

## **EPHP 3301-115, 10099, Exercise Physiology I**

**Spring 2023**

Texas A&M University-Central Texas

### **COURSE DATES, MODALITY, AND LOCATION**

This course meets from January 17, 2023 through March 10, 2023.

This is a blended course, which meets both in person on Tuesdays from 11:00-12:15pm in Warrior Hall 315 and online using the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com/>].

### **INSTRUCTOR AND CONTACT INFORMATION**

**Instructor:** Julie Kresta, PhD

**Office:** 322M Warrior Hall

**Phone:** 254-519-5428

**Email:** [jkresta@tamuct.edu](mailto:jkresta@tamuct.edu)

#### **Office Hours**

Tuesdays: On campus hours, by appointment only

Wednesdays: 10:00am – 12:00pm – Virtual Hours

Thursdays: 9:00am – 11:00am – Virtual Hours

It is strongly recommended to make an appointment via email for all meetings, whether in person or virtual.

#### **Student-instructor interaction**

Students are encouraged to use email as the primary method to contact the instructor. Email is 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.

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

**SAFEZONE.** SafeZone provides a public safety application that gives you the ability to call for help with the push of a button. It also provides Texas A&M University-Central Texas the ability to communicate emergency information quickly via push notifications, email, and text messages. All students automatically receive email and text messages via their myCT accounts.

Downloading SafeZone allows access to push notifications and enables you to connect directly for help through the app.

You can download SafeZone from the app store and use your myCT credentials to log in. If you would like more information, you can visit the [SafeZone](http://www.safezoneapp.com) website [[www.safezoneapp.com](http://www.safezoneapp.com)].

To register SafeZone on your phone, please follow these 3 easy steps:

1. Download the SafeZone App from your phone store using the link below:
  - [iPhone/iPad](https://apps.apple.com/app/safezone/id533054756): [https://apps.apple.com/app/safezone/id533054756]
  - [Android Phone / Tablet](https://play.google.com/store/apps/details?id=com.criticalarc.safezoneapp)  
[https://play.google.com/store/apps/details?id=com.criticalarc.safezoneapp]
2. Launch the app and enter your myCT email address (e.g. {name}@tamuct.edu)
3. Complete your profile and accept the terms of service

**For updates on COVID information**, please monitor the University [website](https://www.tamuct.edu/covid19/)

[https://www.tamuct.edu/covid19/]

## **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 neuromuscular systems.

### **Course Objective or Goal**

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 neuromuscular 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

- neuromuscular 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 neuromuscular 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.

### **Required Reading and Textbook(s)**

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

### **COURSE REQUIREMENTS**

**Examinations:** All written examinations will be delivered online through Canvas 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. Requests for an alternate examination period need to be submitted in writing or via email to the course coordinator at least ***7 days in advance of the scheduled exam.***

For unanticipated events (illnesses, car accident, etc.), students should notify the course instructor by email and/or by phone as soon as possible. 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:

- Book bags, handbags or any other bag of materials (bags to be placed in the front or side of the testing room)
- No technology / electronic devices other than the computer used for testing. This includes smart watches, cell phones, tablets, PDAs, etc.
- No other individuals, as all examinations are to be completed independently
- No written resources related to the course to include textbooks, notes, printed lectures, or any other informational source. All exams are closed book/note.

**Weekly Discussions:** On specified weeks, there will be a discussion board created to cover specific topics. The course instructor will ask several critical thinking questions that each

student will be asked to answer. Students must comment at least once per discussion board to receive credit and will be graded on the quality of their comments based on a rubric that will be provided in advance.

**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 is 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. Specific rubrics and detailed instructions will be made available to the students in advance.

Students will be graded as follows:

| <u>Item</u>                        | <u>Weight</u> |
|------------------------------------|---------------|
| Exam I                             | 15%           |
| Exam II                            | 20%           |
| Exam III                           | 15%           |
| Weekly Discussions                 | 10%           |
| Activity Assignments               | 20%           |
| <u>Article Review Presentation</u> | <u>20%</u>    |
| <b>Total</b>                       | <b>100%</b>   |

### **Grading Criteria Rubric and Conversion**

Specific rubrics to be used for grading will be made available via Canvas 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.

### **Grading Policies**

- **COMPUTER ISSUES**

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.

- **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. 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 review and will be considered an honor code violation if done so. Students may request an appointment with the instructor to review exams an additional time.

## **COURSE OUTLINE AND CALENDAR**

### **Complete Course Calendar**

#### **COURSE SCHEDULE: 1<sup>ST</sup> 8-WEEK TERM**

##### **WEEK 1 – January 17-20**

- ***Tuesday, January 17 – In class***
  - Syllabus and Course Overview
- ***Remote throughout the week:***
  - *Book Chapters to Review:*
    - Chapters 5-8
  - *Lectures to Review:*
    - Bioenergetics and Metabolism
- **WEEKLY DISCUSSION 1**

##### **WEEK 2 – January 23-27**

- ***Tuesday, January 24 – In class***

- Metabolism Activity – Meet in the Exercise Physiology Lab in Heritage Hall
- **Remote throughout the week:**
  - *Book Chapters to Review:*
    - Chapters 9-11
  - *Lectures to Review:*
    - Energy During Physical Activity
    - Measuring Energy Expenditure
- **WEEKLY DISCUSSION #2**
- **ASSIGNMENT #1 – Metabolism Activity (Due Tuesday, January 31 by 11:59pm)**

### WEEK 3 – January 30 – February 3

- **Tuesday, January 31 – In Class**
  - Metabolism review
- **EXAM 1 – Metabolism**
  - Posted on Wednesday, February 1
  - **Deadline: Friday, February 3 by 11:59pm**
- **Remote throughout the week:**
  - *Book Chapters to Review*
    - Chapter 12
  - *Lectures to Review:*
    - Pulmonary Structure and Function

### WEEK 4 – February 6-10

- **Tuesday, February 7 – In class**
  - Pulmonary Activity – Meet in the Exercise Physiology Lab in Heritage Hall
- **Remote throughout the week:**
  - *Book Chapters to Review*
    - Chapters 13, 14
  - *Lectures to Review:*
    - Gas Exchange and Dynamics
    - Respiratory Training Adaptations
- **WEEKLY DISCUSSION #3**
- **ASSIGNMENT #2 – Due Tuesday, February 14 by 11:59pm**

### WEEK 5 – February 13-17

- **Tuesday, February 14 – In class**
  - Cardio/EKG Activity – Meet in the Exercise Physiology Lab in Heritage Hall
- **Remote throughout the week:**
  - *Book Chapters to Review*
    - Chapters 15, 16, 17
  - *Lectures to Review*
    - Cardiovascular Structure and Function
    - EKG Interpretation

- Functional Capacity of the Cardiovascular System

- **WEEKLY DISCUSSION #4**

#### WEEK 6 – February 20-24

- **Tuesday, February 21 – In Class**
  - Cardiopulmonary Review
- **EXAM 2 – Pulmonary and Cardiovascular Systems**
  - Posted Wednesday, February 22
  - **Deadline Friday, February 24 by 11:59pm**

#### WEEK 7 – February 27 – March 3

- **Tuesday, February 28 – In Class**
  - **ARTICLE PRESENTATIONS**
- **Remote throughout the week:**
  - *Book Chapters to Review*
    - Chapters 18, 19, 22
  - *Lectures to Review*
    - Muscle Response to Exercise
    - Neural Control of Movement
    - Muscular Adaptations to Exercise
- **WEEKLY DISCUSSION #5**
- **ASSIGNMENT #3 – Due Tuesday, March 7 by 11:59pm**

#### WEEK 8 – March 6-8

- **Tuesday, March 7 – In Class**
  - **ARTICLE PRESENTATIONS**
  - Neuromuscular Review
- **EXAM 3 – Neuromuscular Response to Exercise**
  - Posted Wednesday, March 8
  - **Deadline Friday, March 10 by 11:59pm**

#### Important University Dates

- January 24, 2023 – Deadline to drop 1<sup>st</sup> 8-week course with no record
- February 24, 2023 – Deadline to drop a 1<sup>st</sup> 8-week course with a Quit (Q) or Withdraw (W)
- <https://www.tamuct.edu/registrar/academic-calendar.html>

#### TECHNOLOGY REQUIREMENTS AND SUPPORT

##### Technology Requirements

This course will use the A&M-Central Texas Instructure Canvas learning management system. **We strongly recommend the latest versions of Chrome or Firefox browsers. Canvas no longer supports any version of Internet Explorer.**

Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com/>] or access Canvas through the TAMUCT Online link in myCT [<https://tamuct.onecampus.com/>]. You will log in

through our Microsoft portal.

Username: Your MyCT email 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.

### **Online Proctored Testing**

A&M-Central Texas uses Proctorio for online identity verification and proctored testing. This service is provided at no direct cost to students. If the course requires identity verification or proctored testing, the technology requirements are: Any computer meeting the minimum computing requirements, plus web camera, speaker, and microphone (or headset). Proctorio also requires the Chrome web browser with their custom plug in.

### **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](mailto: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.*

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## **UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES**

### **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 Warrior Center for Student Success, Equity 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, WH-212; or call (254) 501-5836. Any information you provide is private and confidential and will be treated as such.

For more information, please visit our [Access & Inclusion](#) Canvas page (log-in required) [https://tamuct.instructure.com/courses/717]

### **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. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade



for the course. All academic misconduct concerns will be referred to the Office of Student Conduct. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

For more [information regarding the student conduct process](https://www.tamuct.edu/student-affairs/student-conduct.html),  
[<https://www.tamuct.edu/student-affairs/student-conduct.html>].

If you know of potential honor violations by other students, you may [submit a referral](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0),  
[[https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout\\_id=0](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0)].

### **Drop Policy**

If you discover that you need to drop this class, you must complete the [Drop Request](#) Dynamic Form through Warrior Web.

[<https://federation.ngwebsolutions.com/sp/startSSO.ping?PartnerIdId=https://eis-prod.ec.tamuct.edu:443/samlssso&SpSessionAuthnAdapterId=tamuctDF&TargetResource=https%3a%2f%2fdynamicforms.ngwebsolutions.com%2fSubmit%2fStart%2f53b8369e-0502-4f36-be43-f02a4202f612>].

Faculty 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. Once you submit the completed 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.

### **Important information for Pregnant and/or Parenting Students**

Texas A&M University-Central Texas supports students who are pregnant, experiencing pregnancy-related conditions, 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 [Student Affairs](https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html) [https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf) online, 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 virtually and in-person. Student success coaching is available online upon request.

If you have a question, are interested in becoming a tutor, or in need of success coaching contact the Warrior Center for Student Success, Equity and Inclusion at (254) 501-5836, visit the Warrior Center at 212 Warrior Hall, or by emailing [WarriorCenter@tamuct.edu](mailto:WarriorCenter@tamuct.edu).

To schedule tutoring sessions and view tutor availability, please visit [Tutor Matching Services](https://tutormatchingservice.com/TAMUCT) [https://tutormatchingservice.com/TAMUCT] or visit the Tutoring Center in 111 Warrior Hall.

Chat live with a remote 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 online tutoring support at no additional cost. This tool provides tutoring in over 40 subject areas except writing support. Access Tutor.com through Canvas.

## **University Library & Archives**

The University Library & Archives provides many services in support of research across campus and at a distance. We offer over 350 electronic databases containing approximately 631,525 eBooks and 75,149 journals, in addition to the 97,443 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 virtually through WebEx, Microsoft Teams or in-person at the library. [Schedule an appointment here](https://tamuct.libcal.com/appointments) [https://tamuct.libcal.com/appointments]. 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](https://tamuct.libguides.com/index) [https://tamuct.libguides.com/index]

## **University Writing Center**

University Writing Center: Located in Warrior Hall 416, the University Writing Center (UWC) at Texas A&M University–Central Texas (A&M–Central Texas) is a free service open to all A&M–Central Texas students. The hours of operation are from 10:00 a.m.-5:00 p.m. Monday thru Thursday in Warrior Hall 416 (with online tutoring available every hour as well) with satellite

hours available online only Monday thru Thursday from 6:00-9:00 p.m. and Saturday 12:00-3:00 p.m.

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!

Students may arrange a one-to-one session with a trained and experienced writing tutor by making an appointment via [WOnline](https://tamuct.mywconline.com/) [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu) if you have any questions about the UWC, need any assistance with scheduling, or would like to schedule a recurring appointment with your favorite tutor.

## **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 Wellness and 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/compliance/titleix.html) [https://www.tamuct.edu/compliance/titleix.html].

### **Behavioral Intervention**

Texas A&M University-Central Texas cares about the safety, health, and well-being of its students, faculty, staff, and community. If you are aware of individuals for whom you have a concern, please make a referral to the Behavioral Intervention Team. Referring your concern shows you care. You can complete the [referral](#) online

[https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout\_id=2].

Anonymous referrals are accepted. Please see the [Behavioral Intervention Team](#) website for

more information [<https://www.tamuct.edu/bit>]. If a person's behavior poses an imminent threat to you or another, contact 911 or A&M-Central Texas University Police at 254-501-5805.

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## **OTHER POLICIES**

### **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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