



HHPK 532.01E, CARDIOPULMONARY PHYSIOLOGY

COURSE SYLLABUS: SPRING 2024

INSTRUCTOR INFORMATION

Instructor:	Dr. Vipa Bernhardt
Office Location:	NHS 165D
Office Hours:	TR 2-3:30, R 9-11, or by appointment
Email Address:	Vipa.Bernhardt@tamuc.edu
Class Meeting:	TR 9:30-12:00 in NHS 165

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Required Readings: Texts will be selected and provided by the instructor throughout the semester. These will include excerpts from textbooks, literature review papers, and journal articles.

Course Description

A study of normal physiological and pathological mechanisms at rest and during exercise. The focus of this course is on the mechanisms that affect the heart and lungs.

Student Learning Outcomes

1. Understand and analyze the anatomy, physiology and pathophysiology of the respiratory and cardiovascular systems at rest and during exercise.
2. Be able to safely and accurately conduct cardiopulmonary exercise tests.
3. Evaluate physiological responses to cardiopulmonary exercise tests.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

- Using the D2L learning management system
- Using Microsoft Word, PowerPoint, and Excel

The syllabus/schedule are subject to change.

Instructional Methods

This course will utilize various teaching methods, including lecture, small group learning, laboratory instruction, and case studies. Team-based learning will play an integral part of the course experience.

Student Responsibilities or Tips for Success in the Course

Attendance and participation is required. You will be expected to work in a team.

GRADING

1. Participation	50%
2. Written exam	20%
3. Practical exam	30%
Total:	100%

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

Assessments

Participation:

You are expected to actively participate in all class and laboratory sessions, including asking and answering questions, engaging in group work, as well as performing and conducting exercise tests. Aligns with SLOs #1, 2, 3.

Written exam:

The exam will cover all class content. Aligns with SLOs #1 and 3.

Practical exam:

Student teams will conduct and interpret a cardiopulmonary exercise test on a person of the instructor's choosing. Teams will be evaluated based on their professionalism towards the participant, accurate explanation of the testing procedures, safety measures, accurate measurements and interpretation of the test results. Aligns with SLOs #2 and 3.

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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

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.

COMMUNICATION AND SUPPORT

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

If you have any questions or are having difficulties with the course material, please talk to me before or after class, during office hours, or via email.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

- All lecture and lab materials, as well as the gradebook will be made available on D2L.
- See syllabus for due dates on all assignments.

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 class and/or via D2L.

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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 [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

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:

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.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

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

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

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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 [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.

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.

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COURSE OUTLINE / CALENDAR

Week	Day	Tentative Topics
1	1/30	Syllabus and introductions Cardiopulmonary physiology Intro to cardiopulmonary exercise testing
2	2/6	Pretest assessment Supervising a CPET How to do a CPET
3	2/13	Intro to 9-panel plot
4	2/20	Oxygen uptake, Heart rate
5	2/27	Oxygen pulse
6	3/5	Ventilation, Breathing Reserve
	3/12	Spring Break – no class
7	3/19	Carbon dioxide output, Respiratory exchange ratio
8	3/26	Ventilatory equivalents
9	4/2	Lactate threshold, Anaerobic threshold, Respiratory compensation point
10	4/9	Oxygen saturation, Additional respiratory measurements
11	4/16	CPETs role in exercise prescription
12	4/23	Written exam
13	4/30	Practical exams

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