Physiological Basis of Human Performance
KINE 3080.003   Tuesday/Thursday   8:00 AM – 9:20 AM   Matthews Hall 102

Instructor: Sarah E. Deemer, PhD, CSCS   Sarah.Deemer@unt.edu
Office hours will be available on Tuesday and Thursday (12PM – 1PM) in person or via Zoom by appointment. Please email me in advance, and I will make sure we get a meeting set up!

Teaching Assistant: Patrick Schunk (Pat.Schunk@unt.edu)
                          Office hours TBD

Welcome to UNT!!
As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. UNT's full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

Prerequisites (recommended):
PHED 1000, KINE 2030, KINE 2050, with a minimum average GPA of a 3.0 across the three courses.
BIOL 2301/BIOL 2311 and BIOL 2302/BIOL 2312, with a C or better, or consent of instructor.

Text:
Physiology of Sport and Exercise, 6th Edition or later. Kenney, Wilmore & Costill. Human Kinetics.

Course Description:
Applied physiology course of study including bioenergetics, neuromuscular factors, and cardiovascular and pulmonary dynamics during exercise. Emphasis is placed on acute and chronic responses of human physiology to exercise stress.

🗣 Dr. Deemer's Mean Green Guidelines

- Final grades will be rounded up based on the nearest 0.51 percentage points (e.g., 79.51% = B; 79.49% = C). **This is non-negotiable**.
- Late work will not be accepted unless extenuating circumstances exist. If something arises, please contact me *IN ADVANCE* of the due date and we can arrange something.
- I may offer extra credit during the semester to the WHOLE class; I WILL NOT offer extra credit opportunities to an individual person, this would not be fair to your classmates, so please don't ask.
- Remember, YOU EARN your grade, I don't give you a grade. Do the work, interact with me and your classmates, and you should be successful in this class. I am always an email or Zoom call away and happy to help you succeed in this class.

Course Overview:
What is exercise physiology? The science of exercise physiology can be traced back to the Greek physicians during the Golden age of Greece (5th century BC). Herodicus, a physician and athlete spoke about the importance of proper diet and nutrition for athletic performance, which was then used as the foundation for his work on human health by Hippocrates ("father of preventive medicine," for whom the Hippocratic Oath was named after). Modern exercise physiology is a broad field that encompasses athletic performance, to disease prevention and disease management. During this course you will learn:

1. To identify the components of a high-quality published research article from PubMed. To reflect on knowledge that you gained from the selected research article.
2. To define and describe the key components/stages of the biological response to exercise for individual tissues and the body as a whole organism.
3. To describe how you could adapt an exercise program to improve response to training.
4. To cite examples of exercise training plans that maximize physiological improvement in cardiovascular performance, muscle strength/endurance, and/or body weight/composition.

Course Expectations:
1. **Keeping up with course materials:** It is imperative that you stay on task and prepare for each class period in a timely manner. The course lectures are set to time release on specific dates, and you will be responsible for having viewed the lecture and read the associated chapter(s) prior to coming to class.
2. If you have special learning needs, please inform the instructor immediately.
3. If at any point during the semester you are unhappy with your performance in this class, please contact the instructor **immediately**.
4. **Academic dishonesty** will not be tolerated (i.e., copying, plagiarism, cheating) and will result in a failing grade for the semester.

How the class will work: Team-Based Learning
The Team-Based Learning (TBL) approach will be used in this course. TBL advocates self-directed learning of course content and will facilitate your application of new knowledge within small collaborative teams and full classroom discussions. TBL requires you to be prepared for and attend all classes. Your participation will provide you with the opportunity to learn from your peers as well as work and negotiate within your team.

We live in an age of abundant information. We have nearly immediate access to information in a wide array of forms, from books and magazines, to videos and podcasts. The traditional lecture is one very good way to deliver information, but it's got a lot of competition. What makes the classroom unique is that it brings students and instructors together where they can learn from each other. TBL capitalizes on this feature. In a TBL class, lectures are very limited and are used almost exclusively to clarify questions that arise rather than simply imparting information. In a TBL class, students work in small groups that last the entire semester. Members of the team learn together and from each other, meaning that coming to class prepared is essential to your success and that of your team.

Since the central role of the lecture is reduced in TBL, students need to learn the basics before they get to class. To give you an incentive to do that preparation, in each module there will be two Readiness Assessment Tests (RAT) based on readings and short videos that must be completed before the RAT. Each RAT is completed twice: first individually (the iRAT), then as a team (the tRAT). We will also have many teams activities, usually requiring some preparation, that allow you to refine your understanding of material and improve your ability to use the economic lens.

What TBL is not:
- It is not normal group work – there will be no group work required outside of the classroom.
- It is not an excuse to slack off – Your participation will be evaluated by your peers and that will affect your grade.

Evaluation:
Final grades will be determined based on the total number of points that you accumulate during the semester. Final letter grades will be determined using the grading scale provided below:

Component	% Final Grade
Individual Readiness Assessment Tests	10%
Team Readiness Assessment Tests	15%
Individual/Team In-class Short Assignments	15%
Peer Evaluation of Teammates	10%
Mid-Term Exam	20%
Final Exam	30%
Total	**100%**

Grading Scale

FINAL GRADE	PERCENTAGE
A	89.51% – 100%
B	79.51% – 89.50%
C	69.51% – 79.50%
D	59.51% – 69.50%
F	< 59.51%

Students will not be allowed to take an incomplete in this course due to poor planning on their part. If you find you do have a legitimate reason for an incomplete, please talk with me as soon as possible to discuss the situation and to identify the documentation that will be required to support your request. Please consult the UNT catalog to review conditions under which an incomplete may be granted.

Learning Modules:
Similar to a traditional classroom setting, you will need to watch lectures. The lectures are in voice narrated PowerPoint format, which has been converted to run on a standard web browser (i.e. FireFox, Chrome, Safari, etc.). You may watch the lecture as many times as you like. A printable "storyboard" version of the lecture is also available for download in PDF format in the same folder where you will find the online lecture.

Readiness Assessment Tests (RATs):
RATs are multiple-choice tests over the material that you need in order to be ready to start building on the foundation. Questions for RATs will be derived from the module lecture and posted chapter readings. You will take each multiple-choice test individually at the beginning of class (iRAT). You will then get into your team and take the same test again (tRAT). It is important for the success of yourself and your teammates that you come to class prepared each day.
***PLEASE NOTE: IF THE INSTRUCTOR BECOMES AWARE OF YOUR PHONE FOR ANY REASON, **5 POINTS WILL BE DEDUCTED** FROM YOUR ENTIRE TEAM. ANY ATTEMPT TO RECORD/PHOTOGRAPH THE TEST QUESTIONS IS STRICTLY PROHIBITED. ANY STUDENT SUSPECTED OF COPYING, RECORDING, OR PHOTOGRAPHING THE QUIZ OR EXAM QUESTIONS WILL BE REPORTED TO THE DEAN OF STUDENTS.

Individual/Team In-class Short Assignments:
On most days there will be short graded exercises, usually completed within your teams. Occasionally you will be responsible for short homework assignments that will be completed individually. You must be present in class to receive credit for that day's in-class assignment. There will not be an opportunity to make-up missed class assignments.

Peer Evaluation of Teammates:
Prior to the midterm exam and at the end of the semester, each student will be required to anonymously evaluate each other member of his or her group. On the evaluation form, you will be asked to give qualitative feedback to each member and award points to the other members of his or her team. You will be evaluated by the other members of your team based on your preparedness, contribution, and collegiality.

Mid-Term & Final Exam:
During this class you will complete a mid-term and a final exam, each of which will be cumulative to that point in the semester. You will complete these tests individually. These two exams will be worth 50% of your grade. The final exam will be held during the university scheduled date and time: **December 7 @ 8:00AM – 10:00AM.**

COVID-19 Impact on Attendance

While attendance is expected as outlined above, it is important for all of us to be mindful of the health and safety of everyone in our community, especially given concerns about COVID-19. PLEASE CONTACT ME IF YOU ARE UNABLE TO ATTEND CLASS BECAUSE YOU ARE ILL, OR UNABLE TO ATTEND CLASS DUE TO A RELATED ISSUE REGARDING COVID-19. **It is important that you communicate with me prior to being absent or missing an assignment** so I may make a decision about accommodating your request to be excused from class.

If you are experiencing any symptoms of COVID-19 (https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html) please seek medical attention from the Student Health and Wellness Center (940-565-2333 or askSHWC@unt.edu) or your health care provider PRIOR to coming to campus. UNT also requires you to contact the UNT COVID Team at COVID@unt.edu for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure.

Face Coverings

UNT encourages everyone to wear a face covering when indoors, regardless of vaccination status, to protect yourself and others from COVID infection, as recommended by current CDC guidelines. Face covering guidelines could change based on community health conditions.

The culture of the classroom:

We're all in this together. As your instructor, I will strive to:
- Be prepared
- Give fair exams and grade in a fair and consistent manner
- Be accessible to students outside of class
- Be understanding and helpful when students are uncertain of the material
- Be open to questions
- Convey a sense of priority, i.e., identify important material
- Give ample time to complete assignments and remind students of due dates.
- Respect each student's opinions, priorities, strengths and weaknesses.

In return, I ask that you as the students to:
- Communicate in a professional and responsible fashion, informing me and your teammates in the
- event of absences.
- Be a cooperative and engaged member of your team
- Constructively participate in all classroom activities
- Arrive on time.
- Turn off (not just silence) phones and other devices. No electronic devices may be used during exams or RATs
- Refrain from activities that disengage you from the class or distract others. This includes using electronic devices for text-messaging, reading, browsing, etc. and chatting with neighbors in a way that distracts others in your team or in other teams.
- Inform me before class if you need to leave class early or if you need to be prepared for emergency communication.

Tentative Order of Topics:

Start Date	Learning Module Topic
8/24	**Syllabus Overview & Class Expectations**
8/26	Team Activity #1
8/31	Intro to Exercise Physiology Lab Techniques *(Readings from: Chapters 5, 15)*
9/2	Individual Activity #1 – estimation of VO_{2max} (exercise lab)
9/7	Bioenergetics *(Chapter 2)*
9/9	Team Activity #2
9/14	Exercise Metabolism *(Chapter 5 & handout)*
9/16	Team Activity #3
9/21	Exercise Endocrinology *(Chapter 4)*
9/23	Team Activity #4
9/28	Muscle Physiology *(Readings from: Chapters 1, 3)*
9/30	Team Activity #5
10/5	Circulatory Responses to Exercise *(Chapters 6, 8)*
10/7	Team Activity #6 – measuring heart rate and blood pressure (exercise lab)
10/12	Respiratory Responses to Exercise *(Chapter 7)*
10/14	Team Activity #7
10/19	Mid-Term Exam Review Day
10/21	**MID-TERM EXAM**
10/26	Adaptations to Training *(Readings from: Chapters 10, 11, 14)*
10/28	Team Activity #8
11/2	Environmental Influences on Exercise Performance *(Chapters 12, 13)*
11/4	Team Activity #9
11/9	Introduction to Sports Nutrition *(Chapters 15, 16)*
11/11	Individual Activity #2
11/16	Prevention of Disease with Physical Activity *(Chapters 21, 22)*
11/18	Team Activity #10
11/23	Team Activity #10 (continued)
11/25	Thanksgiving Holiday – No Class
11/30	Final Exam Review Day
12/2	Study Day
12/7	**FINAL EXAM 8:00 AM – 10:00 AM**

Note: The following information is designed to help the class run smoothly. **The instructor reserves the right to make additions and adjustments as necessary**. Some of the writings, lectures, films, or presentations in this course may include material that conflicts with the core beliefs of some students. Please review the syllabus carefully to see if the course is one that you are committed to taking. If you have a concern, please discuss it with me at your earliest convenience.

Technical Support

Student Helpdesk:
     UIT Helpdesk
     Sage Hall 130
     940-565-2324
     helpdesk@unt.edu

Minimum Technology Requirements
Minimum technology requirements include:
- Computer
- Reliable internet access
- Speakers
- Microphone
- Plug-ins
- **Microsoft Office Suite**
  - All assignments will be submitted as a Microsoft Word document. Microsoft Office 365 is provided free to you from the university and instructions for installation can be found here: https://it.unt.edu/installoffice365. Assignments submitted/uploaded as a document other than Word will not be graded and receive a grade of 0. Please let me know if you have questions about this policy.
- Canvas Technical Requirements (https://clear.unt.edu/supported-technologies/canvas/requirements)

Computer Skills & Digital Literacy
Course-specific technical skills learners must have to succeed in the course include:
- Using Canvas
- Using email with attachments
- Downloading and installing software
- Using spreadsheet programs
- Using presentation and graphics programs

Technical Assistance
Part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

UIT Help Desk: UIT Student Help Desk site (http://www.unt.edu/helpdesk/index.htm)
Email: helpdesk@unt.edu
Phone: 940-565-2324
In Person: Sage Hall, Room 130
Walk-In Availability: 8am-9pm
Telephone Availability:
- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm
- Saturday: 9am-5pm
Laptop Checkout: 8am-7pm

For additional support, visit Canvas Technical Help (https://community.canvaslms.com/docs/DOC-10554-4212710328)

UNT Policies

Academic Integrity Policy
Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA Policy
UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website (https://disability.unt.edu/).

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)
The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

Emergency Notification & Procedures
UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Retention of Student Records
Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior
Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's Code of Student Conduct (https://deanofstudents.unt.edu/conduct) to learn more.

Access to Information - Eagle Connect
Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail Eagle Connect (https://it.unt.edu/eagleconnect).

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 [insert administration dates] of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website (http://spot.unt.edu/) or email spot@unt.edu.

Sexual Assault Prevention

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648.

Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.
See UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses (https://policy.unt.edu/policy/07-002).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Download the UNT System Permission, Waiver and Release Form
Transmission and Recording of Student Images in Electronically-Delivered Courses
1. No permission is needed from a student for his or her image or voice to be transmitted live via videoconference or streaming media, but all students should be informed when courses are to be conducted using either method of delivery.
2. In the event an instructor records student presentations, he or she must obtain permission from the student using a signed release in order to use the recording for future classes in accordance with the Use of Student-Created Work guidelines above.
3. Instructors who video-record their class lectures with the intention of re-using some or all of recordings for future class offerings must notify students on the course syllabus if students' images may appear on video. Instructors are also advised to provide accommodation for students who do not wish to appear in class recordings.

Example: This course employs lecture capture technology to record class sessions. Students may occasionally appear on video. The lecture recordings will be available to you for study purposes and may also be reused in future course offerings.

No notification is needed if only audio and slide capture is used or if the video only records the instructor's image. However, the instructor is encouraged to let students know the recordings will be available to them for study purposes.

Class Recordings & Student Likenesses
Synchronous (live) sessions in this course will be recorded for students enrolled in this class section to refer to throughout the semester. Class recordings are the intellectual property of the university or instructor and are reserved for use only by students in this class and only for educational purposes. Students may not post or otherwise share the recordings outside the class, or outside the Canvas Learning Management System, in any form. Failing to follow this restriction is a violation of the UNT Code of Student Conduct and could lead to disciplinary action.

Academic Support & Student Services

Student Support Services

Mental Health
UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:
- Student Health and Wellness Center (https://studentaffairs.unt.edu/student-health-and-wellness-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- UNT Care Team (https://studentaffairs.unt.edu/care)
- UNT Psychiatric Services (https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry)
- Individual Counseling (https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling)

Chosen Names
A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.
- UNT Records
- UNT ID Card
- UNT Email Address
- Legal Name

*UNT euIDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.

Pronouns

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don't assume someone's name, we should also ask and not assume someone's pronouns.

You can add your pronouns to your Canvas account so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

- What are pronouns and why are they important?
- How do I use pronouns?
- How do I share my pronouns?
- How do I ask for another person's pronouns?
- How do I correct myself or others when the wrong pronoun is used?

Additional Student Support Services

- Registrar (https://registrar.unt.edu/registration)
- Financial Aid (https://financialaid.unt.edu/)
- Student Legal Services (https://studentaffairs.unt.edu/student-legal-services)
- Career Center (https://studentaffairs.unt.edu/career-center)
- Multicultural Center (https://edo.unt.edu/multicultural-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- Pride Alliance (https://edo.unt.edu/pridealliance)
- UNT Food Pantry (https://deanofstudents.unt.edu/resources/food-pantry)

Academic Support Services

- Academic Resource Center (https://clear.unt.edu/canvas/student-resources)
- Academic Success Center (https://success.unt.edu/asc)
- UNT Libraries (https://library.unt.edu/)
- Writing Lab (http://writingcenter.unt.edu/)