well as the link to the website. You can purchase the Connect code either directly online via the website or from the TAMUC bookstore.

### Other Requirements:

- Computer/laptop and a reliable internet connection.
- Microsoft Office (Powerpoint, Word, Excel)
  - TAMUC provides MS Office 365 for free ([http://www.tamuc.edu/facultyStaffServices/academictechnology/\\_documents/Office-365-Students.pdf](http://www.tamuc.edu/facultyStaffServices/academictechnology/_documents/Office-365-Students.pdf))

## Student Responsibilities or Tips for Success in the Course

- Keep up with the course content and the weekly assignments.
- Make good use of the Connect access resources.
- Test yourself early and often! It helps you identify what you know and don't know, so that you can focus your studies on the areas where you need improvement. Utilize the Connect Previews/Reviews for this purpose.
- Space it out! Cramming does not work. Instead, space out your study time and practice. Studying for the scheduled in-class quizzes will help.
- Reflect! Take a few minutes to review what you learned and ask yourself questions about how this new learning fits in with what you already know and what you hope to learn. Step it up: reflect after every class, write down any questions you have for your instructor to ask in the class.
- Explain it to somebody else! Your study partner/group, your friend, your mom... Step it up: In your explanation, include how the material relates to you and their life outside of class.
- Believe you can! Adopt a “growth mindset” and understand that learning takes effort. With deliberate practice, you can improve.
- Communicate early and often with the instructors. We are here to help you succeed.

*The syllabus/schedule are subject to change.*

## GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

1. Exams (4 x 100 pts)	50%
2. Quizzes (4 x 25 pts)	10%
3. Exercise Prescription (100 pts)	10%
4. Attendance	5%
5. Lab (250 pts)	25%
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Total (1,000 pts)	100%

## Assessments

### Exams

There will be four (4) online exams. Exams may cover content from lectures, class activities, and/or the textbook. Exams will be open for 24 hours (12:00am-11:59pm). Aligns with SLOs #1,2.

### Quizzes

There will be four (4) scheduled online quizzes. Quizzes may cover material from lectures and/or the textbook. Quizzes will be open for 24 hours (12:00am-11:59pm). Aligns with SLOs #1,2.

### Exercise Prescription

Students will create a detailed exercise prescription based on a case study and information learned throughout the course. The assignment with specific requirements and the case studies will be provided in D2L. Aligns with SLO #3.

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### **Attendance AND Engagement**

To engage students with the class material, in-class tasks will be assigned throughout the semester. These tasks may include questionnaires, surveys, pop quizzes, discussions, exit tickets, case studies, etc. to be completed via D2L. It's the completion of these tasks, rather than "right/wrong" answers, that counts towards this grade. Participation in the tasks will be summarized in the middle and at the end of the semester. Aligns with #1,2.

### **Laboratory**

The lab sessions provide hands-on learning experiences to strengthen the information learned during lectures. See separate lab syllabus for details. The lab graduate assistant will conduct all labs and score grade all assignments and exam. Aligns with SLO #4. See lab syllabus for details.

## **TECHNOLOGY REQUIREMENTS**

### **LMS**

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements.

LMS Requirements: <https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

## **ACCESS AND NAVIGATION**

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, a coffee shop, a TAMUC campus open computer lab, etc.

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## COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here: <https://community.brightspace.com/support/s/contactsupport>

### Interaction with Instructor Statement

The best way to reach us is via email. In most cases, we will reply within 24 hours.

## COURSE AND UNIVERSITY PROCEDURES/POLICIES

### Course Specific Procedures/Policies

- All Lecture and Lab materials, as well as assignments and the gradebook are available in the D2L course shell.
- All assignment due dates can be found in D2L and on the syllabus. Scheduled quizzes and exams will be open for 24 hours (12:00am to 11:59pm). Late assignment **WILL NOT BE ACCEPTED!**

### Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as a pandemic or student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance via D2L and/or email.

### University Specific Procedures

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.tamuc.edu/counsel](http://www.tamuc.edu/counsel).

### Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx).  
<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

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## **TAMUC Attendance**

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

## **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

## **Students with Disabilities-- ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

## **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

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## **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun.

Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

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## COURSE OUTLINE / CALENDAR

<b>Date</b>	<b>Chapters</b>	<b>Class Content</b>	<b>Assignments due</b>
7/11	10	Syllabus Respiration during exercise	
7/12	10, 9	Respiration during exercise, Circulatory Responses to exercise	
7/13	9	Circulatory Responses to exercise	Quiz 1
7/14	13a	Training for cardiorespiratory fitness	
<b>7/18</b>		<b>TEST 1 (Chapters 10, 9, 13a)</b>	
7/19	7	Nervous system	
7/20	7, 8	Nervous system, Skeletal muscle	
7/21	8, 13b	Skeletal muscle, Training for muscular fitness	Quiz 2
7/25	16	Exercise prescription	
<b>7/26</b>		<b>TEST 2 (Chapters 7, 8, 13b)</b>	
7/27	3	Bioenergetics	
7/28	3, 4	Bioenergetics, Exercise metabolism	
8/1	4	Exercise metabolism	Quiz 3
8/2	18	Nutrition, body composition, & weight management	
<b>8/3</b>		<b>TEST 3 (Chapters 3, 4, 16)</b>	
8/4	20	Training for Performance	Exercise prescription (due 8/8)
8/8	12	Temperature regulation	
8/9	24	Ergogenic Aids	Quiz 4
8/10		Test prep	
<b>8/11</b>		<b>TEST 4 (Chapters 18, 12, 20, 24)</b>	

*The syllabus/schedule are subject to change.*





## HHPK 450L, Exercise Physiology Lab

COURSE SYLLABUS: SUMMER II 2022

### INSTRUCTOR INFORMATION

**Instructor:** Daritsa Herrera

**Office Location:** NHS 165

**Office Hours:** by appointment, TR 1-2:50pm

**University Email Address:** [dherrera10@leomail.tamuc.edu](mailto:dherrera10@leomail.tamuc.edu)

**Preferred Form of Communication:** email

**Communication Response Time:** 48 hours

### COURSE INFORMATION

The purpose of the lab is to supplement the HHPK 450 lecture on Exercise Physiology. Activities include testing pulmonary function, ECG, cardiorespiratory endurance testing, body composition, fitness testing, blood lactate, and respiratory exchange ratio during exercise

**Textbook(s) Required:** there is no text required for this lab, however there is a HHPK 450 Lab Manual that must be purchased from the TAMUC Marketplace, [https://secure.touchnet.com/C20206\\_ustores/web/product\\_detail.jsp?PRODUCTID=1412](https://secure.touchnet.com/C20206_ustores/web/product_detail.jsp?PRODUCTID=1412), prior to the first day of lab. Once purchased, the GA will provide you with your hard copy. If you do not purchase the lab manual, your labs will not be scored for credit.

#### Materials Required:

- Reliable internet connection
- Microsoft Office (PowerPoint, Word, Excel) will be required in order to view and play provided texts, videos, and PowerPoints.
  - TAMUC provides MS Office 365 for free:  
[http://www.tamuc.edu/facultyStaffServices/academictechnology/\\_documents/Office-365-Students.pdf](http://www.tamuc.edu/facultyStaffServices/academictechnology/_documents/Office-365-Students.pdf)
- A video capturing device (e.g., your smartphone or laptop camera)

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## Course Description

### Student Learning Outcomes

1. Students will gain introductory knowledge of research and clinical tests in the field of exercise physiology.
2. Students will exhibit understanding of concepts related to exercise physiology testing protocols.
3. Students will be able to demonstrate skills to administer clinical and fitness tests related to exercise physiology and exercise prescription.

## COURSE REQUIREMENTS

### Instructional Methods

- In-person lab instruction will occur on Tuesdays and Thursdays from 1pm-2:50pm. Use the other scheduled times to work on lab assignments.
- Lab activities will be hands-on and are designed to give students conceptual and practical experience in testing protocols related to exercise physiology. This lab is structured to allow for hybrid formatting.

### Student Responsibilities

- Students are responsible for watching all recorded instructions. There may be weekly updates posted to the announcements page on D2L.
- Materials will be provided to disinfect surfaces upon completion of the lab and students are responsible for disinfecting all surfaces and equipment used.
- Students are responsible for communicating any barriers to timely completion of lab activities. All emails must contain the course or lab number in the subject heading line.
- Communicate early and often to keep your instructor aware of any issues.

## GRADING

This lab accounts for 25% of your final HHPK 450 grade; there is no separate lab grade. Weights of the assessments in the calculation of the final score:

1. <b>Pre-labs (10x10 pts)</b>	10%
2. <b>Lab reports (10x10 pts)</b>	10%
3. <b>Final Exam</b>	5%
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<b>TOTAL</b>	25%

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## Assessments

### Pre-labs

There will be a pre-lab to complete prior to the lab. The pre-lab will give protocol instructions and background information about the exercise tests to be covered in the lab session. Pre-labs must be submitted to D2L **before** the corresponding lab session, see specific due dates on the course schedule.

### Lab reports

The lab sessions provide hands-on learning experiences to strengthen the information learned during lectures. All lab assignments will be turned in by HARD COPY, to the GA on the assigned date/time. **NO EMAIL COPIES WILL BE ACCEPTED.**

### Lab final exam

The lab final is cumulative, meaning it covers material from the entire semester. Submit your answers to D2L.

## COURSE AND UNIVERSITY PROCEDURES/POLICIES

### Course Specific Procedures/Policies

Students must wear appropriate attire for activity and instruct participants to be dressed for physical activity when administering lab related testing. If unsure of what appropriate attire is, dress as though about to run on a treadmill. Any attire deemed inappropriate for safely engaging in this activity will affect lab activity grade in a 5-point deduction.

**Late assignments ARE NOT ALLOWED. ANY ASSIGNMENT TURNED IN PAST THE DUE DATE/TIME WILL BE SCORED AS A ZERO.**

### Assumption of risk for participating in physical activity class

Participating in any physical activity class may pose a physical risk. "By continuing participation in the course, the student waives any claim resulting from participation in the above mentioned course. The participating student agrees to indemnify, defend, and hold harmless the State of Texas, the Texas A&M University System, Texas A&M University-Commerce, and the Department of Health and Human Performance, and all of the officers, trustees, directors, agents, representatives, and employees of the foregoing entities against any and all claims, including attorneys' fees and costs, which may be brought against any of them by anyone claiming to have been injured as a result of the student's participation in the course." If you have any questions about this statement, please ask the instructor.

*The syllabus/schedule are subject to change.*

Week	Dates	Lab Pre-lab Due <b>Tuesday 1:00pm</b>	Lab
1	7/19	Spirometry ECG	Syllabus/ PAR- Q/ Liability/ Spirometry/ ECG
	7/20	Submax cardio testing	Submax demo
2	7/26	Nerves EMG	NVC/EMG
	7/28	Muscular fitness	Fitness demo
3	8/2	Body Comp	DXA demo
	8/4	RER	RER/ Exercise Rx Review
4	8/9	Wingate	Wingate demo
	8/11	VO <sub>2max</sub> testing	Final Review/ VO <sub>2max</sub> demo
5			<b>Final (Due 8/11 by 11:59pm)</b>

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