

EPHP 3301, Exercise Physiology I

Spring 2019

Texas A&M University-Central Texas

COURSE DATES, MODALITY, AND LOCATION

This course meets face-to-face with supplemental materials made available online through the Texas A&M-Central Texas Canvas Learning Management System [https://tamuct.instructure.com/].

Dates/Times: Tuesdays and Thursdays – 10:00am – 12:50pm

Location: Heritage Hall 309

INSTRUCTOR AND CONTACT INFORMATION

Instructor: Julie Kresta, Ph.D.

Office: 322C Warrior Hall

Phone: 254-519-5428

Email: jkresta@tamuct.edu

Office Hours:

By appointment only.

Mode of instruction and course access:

The delivery of the course content will be primarily delivered using a blended classroom approach between a traditional lecture course and a flipped classroom model. The intent of the blended classroom model is to provide students with the opportunity to gain first exposure (i.e. knowledge, remembering and understanding) to new course material outside of class, usually via focused reading assignments called *priming activities*. Higher levels of learning (application, analyzing, and evaluation) intended to guide assimilation of that content into practice will be explored through faculty guided in-class discussions, case scenarios and laboratory experiences. Students are expected to be active participants in the learning process. This requires that students come to class prepared to participate in the learning activities designed to foster higher levels of learning.

- **Priming activities** must be completed prior to the class lecture time
- **Post lecture assignments** are due on their listed due dates. If the assignment is not handed in on time the assignment will assigned a grade of "0".

This course uses the A&M-Central Texas Canvas Learning Management System [https://tamuct.instructure.com/].

Student-instructor interaction:

Students are encouraged to use office hours and email as the primary methods to contact the course instructor. Email will be checked regularly throughout the day up until 9:00pm during the academic week. Email responses will be made within 24-48 hours. Appointments can also

be made and are recommended to discuss any course material and/or issues.

911 Cellular:

Emergency Warning System for Texas A&M University-Central Texas

911Cellular is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in 911Cellular through their myCT email account.

Connect at [911Cellular](https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management) [https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management] to change where you receive your alerts or to opt out. By staying enrolled in 911Cellular, university officials can quickly pass on safety-related information, regardless of your location.

COURSE INFORMATION

Course Overview and description: This course provides the foundational basis for understanding the body's physiological responses to physical activity. This course will focus on acute responses and chronic physiologic adaptations to physical activity, including some of the static and dynamic factors that influence such responses and adaptations. Areas covered include energy transfer during rest and exercise, physiologic and performance adaptations of the cardiovascular, respiratory and digestive systems.

Course Objective: The purpose of this course is to increase the student's knowledge and understanding of the physiological adaptations that occur during exercise. Emphasis will be applied to the cardiovascular, respiratory, and digestive systems.

Student Learning Outcomes:

1. Understand the importance of bioenergetics (energy transformation) on exercise response and health.
 - a. Recognize the substrates utilized by each energy system and the process of substrate depletion and repletion depending on the activity.
2. Understand the importance of energy systems on exercise response and health.
 - a. Describe the systems responsible for energy metabolism at rest and during exercise.
3. Compare and contrast metabolic pathways that are active during any form of movement in a healthy person (e.g. aerobic, anaerobic).
4. Understand the acute physiological changes that occur during exercise for the cardiovascular system.
5. Understand the acute physiological changes that occur during exercise for the respiratory system.
6. Understand the acute physiological changes that occur during exercise for the digestive system.
7. Understand the cardiovascular adaptations that occur following exercise training.
8. Understand the respiratory system adaptations that occur following exercise training.
9. Understand the digestive system adaptations that occur following exercise training.
10. Understand the health and physiological benefits of regular exercise.
11. Understand the relationship between the various systems of the human body in response to

exercise.

Competency Goals Statements (certification or standards):

Required Reading and Textbook(s):

McArdle, Katch and Katch. Exercise Physiology: Energy, Nutrition and Human Performance, 8th Edition. Lippincott, Williams and Wilkins 2014. 978-1451191554

COURSE REQUIREMENTS

Course Requirements:

Written Examinations: All written examinations will be delivered during class time on the designated dates. Exams will include questions in various formats including multiple choice, short answer and/or essays. In addition, all examinations may be cumulative and will be explained by the course instructor.

EXAMINATION ATTENDANCE

All examinations must be taken on the date and at the time scheduled by the course coordinator. ***Any student missing a scheduled exam will receive a 0 for that exam.*** In the cases of extenuating circumstances, the student may petition for delayed or early examination. (Note: the early option is only available for written examinations). Requests for an alternate examination period need to be submitted electronically to the course coordinator at least ***14 days in advance of the scheduled exam.***

For unanticipated events (illnesses, car accident, etc.), students should notify the course coordinator by email and by phone as soon as feasible. Appropriate documentation (Doctor's note etc.) at the discretion of the course coordinator will need to be provided before an examination is re-scheduled.

EXAMINATION POLICY

The following items are not allowed during testing:

- Breaks / Bathroom breaks (If student needs to leave the classroom for any reason (including to use the bathroom) they must submit their exam whether or not it is completed)
- Book bags, handbags or any other bag of materials (bags to be placed in the front or side of the testing room)
- No food or drink on the desk or in the surrounding area
- No technology / electronic devices other than the computer used for testing (only if the exam is given through a computer-based program). This includes smart watches, cell phones, tablets, PDAs, etc.
- No hats or other large accessories
- No earphones / headphones

The following items may only be used as indicated by the course instructor and must be turned into the faculty upon completion of the examination:

- Blank sheet of paper (checked prior by instructor)
- Pen/pencil used to write on paper (checked prior by instructor)
- Ear plugs (checked prior by instructor)

Written Quizzes: Written quizzes will be incorporated into the course at the start of class on specified days. Students will be given 10-15 minutes to complete each quiz. There may also be unannounced quizzes throughout the course.

Activity Assignments: Students will complete several activities during the course. All activities will be described in writing in advance with detailed expectations and a grading rubric. Activities will relate back to the topics being covered in the lecture at the time. Each activity will have a written assignment upon completion that may include calculations, formulating conclusions and critical thinking questions. These assignments will be due one week after the activity was completed, unless otherwise stated by the instructor.

Article Review: Students will perform an in depth article review on a specified topic. This review will include the student finding an appropriate peer-reviewed article, which will be approved in advance by the course instructor. Students will prepare a brief presentation based on the article as well as lead a class discussion related to the article. Students will be graded on their presentation as well as their ability to lead the discussion. Specific rubrics will be made available to the students in advance.

GRADING POLICY: The student will be graded as follows:

<u>Item</u>	<u>Weight</u>
Exam I	20%
Exam II	20%
Exam III	20%
Quizzes	10%
Activity Assignments	20%
<u>Article Review</u>	<u>10%</u>
Total	100%

Grading Criteria Rubric and Conversion

Specific rubrics to be used for grading will be made available when the assignment is posted.

Posting of Grades

- Grades for assignments, quizzes, exams, and projects will be posted on the Canvas Grade book for students to access. In addition to individual item grades, a running cumulative course grade will be available to view.
- All assignments, quizzes, exams, and projects will be graded within 1 week of the due date, unless otherwise specified by the professor.

COURSE OUTLINE AND CALENDAR

Complete Course Calendar

COURSE SCHEDULE: 1ST 8-WEEK TERM

WEEK 1 –

- LECTURE 1: Tuesday, January 15
 - **PRIMING ACTIVITY:** Read Chapters 5-6
 - **IN CLASS:** Syllabus Review / Bioenergetics and Metabolism
- LECTURE 2: Thursday, January 17
 - **PRIMING ACTIVITY:** Read Chapter 7-8
 - **IN CLASS:** Bioenergetics and Metabolism

WEEK 2 –

- LECTURE 1: Tuesday, January 22
 - **PRIMING ACTIVITY:** Read Chapters 7-8
 - **IN CLASS:** Bioenergetics and Metabolism
- LECTURE 2: Thursday, January 24
 - **PRIMING ACTIVITY:** Chapters 9-11
 - **IN CLASS:** Metabolism / [QUIZ 1](#)
 - **POST ACTIVITY:** [ASSIGNMENT 1 – Due Wednesday, January 30](#)

WEEK 3 –

- LECTURE 1: Tuesday, January 29
 - **PRIMING ACTIVITY:** Review Chapters 5-11
 - **IN CLASS:** Exam Review
- LECTURE 2: Thursday, January 31
 - **PRIMING ACTIVITY:** Review Metabolism
 - **IN CLASS:** [EXAM I - Metabolism](#)

WEEK 4 –

- LECTURE 1: Tuesday, February 5
 - **PRIMING ACTIVITY:** Read Chapter 12, 13
 - **IN CLASS:** Pulmonary Structure and Function / Gas Exchange
 -
- LECTURE 2: Thursday, February 7
 - **PRIMING ACTIVITY:** Read Chapter 14
 - **IN CLASS:** Dynamics of Pulmonary Ventilation

WEEK 5 –

- LECTURE 1: Tuesday, February 12
 - **PRIMING ACTIVITY:** Read Chapter 15
 - **IN CLASS:** Cardiovascular Structure and Function
- LECTURE 2: Thursday, February 14
 - **PRIMING ACTIVITY:** Read Chapter 16, 17
 - **IN CLASS:** Cardiovascular Regulation / Functional Capacity / EKG / [QUIZ 2](#)

WEEK 6 –

- LECTURE 1: Tuesday, February 19
 - **PRIMING ACTIVITY:** Review Cardiovascular chapters
 - **IN CLASS:** Exam Review
 - **POST ACTIVITY:** [ASSIGNMENT 2 – Due Monday, February 25](#)
- LECTURE 2: Thursday, February 21

- **PRIMING ACTIVITY:** Review all pulmonary and cardiovascular materials
- **IN CLASS:** [EXAM II – Pulmonary and Cardiovascular](#)

WEEK 7 –

- LECTURE 1: Tuesday, February 26
 - **PRIMING ACTIVITY:** Read provided articles/information
 - **IN CLASS:** Gastrointestinal Structure and Function
- LECTURE 2: Thursday, February 28
 - **PRIMING ACTIVITY:** Read provided articles/information
 - **IN CLASS:** Gastrointestinal Response to Exercise / Training Adaptations

WEEK 8 –

- LECTURE 1: Tuesday, March 5
 - **PRIMING ACTIVITY:** Review digestive information
 - **IN CLASS:** Digestive Review / [ARTICLE REVIEW PRESENTATIONS](#)
- LECTURE 2: Thursday, March 7
 - **PRIMING ACTIVITY:** Review digestive information
 - **IN CLASS:** [EXAM III – Digestive](#)

Important University Dates:

- January 22 – Deadline to Drop First 8-week classes with no record
- February 22 – Deadline to Drop First 8-week classes with a Quit (Q) or Withdraw (W)

TECHNOLOGY REQUIREMENTS AND SUPPORT

Technology Requirements

This course will use the A&M-Central Texas Instructure Canvas learning management system. Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com>].

Username: Your MyCT username (xx123 or everything before the "@" in your MyCT e-mail address)

Password: Your MyCT password

Canvas Support

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select "Chat with Canvas Support," submit a support request through "Report a Problem," or call the Canvas support line: 1-844-757-0953.

For issues related to course content and requirements, contact your instructor.

Other Technology Support

For log-in problems, students should contact Help Desk Central.

24 hours a day, 7 days a week:

Email: helpdesk@tamu.edu

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [<http://hdc.tamu.edu>]

Please let the support technician know you are an A&M-Central Texas student.

UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES

Drop Policy.

If you discover that you need to drop this class, you must complete a [Drop Request Form](https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf) [https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf].

Professors cannot drop students; this is always the responsibility of the student. The Registrar's Office will provide a deadline on the Academic Calendar for which the form must be completed, signed and returned. Once you return the signed form to the Registrar's Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar's Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

Academic Integrity.

Texas A&M University -Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Academic integrity is defined as a commitment to honesty, trust, fairness, respect, and responsibility. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. Academic misconduct is any act that improperly affects a true and honest evaluation of a student's academic performance and includes, but is not limited to, cheating on an examination or other academic work, plagiarism and improper citation of sources, using another student's work, collusion, and the abuse of resource materials. All academic misconduct concerns will be reported to the university's Office of Student Conduct. Ignorance of the university's standards and expectations is never an excuse to act with a lack of integrity. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

Academic Accommodations.

At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Office of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the university's programs, services and activities. If you believe you have a disability requiring reasonable accommodations please contact the Office of Access and Inclusion at (254) 501-5831. Any information you provide is private and confidential and will be treated as such.

For more information please visit our [Access & Inclusion](https://www.tamuct.edu/student-affairs/access-inclusion.html) web page [https://www.tamuct.edu/student-affairs/access-inclusion.html].

Important information for Pregnant and/or Parenting Students.

Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education's Office of Civil Rights, the Dean of Student Affairs' Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit the [Student Affairs](https://www.tamuct.edu/student-affairs/index.html) web page [https://www.tamuct.edu/student-affairs/index.html]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines online](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf), please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf].

Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender—including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Associate Dean in the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

Tutoring.

Tutoring is available to all A&M-Central Texas students, both on-campus and online. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Tutors are available at the Tutoring Center in Warrior Hall, Suite 111.

If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, or have any other question, contact Academic Support Programs at (254) 519-5796, or by emailing Dr. DeEadra Albert-Green at deeadra.albertgreen@tamuct.edu.

Chat live with a tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive FREE online tutoring and writing support. This tool provides tutoring in over 40 subject areas. Access Tutor.com through Canvas.

University Writing Center.

Located in Warrior Hall 416, the University Writing Center (UWC) at Texas A&M University–Central Texas (TAMUCT) is a free workspace open to all TAMUCT students from 10:00 a.m.-5:00 p.m. Monday thru Thursday with satellite hours in the University Library Monday thru Thursday from 6:00-9:00 p.m. This semester, the UWC is also offering online only hours from 12:00-3:00 p.m. on Saturdays.

Students may arrange a one-on-one session with a trained and experienced writing tutor by visiting the UWC during normal operating hours (both half-hour and hour sessions are

available) or by making an appointment via [WOnline](https://tamuct.mywconline.com/) at [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu for any assistance needed with scheduling.

Tutors are prepared to help writers of all levels and abilities at any stage of the writing process. While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WIFI, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the UWC is here to help!

If you have any questions about the UWC, please do not hesitate to contact Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu.

University Library.

The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 250,000 eBooks and 82,000 journals, in addition to the 85,000 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place on Skype or in-person at the library. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](http://tamuct.libguides.com/index) [http://tamuct.libguides.com/index].

OPTIONAL POLICY STATEMENTS:

A Note about Sexual Violence at A&M-Central Texas

Sexual violence is a serious safety, social justice, and public health issue. The university offers

support for anyone struggling with these issues. University faculty are mandated reporters, so if someone discloses that they were sexually assaulted (or a victim of Domestic/Dating Violence or Stalking) while a student at TAMUCT, faculty members are required to inform the Title IX Office. If you want to discuss any of these issues confidentially, you can do so through Student Counseling (254-501-5955) located on the second floor of Warrior Hall (207L).

Sexual violence can occur on our campus because predators often feel emboldened, and victims often feel silenced or shamed. It is incumbent on ALL of us to find ways to actively create environments that tell predators we don't agree with their behaviors and tell survivors we will support them. Your actions matter. Don't be a bystander; be an agent of change. For additional information on campus policy and resources visit the [Title IX webpage](https://www.tamuct.edu/departments/compliance/titleix.php) [https://www.tamuct.edu/departments/compliance/titleix.php].

INSTRUCTOR POLICIES.

CLASSROOM USE OF ELECTRONIC DEVICES

Unauthorized and/or distracting use of electronic devices will not be tolerated in the classroom. Electronic devices include, but are not limited to, computers, cell phones, pagers, smart watches, and Tablets. Examples of unauthorized use include: "Instant-Messaging"; inappropriate internet browsing/surfing; playing games; talking on cell phones; e-mailing. Students are expected to turn off audio notification for cell phones and pagers. ***A student who engages in distracting or unauthorized use of electronic equipment in class is considered to be in violation of the MU DPT professional behaviors and will be asked to immediately leave class.*** Being dismissed from class will count as an absence. Further sanctions will be applied for repeat offenses.

COMPUTER ISSUES

Many students utilize personal laptops or tablets for note and examination taking, and for submitting assignments electronically to Canvas or other online programs. If a student should have issues regarding submission of assignments due to technical computer issues (i.e. computer malfunction, network outage, etc.), the student is responsible for submitting the assignment on time. They should email or phone their course instructor to notify them of the issue and attempt to submit the assignment via email or other means as decided by the course instructor. Submission of a late assignment due to technical computer issues as described above will follow the Late Work Policy. No exceptions will be made for technical problems involving the internet, email, or Canvas.

If a student has technical issues and requires an additional computer/laptop for examination, it is their responsibility to notify the course instructor to attain the necessary equipment. Notification should be given at least 24 hours prior to the examination date/time, if possible.

LATE WORK

Students should turn assignments in by their due date and time as indicated by the course instructor or syllabus. In the event that assignments are turned in after the appropriate designated date/time without prior approval by the course instructor, the following course policy applies:

- On the first offense, the student will receive a decrease in their grade on the assignment by one letter grade in addition to any missed points on the assignment.
- On the second late offense, or any thereafter, the student will receive a “0” for the assignment.

No exceptions will be made for technical problems involving the internet, email, or Canvas. Emergency or illness are some of the only exceptions to this policy. All potential exceptions will be dealt with on an individual basis.

EXAMINATION REVIEW

Students will be provided with **ONE** opportunity to review their examination. The review will be at the discretion of the course coordinator. Students are not permitted to copy, write, reproduce, photograph or identify in any way examination questions, answers and/or rationale (hard or electronic format) provided during an examination/quiz review and will be considered an honor code violation if done so.

Copyright Notice.

Students should assume that all course material is copyrighted by the respective author(s). Reproduction of course material is prohibited without consent by the author and/or course instructor. Violation of copyright is against the law and Texas A&M University-Central Texas’ Code of Academic Honesty. All alleged violations will be reported to the Office of Student Conduct.

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