SR | SUL ROSS
KINESIOLOGY DEPARTMENT

KINE 3343
Summer II 2025
Biomechanics

Mary Powers M.S.
Instructor - Kinesiology

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Office Hours: By appointment (email to set an appointment)

Contacting Mr. Renshaw: I do not have office hours this Summer but I will respond to email as soon as possible. If you send an email, I will respond within 24 business hours (unless you are notified otherwise ahead of time). I may not respond to emails over the weekend or once I have left for the day. Plan accordingly

Recommended Text: McGraw Hill Inclusive Access Basic Biomechanics 9th ed. smartbook

Required Materials: You will need a calculator for this course, but a graphing calculator is not necessary.
This class requires Connect textbook access –

You do not need to purchase the book or Connect; this class is a part of Inclusive Access. Inclusive Access is a course material affordability program, designed by institutions and guided by the Department of Education to deliver digital learning resources to students, at a significantly reduced cost, on or before the first day of class. All students should have been sent a password the day before the first day of class via email. See blackboard for the link or go to Mcgraw Hill Assignments & Tests tab in blackboard and click on the first assignment.

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COURSE DESCRIPTION

Biomechanics is the application of Newtonian physics to the human body and to motion in general.

EXPECTATION OF STUDENTS

Students are responsible for keeping up with the reading and are expected to read the assigned chapters and/or other posted readings prior to class in order to contribute to online discussion. Handouts distributed through Blackboard should be

kept in a notebook in order to be referred to as necessary.

MARKETABLE SKILLS – The following marketable skills are met in this course:

- **Collaboration – students will interact with one another through a multitude of class discussions and activities**
- **Critical Thinking – students will be asked to critically decipher a multitude of real-world scenarios**

STUDENT LEARNING OUTCOMES and COURSE OBJECTIVES

The learning activities, assignments, and exams in this course are constructed to assess each student's mastery of the following learning outcomes:

Understanding Fundamental Concepts:

- Grasp the basic principles and definitions of biomechanics, including kinematics, kinetics, and dynamics.
- Differentiate between static and dynamic systems in biomechanics.

Analyzing Human Movement:

- Learn to describe and analyze human movement using biomechanical principles.
- Understand the mechanical properties of muscles, tendons, and bones.

Applying Mathematical and Physical Principles:

- Utilize mathematical equations and physical laws to solve biomechanical problems.
- Apply principles of Newtonian mechanics to biological systems.

Conducting Biomechanical Measurements:

- Develop skills to measure and analyze forces, motion, and other biomechanical parameters.
- Gain proficiency in using biomechanical tools and equipment, such as motion capture systems and force plates.

Understanding Joint Mechanics:

- Study the biomechanics of major human joints, including the knee, hip, shoulder, and spine.
- Understand the roles of ligaments, cartilage, and other joint structures in movement and stability.

Exploring Tissue Mechanics:

- Investigate the mechanical behavior of biological tissues, including bone, muscle, and connective tissue.
- Understand stress-strain relationships and viscoelastic properties of tissues.

Examining Biomechanical Pathologies:

- Identify common musculoskeletal disorders and injuries from a biomechanical perspective.
- Understand the biomechanical factors contributing to these conditions and their implications for treatment

Course Format

The format for this course will include on-line components only.

Attendance

There is no attendance policy for this class. However – the student is responsible for all due dates as posted in blackboard and communicated vie announcements. The instructor reserves the right to adjust due dates with reasonable acomodation

GRADING POLICIES/TESTING/ASSIGNMENTS/ATTENDANCE/EXPECTATIONS

Grade calculation	% of Grade	Grading Scale	
	100 (10%)	900 or more	A
Connect SmartBook Assignments (15)	15 @ 50 = 750 points (75%)	800-899	B
midterm	1 @ 100 = 100 points (10%)	700-799	C
Final exam	1@150 =150 points (15%)	600-699	D
		Less than 599	F
		Total Points = 1000	

No Late Assignments Will Be Accepted. Also, No Credit Will Be Given For Any Late Assignments

Tentative Course Schedule

WEEK	CONTENT	DUE
7/8- 7/15	Smartbook	Connect 1/2/3/4/5
7/16-7/22	Smartbook	Connect 6/7
7/23-7/29	Smartbook	**MIDTERM Covering Connect 1-7 on 7/24** Connect 8/9/10
7/30-8/6	Smartbook	Connect 11/12/13
8/7-8/13	Smartbook	Connect 14/15
8/14		Final Exam **Covering Connect 8-15**

ALL COURSE REQUIREMENTS DEADLINE

All test and assignments will be due on the date shown by 11:59 pm. The final exam will be due by the date and time show

Please read all black board announcements! I communicate a lot through those and will check in regularly. Please contact me via email if you have any questions or concerns

Distance Education Statement

Students enrolled in distance education courses have equal access to the university's academic support services, such as Smarthinking, library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

Accidents & Injuries

In the case of bodily or personal property damage, the Kinesiology Department will not be held responsible. The student must report any field experience related injury or illness to the Instructor immediately. Any expense incurred due to injury or illness will be the student's responsibility.

Academic Integrity Statement

Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation is appreciated. Examples of academic dishonesty include but are not limited to: Turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden. The Student Handbook can be found at: https://www.sulross.edu/catalog/undergraduate-academic-regulations-2/#1605412215143-c8b265dc-3e01
In addition, please note that plagiarism detection software will be used in this class for written assignments.

Academic Civility Statement

Students are expected to interact with professors and peers in a respectful manner that enhances the learning environment. Professors may require a student who deviates from this expectation to leave the face-to-face (or virtual) classroom learning environment for that particular class session (and potentially subsequent class sessions) for a specific amount of time. In addition, the professor might consider the university disciplinary process (for Academic Affairs/Student Life) for egregious or continued disruptive behavior.

Academic Affairs Service Statement

Sul Ross faculty, staff, and students are expected to model responsible citizenship through service activities that promote personal and academic growth while enhancing the university, local, regional, national, and global communities. These activities will foster a culture of academic/public engagement that contributes to the achievement of the university's mission and core values.

Libraries

The Bryan Wildenthal Memorial Library in Alpine.
Offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu. Off-campus access requires logging in with your LobolD and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

Academic Excellence Statement

Sul Ross holds high expectations for students to assume responsibility for their own individual learning. Students are also expected to achieve academic excellence by:

- Honoring the core values of Sul Ross.
- Upholding high standards of habit and behavior.
- Maintaining excellence through class attendance and punctuality.
- Preparing for active participation in all learning experiences.
- Putting forth their best individual effort.
- Continually improving as independent learners.
- Engaging in extracurricular opportunities that encourage personal and academic growth.
- Reflecting critically upon feedback and applying these lessons to meet future challenges.

ADA Statement

SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Students seeking accessibility/accommodations services must contact Rebecca Greathouse Wren, LPC-S, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email rebecca.wren@sulross.edu. Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, SUI Ross State University, Alpine. Texas, 79832.