

KIN 3370

Physiology of Exercise

Fall 2021



Archer College of Health and Human Services

Instructor: Dr. Allyn Byars, PhD, CSCS

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Course Information

Course Description

Physiological responses of the systems of the human body to acute and chronic exercise. Emphasis is on the processes and mechanisms for such responses.

Course Credits

Three hours

Prerequisite and Co-requisite Courses

BIO 2323/2123, BIO 2324/2124 or HSP 2301/2101, HSP 2302/2102

Prerequisite Skills

Accessing Internet websites, using ASU Library resources, and proficiency with Microsoft Word and/or PowerPoint are expectations of KIN 3370

Program Outcomes

Upon completion of the program of study for Kinesiology, the graduate will be prepared to: examine and investigate the major body systems, body processes and functions as they relate to human work and performance.

Student Learning Outcomes

Student Learning Outcome By completing all course requirements, students will be able to:	Assignment(s) or activity(ies) validating outcome achievement:	Mapping to Program Outcomes
Identify major body systems and processes	Periodic chapter exams, midterm and final exam, and essays	
Develop the ability to design strength and endurance training programs	Periodic chapter exams, major exams and essays	
Develop the ability to design cardiovascular aerobic programs	Periodic chapter exams, major exams and essays	
Develop the ability to design speed, agility, and quickness programs	Periodic chapter exams, major exams and essays	

Course Delivery

This is a face-to-face course with learning resources and supplemental materials posted in Blackboard. This includes lecture and discussion.

Required Texts and Materials

Physiology of Exercise (2020). 7th Ed. Kenney, W. L., Wilmore, J.H., Costill, D. L.
Human Kinetics: Champaign, IL. Available as e-book and loose-leaf.

Recommended Texts and Materials

none

Technology Requirements

- A computer capable of running Windows 7 or later, or Mac OSX 10.8 or later
- Microsoft Office Suite or a compatible Open Office Suite
- Adobe Acrobat Reader
- High Speed Internet Access
- Ethernet adapter cable required (wireless connections can drop during tests quizzes and exams)
- Understand the use of Blackboard

Topic Outline

1. Structure and Function of Exercising Muscle
2. Bioenergetics and Muscle Metabolism
3. Neural Control of Exercising Muscle
4. Hormonal Control During Exercise
5. Energy Expenditure, Fatigue, and Muscle Soreness
6. Cardiovascular System and Its Control

7. Respiratory System and Its Regulation
8. Cardiorespiratory Responses to Acute Exercise
9. Principles of Exercise Training
10. Adaptations to Resistance Training
11. Adaptations to Aerobic and Anaerobic Training
12. Exercise in Hot and Cold Environments
13. Exercise at Altitude
14. Training for Sport
15. Body Composition and Nutrition for Sport
16. Ergogenic Aids in Sport
17. Children and Adolescents in Sport
18. Aging in Sport and Exercise
19. Sex Differences in Sport and Exercise
20. Prescription of Exercise for Health and Fitness
21. Cardiovascular Disease and Physical Activity
22. Obesity, Diabetes, and Physical Activity

Communication

Faculty will **usually** respond to email and/or telephone messages within 24 hours, but only during working hours (9am-5pm) Monday through Friday. Weekend messages will not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.

Grading System

Evaluation and Grades

Course grades will be determined as indicated in the table below.

Assessment	Points of Total Grade
Chapter Quizzes	200 points
Midterm Exam	100 points
Final Exam	100 points
Total	400 points

Grading System

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

A = 360-400 points

B = 320-359 points

C = 280-319 points

D = 240-279 points

F = 0-239 points

***NOTE:** Do NOT rely on Blackboard's grading content in determining your grade unless otherwise instructed by your professor.

Teaching Strategies

The course will include lecture and discussion. Students are expected to be "active learners." It is a basic assumption of the instructor that students will be involved (beyond the materials and lectures presented in the course) discovering, processing, and applying the course information using peer-review journal articles, researching additional information and examples on the Internet, and discussing course material with their peers.

Assignment and Activity Descriptions

Exams and Quizzes

Scheduled online exams (300 points) and quizzes (100 points) will be announced throughout the semester and consist of multiple-choice questions. Questions will be taken from the daily lectures and the textbook.

Assignment Submission

All quizzes and exams will be administered online on the Blackboard site for this course. This is for grading, documenting, and archiving purposes. Issues with technology use arise from time to time. If a technology issue does occur, immediately email me at allyn.byars@angelo.edu. In addition, please contact the IT Service Center at (325) 942-2911 or go to your Technology Support tab to report the issue. This lets your faculty know you attempted to complete the quiz or exam on time and are just having problems with the online assessment feature in Blackboard. Once the problem is resolved, you will be allowed to complete the assessment through the appropriate link. This process will document the problem and establish a timeline for the purpose of verification.

POLICY ON MISSED EXAMS AND QUIZZES

Exam and Quiz dates are shown on the course schedule. Faculty reserves the right to determine if a make-up will be allowed. Exceptions to this policy are on a case by case basis and in alignment with Angelo State University policy.

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)¹
- [Angelo State University Catalog](#)²

Student Responsibility and Attendance

The following classroom policies and student responsibilities will be enforced:

1. There will be no smoking or use of smokeless tobacco.
2. There will be NO use of cell phones (including TEXT MESSAGING) or any other unauthorized electronic equipment during lectures and quizzes. Use of cell phones during class is strictly prohibited. Upon entering the classroom turn all cell phones and/or other handheld electronic devices off to prevent distractions affecting other student's learning opportunities.
3. Please be considerate to others while in class. Classroom conversations will be limited to the lecture discussions only
4. Professional behavior is expected. Everyone in the classroom is considered to be an adult professional and therefore should conduct themselves as one.
5. It is the student's responsibility for the information discussed in class even in lieu of one's absence. It is also the student's responsibility for all work and is encouraged to have a contact within the class. All students are encouraged to set up an appointment to meet with the professor as needed throughout the duration of the course. The purpose of the aforementioned is to provide additional assistance in understanding the concepts presented in the course.
6. There are NO extra credit opportunities in this course. Therefore, please do not inquire about such and/or raising your grade particularly at the end of the semester.

7. If you have a **scheduled personal trip** during the day of the final, you will need to **drop** the course or **cancel** the trip. The final will only be given on the day in which it is scheduled by the university. There are **NO** exceptions unless you are required to be present at a university sponsored event.

Attendance Policy

Students are expected to attend all scheduled class meetings. Attendance will be taken each class meeting. If a student arrives to class late or leaves early, it is the student's responsibility to inform the instructor as to the reason. Chronic failure to attend class *will* affect your final grade in this class. This also includes students consistently arriving late or leaving early and/or leaving and coming back to class during the scheduled meeting time. Exceptions to this policy will be made on a case by case basis and in alignment with Angelo State University policy. It is also the student's responsibility for the information discussed in class even in lieu of one's absence. It is also the student's responsibility for all work and is encouraged to have a contact within the class. All students are encouraged to set up an appointment to meet with the professor as needed throughout the duration of the course.

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU. The College of Health and Human Services adheres to the university's [Statement of Academic Integrity](#).³

Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)⁶ in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft. In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and thereference list.

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)⁵ for more information.

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#)⁷ for more information.

Copyright Policy

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

Syllabus Changes

The faculty member reserves the option to make changes as necessary to this syllabus and the course content. If changes become necessary during this course, the faculty will notify students of such changes by email, course announcements and/or via a discussion board announcement. It is the student's responsibility to look for such communications about the course on a daily basis.

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the [Student Disability Services website](#).⁴ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Boone, J.D. You may submit reports in the following manner:

Online: www.angelo.edu/incident-form

Face to face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: michelle.boone@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit: www.angelo.edu/title-ix.

Student Evaluation of Faculty and Course

Students in all programs are given the opportunity to evaluate their courses and the faculty who teach them. Evaluations are most helpful when they are honest, fair, constructive, and pertinent to the class, clinical experience, or course. Faculty value student evaluations, and use student suggestions in making modifications in courses, labs and clinical experiences.

Angelo State University uses the IDEA (Individual Development and Educational Assessment) system administered through Kansas State University for all course evaluations. The Office of Institutional Research and Assessment administers IDEA for the entire university, online and has established a policy whereby students can complete course evaluations free from coercion.

1. Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)
2. Learning to apply course material (to improve thinking, problem solving, and decisions)
3. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course
4. Developing skill in expressing oneself orally or in writing
5. Learning appropriate methods for collecting, analyzing, and interpreting numerical information

End of Syllabus

¹ <https://www.angelo.edu/student-handbook/>

² <https://www.angelo.edu/catalogs/>

³ <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

⁴ <https://www.angelo.edu/services/disability-services/>

⁵ <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>

⁶ <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

⁷ <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>