

HHPK 450.81B: Exercise Physiology

Fall 2022 Thursdays: 11-11:50a / Dallas Campus

Instructor: Dr. Sarah M. Mitchell, PhD, ATC, LAT

Office Location: Nursing & Health Sciences #116 Office Hours: By Appointment, Wed 10a-1p, Thurs 9-11a (Dallas) or Virtual Office Phone: (903) 886-5543 Office Fax: (903) 886-5365 Email Address: Sarah.Mitchell@tamuc.edu Preferred Form of Communication: Email Communication Response Time: 24-48 hours

Teaching Assistant/Lab Instructor: Raquesha Cox

Email Address: rcox4@leomail.tamuc.edu Lab Section 81L: Meets Thursdays 2-3:15p in Dallas

COURSE INFORMATION

Required Textbook:

Powers & Howley. Exercise Physiology-Connect Access. 11th edition. McGraw-Hill. ISBN: 9781260813470.

- You are required to purchase McGraw-Hill Education Connect access. Connect access includes the ebook and several other learning features, such as practice quizzes and content animations. It also includes the SmartBook Preview/Review assignments. 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.

Required Lab Manual:

Purchase the lab manual online via the <u>TAMUC marketplace</u> (search for Health and Human Performance, HHPK 450L Exercise Physiology Lab Manual). Use your tamuc email address during the checkout process. Then pick up the manual during the first 2 weeks of the semester in class/lab. The manual is needed to complete the lab assignments.

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. Corequisites: HHPK 450L.

Student Learning Outcomes

- 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. Conduct and interpret laboratory and field tests used in exercise and fitness.

Minimal Technical Skills Needed

COURSE REQUIREMENTS

Students must have working knowledge of and know how to use the MyLeo Online: D2L Brighspace learning management system, and Microsoft Word/Excel/PowerPoint. Students must utilize their University assigned email (Leo mail) for all course communications. All email communication from the instructor will be sent to the student's Leo mail.

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 SmartBook 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.

Grading

Each assignment will be worth a pre-determined amount of points. Upon the completion of the course, grades will be calculated by adding up the total number of points each student has earned and dividing it by the total amount of points available in the course. This will produce a percentage of points earned (Ex. Student earned 850 points out a possible 1000 in the course: 850/1000 = 85% "B"). Grades will be assigned based upon the percentages below.

Exams: 4 x 75 pts	Grading Scale:			
Quizzes: 7 x 20 pts	A = 90-100%			
Connect Previews/Reviews: 11 x 10pts	B = 80-89%			
Exercise Prescription: 100 pts	C = 70-79%			
In-class engagement/participation: 100 pts	D = 60-69%			
Lab: 250 pts	F = 0-50			
Pre-Labs: 10 x 10 pts				
Lab Reports: 10 x 10 pts				
Lab Final Exam: 50 pts				
Total: 1000 pts				

Students are expected to earn points toward their final grade during the course of the semester with the assignments and tests that are scheduled. Extra Credit Assignments WILL NOT be given at the end of the semester. All students are graded based on the exact same criteria and no exceptions will be made for individual assignments, tests, or final point values.

Students will receive back all graded assignments in a timely manner (typically within 1 week of the due date). Students are encouraged to keep all graded assignments as well as keep up with their grades throughout the semester. Any questions or concerns about assignments/grades should be brought to the instructor's attention immediately (i.e. Do not wait until the end of the semester)

ASSESSMENTS

Exams

There will be four exams. Exams will cover lectures, class activities, and the textbook. Aligns with SLOs #1 and 2.

Quizzes

There will be eight (8) scheduled quizzes, taking place during the first 10 minutes of class time. Only 7 will be scored; i.e., the lowest score will be dropped. Quizzes may cover material from previous lectures, class activities, and the textbook assignments. Aligns with SLOs #1 and 2.

Previews/Reviews via McGraw-Hill Connect Access

There will be 12 SmartBook assignments within the McGraw-Hill Connect online access, including both reading and practicing the material learned in each chapter. Only 11 will be score, the lowest score will be dropped. To access Connect within D2L, click on the McGraw Hill Connect module. Aligns with SLOs #1 and 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.

Engagement/Participation

To engage students with the class material, tasks will be assigned throughout the semester. These tasks may include quizzes, questionnaires, surveys, discussions, exit tickets, case studies, etc. to be completed either in class or online. It's the participation in and completion of these tasks, rather than "right/wrong" answers, that counts towards this grade. Aligns with SLOs #1 and 2.

Laboratory

The lab sessions provide hands-on learning experiences to strengthen the information learned during lectures. Participation in the lab session is required. The lab graduate assistant will conduct all labs and score grade all assignments and exam. Aligns with SLO #4.

Prelabs and Lab Reports

There will be ten (10) labs, each with a prelab and lab report assignment. The prelab explains lab procedures and may offer supplemental video instruction to introduce the lab topic for the week. Prelabs are due BEFORE the respective lab session. In the subsequent lab report, you will present and discuss the results obtained from lab session. You are responsible for recording the results of demonstrations during lab.

Lab final Exam

The lab final exam will be a comprehensive written exam that may cover any of the 10 labs.

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.ht m

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 <u>helpdesk@tamuc.edu</u>.

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, Starbucks, a TAMUC campus open computer lab, etc.

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: <u>https://community.brightspace.com/support/s/contactsupport</u>

Interaction with Instructor Statement

Email is the best way to contact the instructor if you need assistance with any aspect of the course. Instructor will typically respond to emails within 24 hours (except on weekends). Students are also welcome to utilize instructor's office hours if they prefer a face to face conversation.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

- Lecture presentations and supplemental lecture and lab materials, as well as the gradebook will be made available on D2L.
- See syllabus for due dates on all assignments. Late assignments will not be accepted, unless you have made prior arrangements with the instructor(s).
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Lecture Specific Procedures/Policies

- Regular attendance of lectures is highly advised. Powerpoint slides and supplemental videos will be made available via D2L as well. You are responsible for obtaining information that was covered in class from your classmates in case you cannot attend.
- All quizzes will be given in person in class. Make-up quizzes or engagement/participation assignments may be granted only if student informs the instructor IN ADVANCE and have a documents excused absence.
- SmartBook previews/reviews are due online via McGraw Hill Connect (accessible via D2L).

Lab Specific Procedures/Policies

• Lab attendance is mandatory in order to receive credit for the lab report. If you are unable to attend your designated lab meeting time, email the lab instructor at least 3 days in advance so that arrangements may be made for you to attend the other lab session.

- Pre-labs are due by 1:59 pm on your scheduled lab day (i.e., if you are in Tuesday's lab, the pre-lab is due on Tuesday, if you are in Thursday's lab, the pre-lab is due on Thursday).
- All lab reports are due by 11:59 pm on Sundays.
- Late assignments are capped at a maximum of 70%. Assignments more than 3 days late will receive a zero.
- During the semester, we will be in the Human Performance Laboratory. You must show respect for the all equipment found in the lab. Failure to follow this rule will result in removal from the lab for the duration of the semester.
- Wear proper attire. Throughout the semester, there will be times when you will perform different types of exercises. You must dress appropriately for exercise each day; indecent attire will not be tolerated and will result in dismissal from class and no credit will be given for the lab report.

Attendance

This is a "Blended" course (i.e. Face-to-Face with online content). Class attendance is **required** for in-person class times. Excused absences include university approved absences or those that I receive appropriate notification of (i.e. sudden/serious illness, death to immediate family member, etc.). It is the student's responsibility to notify the instructor ahead of time if they are going to miss class due to an excused absence and make arrangements for all materials and assignments that will be missed on that day. In the case of excused absences due to unavoidable or emergency situations, the student must promptly notify the instructor via phone call or email explaining the circumstances. Prompt notification (with three days) is required to have an absence excused; additionally, written documentation may be required to have the absence excused.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as 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.

University Specific Procedures

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 <u>Student Guidebook</u>.

http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebookaspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <u>https://www.britannica.com/topic/netiquette</u> Students are expected to prepare for, participate in, and attend each scheduled class. Failure to do so may/will lead to a decline in the student's overall grade. In order to succeed in this class, students should read each chapter prior to beginning that section in the course. Forming study groups to prepare for class and tests will also greatly benefit students throughout the semester.

Students are also expected to behave appropriately in class and avoid being a distraction to their fellow students and the instructor. Appropriate behavior involves paying attention, actively participating, and following instructions. Cell phones (including text messaging), music, inappropriate language/gestures, and any other behavior determined to be a distraction will not be tolerated. Students who are considered to be a disturbance in class will be asked to leave.

TAMUC Attendance

For more information about the attendance policy please visit the <u>Attendance</u> webpage and <u>Procedure 13.99.99.R0.01</u>.

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

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13s tudents/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

Undergraduate Student Academic Dishonesty Form

<u>http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf</u>

Graduate Student Academic Dishonesty Form

http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishone styFormold.pdf

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13s tudents/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**, Velma K. Waters Library Rm 162, Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148 Email: 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.

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 <u>Carrying Concealed Handguns On Campus</u> document and/or consult your event organizer. Web url:

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34S afetyOfEmployeesAndStudents/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.

A&M-Commerce Supports Students' Mental Health

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

Department or Accrediting Agency Required Content

Assumption of Risk

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.

Module	Dates	Lecture Topics	Lecture Assessments	Lab Topics
1	9/1	Intro and Syllabus		
	9/8	10) Respiratory system	SB 10	1) PFT, BP
	9/15	9) Cardiovascular system	SB 9; Quiz 1	2) Submax CRF I
	9/22	13) Physiology of endurance training & Training for cardiorespiratory fitness	SB 13; Quiz 2	2) Submax CRF II
			Exam 1	
2	9/29	7) Nervous system	SB 7	3) VO2max/Pulse Ox
	10/6	8) Skeletal muscle	SB 8; Quiz 3	4&5) EMG & NVC
	10/13	14) Physiology of resistance training & Training for muscular fitness	SB 14; Quiz 4	6) Muscular fitness I
			Exam 2	
3	10/20	Exercise is Medicine-On Campus Exercise prescription		6) Muscular fitness II
	10/27	3) Bioenergetics	SB 3	7&8) RER & Lactate
	11/3	4) Exercise metabolism	SB 4; Quiz 5	9) RMR
	11/10	18) Nutrition & Body composition	SB 18 Quiz 6	10) Body Comp
			Exam 3	
4	11/17	12) Temperature regulation	SB 12 ExRx	Optional: ExRx/Review
	11/24	No class - Thanksgiving		
	12/1	20) Training for performance	SB 20 Quiz 7	Lab Final
	12/8	24) Ergogenic aids	SB 24; Quiz 8	
	12/15		Exam 4	

COURSE OUTLINE / CALENDAR

Pre-labs are due by 1:59 pm on Thursdays.All lab reports are due by 11:59pm on Sundays.