



Exercise & Metabolism – I Laboratory
(BIOL 1107; CRN 10667)
The University of Texas at El Paso
Fall 2023



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Meeting Time & Room:	Friday 9:00-11:50 am; HSSN 131
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Welcome to BIOL 1107-Exercise & Metabolism – I Laboratory. This syllabus will serve as a guideline to what our semester will look like. Together we will explore and understand the importance and relevance of research as it pertains to exercise and metabolism.

Course Description: This course will describe basic concepts in exercise physiology with a focus on skeletal muscle metabolism. The course will discuss the theoretical and methodological approaches for assessment of substrate metabolism, physical fitness and insulin sensitivity. This research-driven course will teach the fundamentals of exercise physiology while providing students with hands on experience in collecting, analyzing, discussing and presenting data.

Course Objectives: Upon completion of this course, students will have developed a practical understanding of:

- Fundamentals of Laboratory Safety, blood borne pathogens, and Human Research Ethics
- Fundamental aspects of Exercise & Metabolism including:
 - Insulin sensitivity
 - Substrate utilization
 - Physical activity
 - Calorie intake/expenditure
 - Cardiorespiratory fitness
 - Anthropometry/body composition
 - Neuromuscular Electrical Stimulation
 - Cell culture
- Scientific literature synthesis and presentation

Evaluation and Grading Scheme: Student performance will be evaluated based on:

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|-------------------------------------|-----------------------|
| • Attendance/Participation (10%) | Grading Scheme |
| • Trainings and Certifications (5%) | A (≥ 90%) |
| • Research Technique Training (15%) | B (80-89.9%) |
| • Quizzes (30%) | C (70-79.9%) |
| • Article Summaries (10%) | D (60-69.9%) |
| • Group Research Project (30%) | 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 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 (10% of grade): Students are responsible for attending all class sessions and to actively engage in discussions. Students are expected to actively participate in the group research presentation process. Points will be deducted from students who do not actively engage within their groups. Please check your university email often, communicate and answer group emails within a reasonable amount of time (1-2 days).

Trainings and Certifications (5% of grade):

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 to receive credit.

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 for credit.

Research Technique Training (15% of grade): You are required to participate in learning research techniques during laboratory sessions. Bring your lab rotation checklist to each laboratory session and have your supervisor sign them at end of the session. Each individual is expected to acquire the necessary practical skills to be able to carry out experimental procedures and obtain accurate data.

Quizzes (30% of grade): Students will be tested on the materials presented in the class as well as materials provided on blackboard as an assignment in the form of lectures, journal articles, discussions, and hands on experiences. Quizzes will be given on Videos, and end of Module/Units Quizzes. Each student **MUST** complete quizzes during the designated time. Students will not be allowed to make-up a missed quiz without **prior** arrangements made in case of emergency. Quizzes will be given in the form of written question/answer style.

Article Summaries/Reflections (10% of grade): Each student will submit a brief (approx. one page) summary of the assigned relevant article, summarizing the main findings of the article in your own words (2 Sentences on Introduction, 2 Sentences on Methods, 3-5 sentences on Results/Data Interpretation, 2 Sentences on Conclusion). Article summary example along with grading rubric can be found on Blackboard. Please reference this to maximize point total.

Group Research Project (30% of grade): Students in small groups will be assigned a topic/procedure relevant to understanding *Exercise and Metabolism*. Once the selected topic has been assigned, you will be expected to learn in depth understanding about your research topic, do scientific literature review, and present your findings at the end of the semester. Although there is not a maximum number of research articles required, a minimum of 3 articles is needed for groups of 3, and a minimum of 4 articles for groups of 4. It is the responsibility of each student to learn ALL of the methods presented in addition to his/her assigned topic. Including images and graphics are encouraged but must come from reputable sources (no Wikipedia, you tube, etc.) Reputable sources will be further discussed in class while preparing presentations. Group presentations must be saved as a file (no links) and uploaded onto Blackboard. Please make sure to save your file with a clear file name, such as: *Group1_presentation_Fall2023*. Points will be deducted from the formatting portion of the research project grading rubric if not followed.

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).
- Take all exams and quizzes at designated times. There will be no make-up quizzes or exams. For the following documented circumstances, please contact your instructor: 1) illness/hospitalization; 2) death of family member; 3) official university business; 4) legal matter
- 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 provided 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.**

Artificial Intelligence (AI): The use of generative AI tools such as ChatGPT is permitted in this course for the following activities:

- Brainstorming and refining your ideas
- Fine tuning your research questions
- Finding information on your topic
- Drafting an outline to organize your thoughts
- Checking grammar and style.

However, you may not use AI tools to write entire sentences or paragraphs in completing article summary assignments and group research projects.

You are responsible for the information you submit based on an AI query (e.g. ensuring it does not violate intellectual property laws, or contain misinformation or unethical content). Your use of AI tools must be appropriately noted or cited.

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.)

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.