



**Exercise & Metabolism – II Laboratory
(KIN 4390; CRN 20363)**

The University of Texas at El Paso
Spring 2022



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Instructor:	Dr. Sudip Bajpeyi; sbajpeyi@utep.edu
Meeting Time & Room:	Friday 12:10-3:00 pm; HSSN 136
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Office Hours:	By email appointment

Course Description: This is a research-intensive course designed to prepare undergraduate students for a graduate degree in research or a health profession. Students will have the opportunity to gain hands-on experience in clinical and basic science laboratory research techniques applicable to exercise physiology and energy metabolism. In addition, student will learn how to collect data, analyze data, do scientific writing, and do research presentation.

Course Objectives: Upon successful completion of this course, students will be able to:

- Develop laboratory skills in basic science and clinical experimental procedures pertinent to exercise & metabolism research:
- Analyze and interpret research data
- Synthesize scientific literature and do research presentation

Evaluation: Student performance will be evaluated based on:

- Attendance/Participation **(30%)**
- Research Technique Proficiency **(15%)**
- Presentations **(25%)**
- Scientific Writing **(30%)**

Grading Scheme:

- A (≥ 90%)
- B (80-89.9%)
- C (70-79.9%)
- D (60-69.9%)
- F (< 60%)

Technology Requirements: Course content may be delivered via the internet through the video communication Zoom. You will access Zoom virtual meetings through the course Blackboard. You will need to have access to a computer/laptop/tablet with a webcam, microphone, and internet to join and interact in class sessions.

General Expectation: Given this is a research-intensive course, the class is designed to provide an enriching hands-on research experience to undergraduate students. Students are expected to dedicate significant amount of time outside of scheduled class/lab hours. Class may not always last the scheduled time, to allow for outside of class assignments and data analysis.

Required Materials: Videos, lecture slides, and reading materials will be available on Blackboard. Students will be instructed on how to properly document experiments and data collection (Blackboard may also be used as a tool for such upon occasion).

Laptop Borrowing: UTEP allows you to borrow a laptop for exam and other class uses. It is highly recommended to reserve in advance so that laptops are available to be checked out. You may do so up to two weeks ahead of time at EquipmentCheckout.utep.edu by entering you UTEP username and password. If you have any questions call 915-747-6440 or email EquipmentCheckout@utep.edu

Attendance/Participation (30% of grade): Students are responsible for recruiting, screening, and testing a minimum of 3 participants and following the participant from the beginning of research project to the end of post testing. Students will be required to come and participate in data collection outside of scheduled class time on assigned days. All students are expected to attend classes and actively participate in the research presentation process. Points will be deducted from students who absent themselves without permission, or do not actively engage in lab activities. Please check your university email often, communicate and answer emails within a reasonable amount of time (1-2 days).

Research Technique Proficiency (15% of grade): You are required to participate in learning research techniques and documenting lab procedures during laboratory sessions. Each student is expected to acquire the necessary laboratory skills to be able to carry out experimental procedures and obtain accurate data.

Note Taking & Electronic Data Entry: Students will be required to document their research techniques and procedures in a notebook, taking detailed notes (points will be deducted for incomplete notes). All entries ***must be made in the lab notebook and*** dated at the top. Lab notebooks should not be taken away from the lab. Keep in mind all entries should be detailed enough to be able to replicate the ***exact*** same experiment (including mistakes). Data obtained from experiments must be entered electronically into excel documents. Students will be graded on the thoroughness in electronic data entries for each research experiment (scientific data collection) including a detailed description of each of the following points:

- Date and Time
- Title/Heading
- Procedure/Steps
- Observations:
 - Instruments Used: Type; Location; Name
 - Supplies/Consumables: Type, Amount, Storage Location

- All that Happens (planned or unplanned)
 - Time between/during steps

Presentations (25% of grade): Each student will prepare and give three presentations based on his/her selected research project. The first two will be PowerPoint presentation on assigned articles while the third one will be a poster presentation based on data collected during the laboratory sessions. Towards the end of the semester, you will be expected to learn in depth understanding about your research project, do scientific literature review, analyze the data, prepare a poster, and present your findings.

Scientific Writing (30% of grade): Each student will write an original research manuscript at the end of the semester using data analyzed from the research project. Manuscript should be in the same format as articles published in peer review journals.

Trainings:

Institutional Review Board (IRB) Training: All students must complete IRB training so that everyone has baseline knowledge of ethical conduct related to research. To access the required training for the “CITI Program”, see <https://www.utep.edu/orsp/human-subjects-research/training/index.html>

- You will need to register and create an account.
- Locate University of Texas at El Paso in the search bar.
- Choose “Add a Course” under “Learner Tools for University of Texas at El Paso”
- Then choose “Human Subjects Research”
- Then choose “Nursing, Pharmacy & Allied Health Researchers”
- Complete all modules

This training is a vital part of your overall understanding of human research. It will take a few hours to complete so please take the necessary time to ensure that you understand all the material. There are module quizzes at the end of each module. You will be asked to submit your CITI Training certificate after completion.

Lab Safety & Blood Borne Pathogens Trainings: The class will be required to complete 2 virtual certification training courses offered by the UTEP Environmental Health and Safety Department: <https://www.utep.edu/ehs/training.html>

This virtual training dates will be disclosed in the beginning of the semester. Please make sure to undergo the trainings and submit your certifications of completion.

Class Policies

Please observe the following:

- Maintain your professionalism at all time as you work both virtually and face-to-face with the rest of the class. Absolutely no cell phone use, chatting, recording or joking while you work with fellow classmates (no exception).
- You are required to check the Blackboard course daily for messages, updates and assignments (Blackboard Student Mobile App available in Google Play and the App Store; Links can be found on Blackboard Home Page).

- Students are required to check their emails daily. Student must use their UTEP email, put their full name, course name and be professional over email. Emails without this information will not be acknowledged (Proper email formatting can be found below on page #6 of syllabus-Online Etiquette).
- If a student is late or absent, it is not the instructor's responsibility to give him or her the materials or deliver a personal lecture/tutoring session for the student. Instead, it is the student's responsibility to keep up with the lecture materials provided during the class session. If necessary, he or she can request electronic notes from a fellow student.
- Respect and courtesy must be shown to fellow classmates and the instructor at all times, in all contexts. No harassment or inappropriate postings will be tolerated.
- Be professional and careful in what you say about others.
- When reacting to someone else's message, address and focus on the ideas, not the person who posted them.
- Be careful when using sarcasm and humor in virtual meetings. Without face-to-face communications your joke may be viewed as criticism.

Syllabus Changes: The instructors reserve the right to make changes to the syllabus and will notify students accordingly.

Late Assignments: Any assignment that is not turned in by 11:59 pm on the day it is due will be considered late. **NO LATE** work will be accepted.

Attendance and the Drop Deadline: Students who miss more than three class sessions risk being withdrawn from class with a grade of W if absences occur prior to the first eight weeks, or an "F" if the total of class sessions missed exceeds three after the first four weeks of the course. Students wishing to drop a course and receive a grade of W must do so prior to the Drop Date. Dropping a course after that time will result in an automatic grade of F.

Americans with Disabilities Act (ADA): If you have or believe you have a disability that may impact your ability to succeed in a class, whether it be online or face-to-face, you may wish to contact the Center for Accommodations and Support Services (CASS) to show documentation of a disability or to register for testing and services. Students who have been designated as disabled must reactivate their standing with the CASS yearly.

If you feel that you may have a disability requiring accommodations and/or modifications, contact CASS at 915-747-5148.

You also can visit the CASS website at <http://sa.utep.edu/cass/> or the CASS office in Room 108 East Union Building.

Academic Integrity: Scholastic dishonesty--which includes the attempt of any student to present the work of another as his or her own, or any work which s(he) has not honestly performed, or attempting to pass any examination by improper means is a serious offense and will subject the student to disciplinary action. The aiding and

abetting of a student in any dishonesty is held to be an equally serious offense. All alleged acts of scholastic dishonesty will be reported to the Dean of Students for disposition. It is the Dean of Students' responsibility to investigate each allegation, dismiss the allegation, or proceed with disciplinary action in a manner, which provides the accused student his or her rights of due process.

The International Center for Academic Integrity, comprised of a consortium of universities worldwide, defines academic integrity as “a commitment to fundamental values: honesty, trust, fairness, respect, and responsibility. From these values flow principles of behavior that enable academic communities to translate ideals into action.” As they relate to students, these values can be defined as follows:

- **Honesty:** “adhering to standards of truthfulness and integrity”
- **Trust:** participating in “an environment of confidence”
- **Fairness:** abiding by the “standards, practices, and procedures” outlined by your instructors and institution
- **Respect:** “encouraging a wide range of opinions and ideas”
- **Responsibility:** assuming personal accountability and accepting sanctions in cases of misconduct.

*Students are responsible for adhering to the above standards in all academic activity and refraining from all forms of academic dishonesty. According to the UTEP Handbook of **Operating Procedures**, academic dishonesty includes committing (or attempting to commit) the following:*

- **Plagiarism** – taking credit for work that is not your own (e.g., copying and pasting from the internet, failing to cite sources of information, failing to attribute direct quotes to their original author, or submitting your work from another course without prior permission).
- **Cheating** – This includes copying another student’s work during an exam; using notes, books, or electronic devices during an exam without prior permission; taking an exam for another student; and communicating with or helping another student during an exam.
- **Collusion** – any collaboration with another student without the permission of the instructor.
- **All of the above will result in automatic 0 for any given assignment, test, or quiz.**

Professional Conduct: During this course you will be expected to deal with your colleagues, and yourself as a professional. Demonstrate pride in your chosen profession through both your actions and your attitude. This includes being on time for every class, being respectful during the class/data collection, and coming prepared. You will be provided with the appropriate training on research ethics, human subjects research, and, laboratory safety. If you are found acting inappropriately during class/data collection/participant interaction you will be asked to leave and will lose participation credit for that day. **Attendance is expected. Contact the instructor if you are going to miss a class session.**

Communicating Effectively: Learning is not a spectator sport. It is everyone's responsibility to participate as fully as they can so everyone can get the most from the experience. Here are some simple tips to follow to ensure your participation and engagement in the learning process:

- **Ask questions:** If you don't know the answer, someone else will. The discussion board is the area for asking questions related to content OR any problems, related to the class, you are having. Make sure that you have clearly indicated the subject of your message.
- **Reach out to others:** Offer a fact, article, link or other item that can help others learn something you can share.
- **Be appropriate:** The classroom (whether virtual or face-to-face) is not the place for insulting, making insensitive comments, attacking, or venting. Inappropriate behavior will usually be subject to disciplinary action as well.
- **Be diplomatic:** When sending messages on emotionally charged topics, make sure you write the message and then walk away for at least an hour before rereading the message and then sending it. Re-reading emotionally charged messages ensures that they are constructive instead of destructive. Think of the person at the other end.
- **Stay focused:** Stay on topic to increase the efficiency of your learning.

Online Etiquette: When communicating electronically, many of the feelings or impressions that are transmitted via body language in face-to-face communications are lost. Consequently, interpreting emotions and innuendos is much more difficult. Only what is written, or drawn, carries the message. Often, excitement can be misinterpreted as anger or insult. It is important that we all keep this in mind as we communicate. Words in print may seem harmless, but they could emotionally injure us when working at a distance. Hence, it is vitally important that we are conscious of how we communicate while working at a distance.

For example, avoid the use of caps in your electronic messages, as wording in caps comes across as shouting. The standard practice ("Netiquette") for participation in networked discussion requires that all participation be focused on the topic at hand, not become personalized, and be substantive in nature. (Translation: you may certainly disagree with others, but you must do so respectfully; you may express strong beliefs or emotions, but you may not get so carried away that you lose all perspective on the course itself.)

Covid-19 Precaution

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area including UTEP campus at no cost. For more information about the current rates, testing, and vaccinations, please visit <https://www.utep.edu/chs/covid-testing/index.html>, <https://www.utep.edu/resuming-campus-operations/vaccine/?home> or www.epstrong.org. Please note that if COVID-19 conditions deteriorate in the City of El Paso, all course activities may be transitioned to remote delivery.

Covid-19 Accommodations

Students who are considered high risk according to CDC guidelines and/or those who live with individuals who are considered high risk may contact [Center for Accommodations and Support Services](#) (CASS) to discuss temporary accommodations for on-campus courses and activities.

Online Class Recordings:

The use of recordings will enable you to have access to class lectures, group discussions, and so on in the event you miss a synchronous or in-person class meeting due to illness or other extenuating circumstance. Our use of such technology is governed by the Federal Educational Rights and Privacy Act (FERPA) and UTEP's acceptable-use policy. A recording of class sessions will be kept and stored by UTEP, in accordance with FERPA and UTEP policies. Your instructor will not share the recordings of your class activities outside of course participants, which include your fellow students, teaching assistants, or graduate assistants, and any guest faculty or community-based learning partners with whom we may engage during a class session. **You may not share recordings outside of this course.** Doing so may result in disciplinary action.

Course Resources: Where you can go for assistance

UTEP provides a variety of student services and support:

Technology Resources

- [Help Desk](#): Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

Academic Resources

- [UTEP Library](#): Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- [University Writing Center \(UWC\)](#): Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.
- [RefWorks](#): A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.

Individual Resources

- [Military Student Success Center](#): Assists personnel in any branch of service to reach their educational goals.

- [Center for Accommodations and Support Services](#): Assists students with ADA-related accommodations for coursework, housing, and internships.
- [Counseling and Psychological Services](#): Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.

KIN 4390- TENTATIVE SCHEDULE (subject to change)

Important Dates/Deadlines		
3/14 - 3/18/2022	Spring Break	
4/1/2022	Course Drop Deadline	
5/6/2022	Dead Day	
Tentative Schedule		
Week 1-3 (Module 1)	<ul style="list-style-type: none"> ◇ Introduction/Syllabus ◇ Goals and Objectives ◇ Lab Rotations <ul style="list-style-type: none"> ○ Clinical/Exercise Testing Labs <ul style="list-style-type: none"> • Physical Activity Level Measurement • Resting Metabolic Rate (RMR) • Oral Glucose Tolerance Test • HbA1c • Anthropometry • Dual X-ray Absorptiometry (DXA) • Anaerobic Strength Test ○ Wet Lab <ul style="list-style-type: none"> • Cell Culture • Western Blotting • Electrical Pulse Stimulation ◇ Research Project Selection 	
Week 4-12 (Module 2)	<ul style="list-style-type: none"> ◇ Lectures <ul style="list-style-type: none"> ○ Data Analysis and Interpretation ○ Questions and Answers ○ Discussions ○ Referencing Tools and Techniques ◇ Data Collection and Entry on Selected Projects ◇ Presentations <ul style="list-style-type: none"> ○ 1st and 2nd Presentations on Assigned Manuscripts ◇ Writing of Manuscript – Introduction and Methods Sections 	
Week 13-17 (Module 3)	<ul style="list-style-type: none"> ◇ Data Analysis <ul style="list-style-type: none"> ○ Tables and Graphs/Figures Poster Preparation and Presentation ◇ Finalize Manuscript – Results and Discussion 	