KINESIOLOGY 3372
BIOMECHANICAL MOVEMENT
SPRING 2020

Instructor: Dr. Kathleen M. Price
Email: Kathleen.Price@angelo.edu
Phone: Dr. Price (325) 486-6175 or Kinesiology Department Office (325)942-2173
Office: Ben Kelly Center for Human Performance (CHP) #108
Office Hours: MWF 8:30-10:00 MWF and 12:00-12:30 Friday
TTH 8:30-9:30 and 10:45-11:45 and 1:30-2:00

Course Information

Course Description
This course will focus on the principles of human movement emphasizing an understanding of the relationship of structure and movement with respect to anatomy and mechanical analysis.

Course Credits
3 advanced semester hours

Prerequisite Courses
Biology 2323/2121 or HSP 2301/2101

Prerequisite Skills
Accessing Internet websites, using ASU Library resources, and proficiency with Microsoft Word and/or PowerPoint are expectations of KIN 3372.

Program Outcomes
Upon completion of KIN 3372, the student will be prepared to analyze movement based on anatomical and mechanical factors. They should be able to recognize equipment and movement modifications for more efficient and effective skills.
Upon completion of the program of study for Kinesiology 3372, the student will be prepared to:

**Student Learning Outcomes**

<table>
<thead>
<tr>
<th>Student Learning Outcome</th>
<th>Assignment(s) or activity(ies) used in validating outcome achievement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will develop a knowledge and understanding of anatomical and mechanical principles.</td>
<td>This will be assessed by quizzes, homework, exams, and lab opportunities.</td>
</tr>
<tr>
<td>Students will develop an awareness of the importance of mechanics and application of mechanical principles to the study of anatomical structure and analysis of human movement.</td>
<td>This will be assessed by lab, website analysis, formal quizzes and exams.</td>
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<tr>
<td>Students will develop the ability to effectively analyze selected motor patterns.</td>
<td>This will be assessed by a choosing a skill and critically evaluating the components within the task.</td>
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By Mapping to this to Program Outcomes: Students will:

- Gain a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)
- Learn to apply course material (to improve thinking, problem solving, and decisions)
- Develop specific skills, competencies, and points of view needed by professionals in the field most closely related to this course
- Learn how to find, evaluate, and use resources to explore a topic in depth
- Learn to analyze and critically evaluate ideas, arguments, and points of view
- Learn to apply knowledge and skills to benefit others or serve the public good

**Course Delivery**

This is a face-to-face course with learning resources and supplemental materials posted in Blackboard.
**Required Texts and Materials**
Do you want a Bound Text Book? This type book is only for rent.
This can be rented through McGraw-Hill Publishers. ISBN #978-1-259-91387-7
Would you prefer a Loose Leaf Version? This can be purchased at ASU Bookstore.
ISBN# 9781260137392

**Recommended Texts and Materials**
Anatomy Coloring Book- You’ll use this again in this course. Some pictures of bones and muscles may be distributed with class notes.

**Communication**
Professor will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday if possible. Weekend messages may not be returned until Monday.

**Student Behavior**
**NO HATS WILL BE WORN AT ANY TIME by any student!** Please!! Be respectful!
Please respect your classmates and your professor by turning off your cell phone prior to coming into class. **If your phone rings during class, you will be asked to leave class and will be counted absent!**

**NO TEXTING** permitted during class! PUT YOUR PHONES AWAY! If you choose to text and I see you, you will be asked to leave and will be counted absent!

**Grading Policy**
Course grades will be determined as indicated below.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent/Points of Total Grade</th>
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</thead>
<tbody>
<tr>
<td>Quizzes and homework</td>
<td>30%</td>
</tr>
<tr>
<td>Tests</td>
<td>70%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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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 = 90.00-100
B = 80.00-89.99
C = 70.00-79.99
D = 60.00-69.99
F = 0-59.99

Teaching Strategies
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) in discovering, processing, and applying the course information using peer-review journal articles, researching additional information and examples on the Internet, and discussing course material and clinical experiences with their peers.

Attendance Policy and Class Policies
Attendance is necessary to fully understand the concepts and theories introduced in class. ASU functions must have a sponsor note.

No make-ups will be given for daily quizzes. You will be given an opportunity to drop 3 quiz grades with a critique exchange. You MUST turn in critiques on the day stated on the syllabus. The critique is due at the beginning of class. (This assignment is typed double-spaced.) A copy of the article must also be turned in to complete the assignment. No late work will be accepted. If you are absent and miss a quiz, it is recorded as a zero. A poor quiz grade can be dropped with this exchange. This is the only method of extra credit.

Student Responsibility and Attendance
Attendance BONUS for Borderline Grades
Attendance is recorded every day. Attendance may be taken by roll call or by the submission of an in-class activity. If you are not in class when attendance is recorded or when the in-class assignment is submitted then an absence for the day will be recorded. Excused absences require documentation prior to the absence and are only recognized for school sponsored activities, religious holy days, or military training. At the end of the semester attendance will be considered for students who are on the borderline of a higher letter grade (For example, students with an 89%, 79%, 69%, or 59%).
The following formula will be applied:
Two or fewer absences = 1 additional point added to final grade
Note: 8 or more unapproved absences will result in automatic failure of the course. No grades will be rounded up after bonus points are added. (Example- 89.9 average = B)

***Keep track of all grades through Blackboard. If there is an error, please check in with me in a timely manner.

Assignment Submission
All assignments MUST be submitted in a “hard copy” unless otherwise directed. If an issue does occur regarding an assignment submission, email me at kathleen.price@angelo.edu and attach a copy of what you are trying to submit.

If you have issues with “technology”, please contact the IT Service Center at (325) 942-2911 or go to your Technology Support tab to report the issue.

General Policies Related to This Course
All students are required to follow the policies and procedures presented in these documents:

- Angelo State University Student Handbook¹
- Angelo State University Catalog²

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

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. 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

**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 for more information.

**Plagiarism**

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy 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 the reference list.
Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the ASU Writing Center.7

**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 Day8 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.

**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](http://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 any incident 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](http://www.angelo.edu/title-ix).
| Date       | Topic                                                                 | Notes                                                                                           |
|------------|----------------------------------------------------------------------|                                                                                                |
| Mon Jan 13 | Orientation and Introduction                                         | Ch 1 pp 1-25 What is Biomechanics?                                                               |
|            |                                                                      | Learn key terms, basic concepts, and how biomechanics is used in various professions.            |
| Wed Jan 15 |                                                                      | Ch 1 continued                                                                                  |
| Fri Jan 17 | Ch 2 pp 27-56 (Planes, axes, terminology)                             | Kinematic Concepts for Analyzing Human Motion                                                   |
|            |                                                                      | Learn key terms for planes, joint movements, and directional terms.                             |
| Mon Jan 20 | University Holiday- No classes (Martin Luther King Day)              |                                                                                                |
| Wed Jan 22 | Ch 2 continued and                                                   | Ch 4 pp 83-108 (Bones)                                                                          |
|            |                                                                      | The Biomechanics of Human Bone Growth and Development                                           |
|            |                                                                      | Learn key terms associated with bone structure, growth and development, and injuries.          |
| Fri Jan 24 | Ch 4 continued and                                                   | Ch 3 pp 57-82 (Force, weight, mass, volume, pressure, vectors)                                   |
|            |                                                                      | Kinetic Concepts for Analyzing Human Motion                                                     |
|            |                                                                      | Learn key terms, units of measurement, and types of loading/forces present in sport and ADL.    |
| Mon Jan 27 | Ch 5 pp 109-133 (Joints)                                             | The Biomechanics of Human Skeletal Articulations                                                |
|            |                                                                      | Learn key terms associated with joint structure/movement capabilities, flexibility/ROM, and properties of connective tissue. |
| Wed Jan 29 |                                                                      | Ch 5 continued                                                                                  |
| Fri Jan 31 | Ch 6 pp 135-170 (Muscles)                                            | The Biomechanics of Human Skeletal Muscle                                                       |
|            |                                                                      | Learn key terms, properties, and muscle fiber types/characteristics.                            |
Mon Feb 3  Ch 6 continued

Wed Feb 5  Types of contractions, catch-up and review

Fri Feb 7  TEST #1
Mon Feb 10  First critique due

Ch 7 The Biomechanics of the Human Upper Extremity
Learn key terms and factors affecting mobility, muscles, and biomechanical contributions to injuries in the upper extremities.
pp 171-189 (Shoulder movements)

Wed Feb 12  Ch 7 pp 189-196 (Elbow movements)

Fri Feb 14  Ch 7 pp 196-203 (Wrist/hand movements)

Mon Feb 17  Upper body exercise lab and activity

Wed Feb 19  Catch-up and Review Game

Fri Feb 21  Upper Extremity Test (#2A)

Mon Feb 24  Ch 8 The Biomechanics of the Human Lower Extremity
Learn key terms and factors affecting mobility, muscles, and biomechanical contributions to injuries in the lower extremities.
pp 215-224 (Hip movements)

Wed Feb 26  Ch 8 The Biomechanics of the Human Lower Extremity  pp 224-235 (Knee movements)

Fri Feb 28  Ch 8 The Biomechanics of the Human Lower Extremity  pp 235-245 (Ankle/Foot movements) and Lower body exercise lab

Mon Mar 2  Ch 9 Biomechanics of the Human Spine
Learn key terms and factors affecting mobility, muscles, and biomechanical contributions to injuries in the spine.
pp 259-296(Spine)

Wed Mar 4  Ch 9 continued and Catch-Up Review Game
(Tentative schedule continued)
Fri Mar 6   Lower Extremity Test (#2B)

Mar 7-15   Spring Break

Mon Mar 16   2\textsuperscript{nd} critique due
Center of Gravity pp 60, 409-414
Balance and stability 414-416
Levers 400-405

Wed Mar 18   Lever lab and
Ch 10 Linear Kinematics of Human Movement pp 297-330
Learn key terms related to kinematic variables and projectiles.

Fri Mar 20   Ch 10 continued. Worksheet to review concepts.

Mon Mar 23   Ch 10 pp 309-323 (Projectiles and possible lab)

Wed Mar 25   Linear kinematics continued and problems

Fri Mar 27   Ch 11 pp 331-358 (Angular Kinematics of Human Movement)
Learn key terms and concepts associated to angular kinematics

Mon Mar 30   Ch 11 continued.

Wed Apr 1   Angular kinematics continued and problems

Fri Apr 3   Review game and catch-up

Mon Apr 6   TEST #3

Wed Apr 8   3\textsuperscript{rd} critique due
Ch 12 pp 359-391 (Linear Kinetics of Human Movement)
Learn key terms associated with kinetics including Newton’s Laws,
friction, work, power, and energy.

Fri Apr 10   Spring Holiday (No Classes)

Mon Apr 13   Ch 12 continued
(Tentative schedule continued)

**Wed Apr 15**  Linear kinetics continued and problems to reinforce linear concepts

**Fri Apr 17**  Work/Power Lab and Coefficient of Restitution

**Mon Apr 20**  Ch 14 pp 427-452 (Angular Kinetics of Human Movement)
Learn key terms, concepts, and factors related to angular kinetics that influence movement. Introduction and worksheet
Problems in angular kinetics and lab activities in kinetics

**Wed Apr 22**  Problems in angular kinetics and lab activities in kinetics

**Fri Apr 24**  Problems in angular kinetics and lab activities in kinetics

**Mon Apr 27**  Sport Science in action

**Wed Apr 29**  Observation strategies and qualitative movement analysis skills

**Fri May 1**  Review for final exam

**IMPORTANT DATE:** March 26 is the last day to drop a class or withdraw from the University for the Spring 2020 semester.

**FINAL EXAM SCHEDULE**
10:00 MWF CLASS, your final is Monday May 4 from 10:27 am -12:30 pm.

11:00 MWF CLASS, your final is Wednesday May 6 from 10:27 am-12:30 pm.

**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.