

KIN 340

Physiology of Exercise

Spring | 2025

Instructor Information

Name: Dr. Jeremy Fransen

Email Address: jeremy.fransen@asu.edu

Office Hours: By appointment (please email to arrange)

Office Location: Health North 481

Course Time:

T/Th 1:30 - 2:45 PM

Course Location:

In-person: CRONK 122

Course Prerequisites

Successful completion KIN 101 with B or better, BIO 201 (ZOL 201) and BIO 202 (ZOL 202) with C or better; one of the following courses: CHM 101, 113, 114, 115, 116, 117, or 118 with C or better

Course Objectives:

Through examinations and assignments, upon completion of this course, students should be able to:

- Identify and apply the appropriate equations to quantify work, power, and energy expenditure.
- Understand how enzymes facilitate reactions in the three energy systems to regenerate ATP.
- Comprehend the actions of the neuromuscular system in the process of muscle contraction and relaxation.
- Explain how hormones regulate physiologic function during exercise.
- Quantify oxygen uptake and measures of cardiopulmonary function.

- Demonstrate the physiological mechanisms underlying acute responses and chronic adaptations to anaerobic and aerobic exercise.
- Evaluate and interpret research findings.

About This Course:

This course is designed to address the physiological mechanisms of acute responses and chronic adaptations to exercise.

Textbook

Textbook: The required textbook for this course is available in the ASU bookstore:
Exercise Physiology, 12th edition, Powers & Howley, McGraw Hill, 2023

The required assignments, quizzes, and lectures will be considered testable content and will be included in your exams

Grading Policy:

Activity/Assignment/Quiz/Exam	Points Per Assignment**	Total Points
Quizzes		
Syllabus Quiz	10	10
Chapter Quizzes (9)	5	45
Lecture Activities		
Applied Learning Assessments (9)	5	45
Exams		
Exam One	100	100
Exam Two	100	100
Exam Three	100	100
Comprehensive Final	100	100
Total Points Possible		500

Grade breakdown:

A+	100% - 97%
A	96.9% - 93%
A-	92.9% - 90%
B+	89.9% - 87%
B	86.9% - 83%
B-	82.9% - 80%
C+	79.9% - 77%
C	76.9% - 70%
D	69.9% - 60%
E	<60%

Satisfactory Y Grade

A Y (Satisfactory) grade is considered the equivalent of a C or better, and is available at the discretion of the instructor. This should be a worst-case scenario for a student. To request the Y grading option, you must email your request to the instructor by the last day of class. All students should review their major map for (1) grade requirements for this course, and (2) grade requirements as a prerequisite for future required coursework. You should contact your advisor with questions about how a Y grade may impact your DARS or graduate school applications. A Y grade is not used for computing your GPA.

Course Requirements:

Syllabus Quiz

You are required to complete a ten-question quiz on the syllabus. Please refer to the schedule located within this syllabus. There is no time limit for this quiz, you have unlimited attempts, and I encourage you to have your syllabus in front of you while completing the quiz. Once the due date and time for the syllabus quiz has passed, it **will NOT** be reopened.

Chapter Quizzes

There will be nine (9) chapter quizzes that are designed to help you prepare for the exam within each Learning Module. All quizzes are due on the date listed below, no later than 11:59 pm (Arizona Time). The quizzes are time limited (to prepare you for the

exams), but you are allowed two (2) attempts to ensure that you have learned the material. Once the due date and time for the syllabus quiz has passed, it **will NOT** be reactivated. If for some reason you are locked out of the quiz, email the instructor immediately. If the date and time of your email shows that you attempted to complete the quiz at least one hour prior to the deadline, you will be provided a password and allowed to attempt the quiz again.

Lecture Activities (LA's)

There will be 9 lecture activities. If time permits, students will be allowed to work on these in class after the lecture material is complete. No physical copies of the assignment will be provided; however, students are welcome to print their own copy and submit a photocopy of completed work. If we do not have any extra class time after lecture, students will complete these assignments outside of class. Students in the class are welcome to work together, however, every student must submit their own work for grading. The answers will be reviewed at the start of class, in the class period after the due date. The answer key will be posted after the due date. All assignments will be graded for completion only (i.e., all questions answered with sufficient effort).

Exams

Exams will cover the content presented in lectures indicated in the exam schedule below. Each exam will consist of a combination of multiple choice and true/false questions. There will be one comprehensive final at the end of the semester on the date indicated in the schedule. There are **NO** make-ups allowed for any of these exams. If an emergency arises, notification **PRIOR** to the exam must be given to the instructor. All exams will be proctored in class with paper with answers recorded and graded on scantron.

Exam Study Guides (Optional)

Exam study guides will be provided for each of the 9 chapters that we will cover in this course. These study guides are meant to help you prepare for the exams but they are not worth a portion of your grade (i.e., they are optional). It is important to note that just because a content area may not appear on the study guide does not mean a question won't be asked about it on the exam. All lecture material is fair game for the exam. The study guides are simply a study tool that you can use if you choose. I will not review a study guide for correctness, however, you are always welcome to attend office hours to clarify any questions you have.

Extra Credit

There is NO extra credit available for this course for any reason or under any circumstances.

Grading Disclaimer

It is your responsibility to check grades posted on Canvas. Questions regarding assignment grades must be handled within 48 hours of the posted grade (after that time grades may not be changed).

Course Schedule

Due dates will be listed in Canvas and may change based on how fast/slow we get through lecture material and in-class activities. Please monitor Canvas as attend class for updates.

Assignments Due (See Due Dates in Canvas)	Points
Syllabus Quiz	10
Chapter 1 Lecture Activity	5
Ch. 1 Quiz	5
Chapter 3 Lecture Activity	5
Ch.3 Quiz	5
Chapter 4 Lecture Activity	5
Ch. 4 Quiz	5
Exam 1	100
Chapter 7 Lecture Activity	5
Ch. 7 Quiz	5
Chapter 8 Lecture Activity	5
Ch. 8 Quiz	5
Chapter 5 Lecture Activity	5
Ch. 5 Quiz	5
Exam 2	100
Chapter 9 Lecture Activity	5
Ch. 9 Quiz	5
Chapter 10 Lecture Activity	5
Ch. 10 Quiz	5
Chapter 13 Lecture Activity	5
Ch. 13 Quiz	5
Exam 3	100
FINAL EXAM	100

Note: While every effort is made to keep the course evaluation process consistent with what is in the initial syllabus, it is possible that slight changes may have to be made as the semester progresses. These changes will be communicated thoroughly to the students and although total points may potentially fluctuate, the percentages remain constant, meaning there is no intention of harm to the student's grades. Any changes to the course evaluation process will be posted on Canvas as part of an announcement; however, it is the student's responsibility to be aware of the points and their grade and be proactive in speaking to the instructor if there are questions or concerns. Students should not rely on Canvas or other students if they have a question on their grade in class, contact the instructor.

Intellectual Property

This syllabus and all other course materials (PowerPoint slides, Zoom recordings, handouts, assignments, quizzes, exams, digital recordings, etc.) are intellectual property of Arizona State University and are not to be publicly distributed or otherwise commercialized since these materials are copyright protected. Publishing, uploading, linking, redistributing, and/or downloading course material may subject students to penalties for academic misconduct. Such materials are for sole use in that designated semester. It cannot be used in any other form unless via a written statement of approval from the instructor of record. Commercial note taking services are prohibited without written permission from the instructor of record in accordance with ACD 304-06 available at <http://www.asu.edu/aad/manuals/acd/acd304-06.html>. This includes PowerPoint slides and PowerPoint slides with audio. This includes Zoom lecture recordings.

CLASS EXPECTATIONS

Classroom Behavior Policy

Please be sure to have all ringtones silenced. Participation in class is crucial to your success in the course.

Classroom Honesty and Integrity

ASU expects and requires all its students to act with honesty and integrity, and respect the rights of others in carrying out all academic assignments. Also, I expect you to conduct yourselves ethically. **Exams are to be completed during class. Any cheating on exams will result in (at best) a zero on the exam in question; at worst, expelled from the University.** Because students compete with one another for grades and eventually career opportunities, cheating is considered a serious offense. For more information on academic integrity, including the policy and appeal procedures, please visit <http://provost.asu.edu/academicintegrity> and the Student Conduct Statement below.

Student Conduct Statement

Students are required to adhere to the behavior standards listed in Arizona Board of Regents Policy Manual Chapter V – Campus and Student Affairs: Code of Conduct (http://www.abor.asu.edu/1_the_regents/policymanual/chap5/5Section_C.pdf), ACD 125: Computer, Internet, and Electronic Communications (<http://www.asu.edu/aad/manuals/acd/acd125.html>), and the ASU Student Academic Integrity Policy (<http://www.asu.edu/studentaffairs/studentlife/srr/index.htm>).

Students are entitled to receive instruction free from interference by other members of the class. If a student is disruptive, an instructor may ask the student to stop the disruptive behavior and warn the student that such disruptive behavior can result in withdrawal from the course. An instructor may withdraw a student from a course when the student's behavior disrupts the educational process under USI 201-10 <http://www.asu.edu/aad/manuals/usi/usi201-10.html>.

Appropriate classroom behavior is defined by the instructor. This includes the number and length of individual messages online. Course discussion messages should remain focused on the assigned discussion topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion. Inappropriate discussion board messages may be deleted if an instructor feels it is necessary. Students will be notified privately that their posting was inappropriate.

Student access to the course Send Email feature may be limited or removed if an instructor feels that students are sending inappropriate electronic messages to other students in the course. Disruptive and violent behavior is not tolerated. Read more about this policy in the **ASU Policies** section.

Attendance Policy

Some absences are excused in accordance with ASU policy. They include accommodations for religious practices, University-sanctioned activities, and death of a family member. Read more about university-excused absences in the **ASU Policies** section.

In the event the instructor fails to indicate a time obligation, the time obligation will be 15 minutes for class sessions lasting 90 minutes or less, and 30 minutes for class sessions lasting more than 90 minutes. Students may be directed to wait longer by someone from the academic unit if they know the instructor will arrive shortly.

Technical Support

You have access to [24/7 technical support](#). It is recommended to use Chrome when accessing Canvas.

Internet Outage Plan

Network and internet outages are never expected. Be prepared and have a plan in case you find yourself without the internet.

What to Do If You Have Questions

I receive a large number of emails and will generally not respond in a timely manner (or at all) to any emails with questions that can be answered either by looking at the syllabus or checking Canvas. E-mails such as this will always be moved to the bottom of my reply list and you may not receive an answer before you need it.

Therefore, if you have questions, before contacting me, exhaust all the following resources:

- 1) Is the answer in the syllabus? Read it. And if you don't find your answer, read it again.
- 2) Is the answer in an email sent out by me (the instructor)? Check your email. Even the ones you have deleted.
- 3) Is the answer in an announcement on Canvas? Go to Canvas and find out.

Campus Network Outage and Technical Support

When access to Canvas is not available for an extended period of time (greater than one entire evening) you can reasonably expect that the due date for assignments will be changed to the next day (assignment still due by 11:59pm).

To monitor the status of campus networks and services, please visit the System Health Portal (<http://syshealth.asu.edu/>).

Technical Support

This course uses Canvas to deliver content. You can access Canvas through your [MyASU](#) portal.

To contact the help desk you have two options:

- For immediate assistance, call ASU at 1-855-278-5080.
- Visit the ASU Experience Center (<https://uto.asu.edu/experiencecenter>) to get personalized support through 24/7 live chat or by submitting your request online (<https://my.asu.edu/service>).

For more information on Canvas the following resources are suggested:

- [Canvas Course Tour Video](#)
- [Canvas Student guide](#)
- [Digital Portfolios Help Resources](#)
- [Library Resources for Students](#)
- [Best Practices for Setting Course Notifications](#)
- Canvas Student App - Download through Google Play (Android) or the App Store (iOS)
 - [Android Guide](#)
 - [iOS Guide](#)

Other useful links:

- [Undergraduate Academic Advising](#)
- [ASU Email Guide](#)
- [ASU Wireless Network](#)

Accessibility Statement

In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990, professional disability specialists and support staff at the Disability Resource Centers (DRC) facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities. DRC staff coordinate transition from high schools and community colleges, in-service training for faculty and staff, resolution of accessibility issues, community outreach, and collaboration between all ASU campuses regarding disability policies, procedures, and accommodations. Students who wish to request accommodation for a disability should contact the Disability Resource Center (DRC) for their campus.

Downtown Phoenix Campus

<http://campus.asu.edu/downtown/DRC>

University Center Building, Suite 160

602-496-4321 (Voice)

602-496-0378 (TTY)

Tempe Campus

<http://www.asu.edu/studentaffairs/ed/drc/>

480-965-1234 (Voice)

480-965-9000 (TTY)

West Campus

<http://www.west.asu.edu/drc/>

University Center Building (UCB), Room 130

602-543-8145 (Voice)

Polytechnic Campus

<http://www.asu.edu/studentaffairs/ed/drc/>

480.727.1165 (Voice)

480.727.1009 (TTY)

Subject to Change Notice

All material, assignments, and deadlines are subject to change with prior notice. It is your responsibility to stay in touch with your instructor, review the course site regularly, or communicate with other students, to adjust as needed if assignments or due dates change.

Add/Drop/Withdraw

Access the [University Registrar page](#) for information on grades, the academic calendar, and add/drop/withdrawal options among other things. NOTE: if you are considering withdrawing, please check with financial aid as it may be impacted by a withdrawal.

Study Techniques

It's important that you attend all classes and complete all assignments to be successful in your college career. To support this, you should take a look your study habits. Consider *where*, *when*, and *how* you study. For example, trying to read a complex paper in a loud coffee shop may be too distracting for you to really understand the material. Waiting until the last minute to write a paper rarely yields good results. Take a look at the guide provided below for more suggestions to optimize your study time.

[Guide for How to Study in College](#)

Active Reading

You will have to read a lot throughout your degree! It's common practice to highlight content as you read it to help remember it. Studies show, however, that this is not as effective as previously thought. A much better way to help you process and retain the information is to write down the important points and quiz yourself as you read. This is known as "active reading." Download the handout provided below to get started on this simple technique that can help you from day one at ASU.

[Active Reading Technique Guide](#)

Available Academic Resources

ASU has a wealth of resources to enable your success. Access the [University Academic Success Programs](#) website for information on the writing center, tutoring, supplemental instruction, graduate academic support and more.

Academic Integrity

Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The [ASU Student Academic Integrity Policy](#) is strictly enforced for students found in violation. Read more about this policy in the **ASU Policies** section.

[ASU Student Resource on Academic Integrity](#)

Mental Health

Students may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These emotional health concerns or stressful events may diminish academic performance and/or reduce the ability to participate in daily activities. [ASU Counseling](#)

Services provides counseling and crisis services for students who are experiencing a mental health concern. Any student may call or walk-in to any ASU counseling center for a same day or future appointment to discuss any personal concern. ASU's dedicated crisis line is available 24/7 for crisis consultation by calling 480-921-1006.

Third-Party Software and FERPA

During this course you might have the opportunity to use public online services and/or software applications sometimes called third-party software such as a blog or wiki. While some of these are required assignments, you need **not** make any personally identifying information on a public site. Do not post or provide any private information about yourself or your classmates. Where appropriate you may use a pseudonym or nickname. Some written assignments posted publicly may require personal reflection/comments, but the assignments will not require you to disclose any personally identifiable/sensitive information. If you have any concerns about this, please contact your instructor.

ASU POLICIES

ASU Academic Policies – January 6, 2020

University Excused Absences

Accommodation for Religious practices in accordance with ACD 304-04

The university community should, in all its activities, be sensitive to the religious practices of the various religious faiths represented in its student body and employees. Faculty are asked to recognize the obligations of their students who may be participating in the observance of religious holidays. Students should notify faculty at the beginning of the semester about the need to be absent from class due to religious observances.

Missed class due to University-sanctioned activities in accordance with ACD 304-02

Students who participate in university-sanctioned activities that require classes to be missed, shall be given opportunities to make up examinations and other graded in-class work. However, absence from class or examinations due to university-sanctioned activities does not relieve students from responsibility for any part of the course work required during the period of the absence.

Disability Accommodations:

Reasonable accommodations are determined on a case-by-case, course-by-course basis to mitigate barriers experienced due to a disability (SSM 701-02). Students with disabilities who require accommodations must register with the Student Accessibility and Inclusive Learning Services and submit appropriate documentation. It is recommended students complete this process at the beginning of the term and communicate as appropriate with their instructor.

- Email: Student.Accessibility@asu.edu
- Phone: (480) 965-1234
- FAX: (480) 965-0441

Academic Integrity and Student Code of Conduct:

ASU expects and requires its students to act with honesty, integrity, and respect. Required behavior standards are listed in the Student Code of Conduct and Student Disciplinary Procedures, the Computer, Internet, and Electronic Communications Policy, the ASU Student Academic Integrity Policy, and outlined by the Office of Student Rights & Responsibilities. Anyone in violation of these policies is subject to sanctions.

Academic Integrity

Academic honesty is taken very seriously. While interaction among students is encouraged, students are expected to adhere to the [ASU Student Academic Integrity Policy](#). Plagiarism of any kind will not be tolerated. Students must properly cite sources used for assignments. Students must take exams independently without assistance from others. Students may not submit papers written by persons other than themselves. Students must submit original work for this course and may not submit papers previously submitted to another class. Consequences of non-compliance can be significant, including: failing the assignment or course, receiving a permanent “XE” grade for the course, removal from a major or program of study, expulsion from the university, among others.

The [ASU Student Academic Integrity Policy](#) lists violations in detail. These violations fall into five broad areas that include, but are not limited to:

1. Cheating on an academic evaluation or assignment.
2. Plagiarizing.
3. Academic deceit, such as fabricating data or information.
4. Aiding academic integrity policy violations and inappropriately collaborating.
5. Falsifying academic records.

Information on the Academic Integrity procedure within the College of Health Solutions can be found at <https://catalog.asu.edu/policies/chs>.

Student Code of Conduct

Violations of the ASU Student Code of Conduct, other than the provision concerning academic dishonesty, are more generally considered inappropriate behavior. The [Office of Student Rights and Responsibilities](#) reviews and sanctions these matters. If a student violates both the academic integrity provision and additional provisions of the Student Code of Conduct, both the college and the Office of Student Rights and Responsibilities will review the matter. Each independently makes determinations concerning violations and appropriate sanctions.

Disruptive or Violent Behavior

In the classroom and out, students are required to conduct themselves in a manner that promotes a safe environment that is conducive to learning and conducting other university-related business. All incidents and allegations of violent or threatening conduct by an ASU student will be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. Such incidents will be dealt with in accordance with the policies and procedures described in Section 104-02 of the Student Services Manual, available at <http://www.asu.edu/aad/manuals/ssm/ssm104-02.htm>. Be advised that an instructor may withdraw a student from the course when the student's behavior disrupts the educational process per Instructor Withdrawal of a Student for Disruptive Classroom Behavior (<http://www.asu.edu/aad/manuals/usi/usi201-10.html>).

Health Equity and Inclusion

The College of Health Solutions has a mission to improve the mental and physical health of our larger and immediate communities by better understanding the challenges that individuals and populations face, while striving to be part of the solution. The college is committed to the idea that every member of our society should have the opportunity for good health and wellness throughout their lifespans. In an effort to actualize this ideal, we embrace and support greater justice, diversity,

equity, and inclusion in everything we do, including teaching, research, service and clinical practice.

Learn more about the College of Health Solutions' commitments to justice, equity, diversity and inclusion at <https://chs.asu.edu/about/justice-equity-diversity-inclusion>.

Prohibition Against Discrimination, Harassment, & Retaliation

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. [ASU Counseling Services](#) is available if you wish discuss any concerns confidentially and privately. ASU online students may access 360 Life Services, <https://goto.asuonline.asu.edu/success/online-resources.html>.

Copyright

Students must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's original work, unless the students first comply with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement. For more information, see the Computer, Internet, & Electronic Communications Policy at <http://www.asu.edu/aad/manuals/acd/acd125.html>

The course syllabus and all other class materials (slide presentations, handouts, assignments, digital recordings, exams, quizzes, etc.) are intellectual property of Arizona State University and are not to be publicly distributed or otherwise commercialized since these materials are copyright protected. Such materials are for sole use in that designated semester. It cannot be used in any other form unless via a written statement of approval from the instructor. Commercial note taking services are prohibited in accordance with ACD 304-06 available at <http://www.asu.edu/aad/manuals/acd/acd304-06.html>

Information in this syllabus, other than grade and absence policies, is subject to change with reasonable advance notice. Please consult Canvas regularly.