# Auburn University

# College of Education

# School of Kinesiology

# Course Syllabus

## Syllabus for KINE 3620-001 (Spring 2023)

### Course Information:

Course Number: KINE 3620

Course Title: Biomechanics of Human Movement

Course Hours: 3 semester hours (Lecture 3)

Prerequisites: none

### Faculty Information:

Instructor: Dr. Wilburn

Office Location: Kinesiology Building 103

Office Hours: TR 2-3:30 PM

Email**:**czw0043@auburn.edu

Phone number: 334-844-1462

Teaching Assistant: Ms. Julia Christl

Office Hours: schedule by appointment

Email: jac0151@auburn.edu

### Course Meetings:

Tuesdays & Thursdays: 8:00 AM – 9:15 AM (Room 257)

Required Text: Wilburn, C, Weimar, W, & Decoux, B*.* (2021). *Basic Biomechanics for the Pre-Clinicians & Practitioners.* Great River Learning. IBSN: 9781644966136

### Course Description:

This course is designed to develop a fundamental understanding of the anatomical, neuromuscular, and biomechanical principles of human movement. Application of these concepts, as well as methods of motion analysis covered in this course, will enable the student to evaluate human performance in greater detail.

Student Learning Outcomes:

The students will be able to:

1. learn a systematic approach to the analysis of human motion;

2. understand the anatomical, neuromuscular, and biomechanical fundamentals of human motion;

3. apply anatomical and biomechanical analyses to the study and improvement of a broad spectrum of movement activities

### Course Overview (Tentative Schedule of Topic- exact timing may change)

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Week 1. Biomechanics History

Week 2. Anatomical Language

Week 3 Mechanical Terminology

Week 4. Newtonian Laws of Motion

Week 5. Kinematics

Week 6. Linear Kinematics & Projectile Motion

Week 7. Linear Kinetics   
Week 8. Linear Kinetics & Angular Kinematics

Week 9. Angular Kinematics & Angular Kinetics

Week 10. Angular Kinetics & Bones

Week 11. Bones & Articulations

Week 12. Articulations & Skeletal Muscle

Week 13. Skeletal Muscle

Week 14. Skeletal Muscle& Applied Concepts

Week 15. Applied Concepts

### EVALUATION METHODS:

#### Course Requirements:

Quizzes, exams, a final project, and final exam will be given during this course.

#### Grading and Evaluation Procedure:

Exams......40%

Quizzes………30%

Final Project......20%

Final Exam....10%

90 - 100 --- A

80 - 89 --- B

70 - 79 --- C

60 - 69 --- D

Under 60 --- F

### Class Policy Statements:

Participation: Students are expected to participate in all class discussions. It is the student’s responsibility to contact the instructor if assignment deadlines are not met. Students are responsible for initiating arrangements for missed work.  
  
***Online Student Learning Expectations:*** All students in this course are expected to have all the equipment and software needed to be successful in the course.  
  
All students are expected to contribute to their own learning as active and well-prepared participants. Weekly modules will provide various opportunities for reading, reflection, applied experiences, collaboration, and writing. Since these activities are woven through the entire week and generally do not require your “electronic presence” at any particular time or day, there should be no need to "miss" class. You should plan on spending the same amount of preparation and “in class” time on this course as you would if you were taking the course face-to-face.

Attendance/Absences: Attendance is required at each class meeting. If an exam or quiz is missed, a make-up exam will be given only for University-approved excuses as outlined in the Student Policy e-Handbook. Arrangement to take the make-up exam or quiz must be made in advance. Students who miss an exam or quiz because of illness need a doctor’s statement for verification of sickness and should clear the absence with the instructor the day they return to class. Other unavoidable absences from campus must be documented and cleared with the instructor **in advance**.

Assessments: All exam and assignment grades will be posted to Canvas. Upon receiving a notification about your grade, you have the opportunity to appeal your graded assessment. To appeal a grade that you have received, please compose and send an email to your instructor writing out the exam or assignment in question, indicating the answer you submitted, and providing a written justification from the reading/class notes/etc. on why you think your answer is correct.   
  
Once received, the instructor may or may not communicate with you regarding your appeal. Ultimately, the instructor will render a decision. If no appeal is sent to the instructor after five business days, the assignment score is final. Failure to monitor your progress as the semester progresses does not warrant a re-grade on assignments evaluated earlier in the semester. Once the 5-day appeal period has passed, students forfeit their right to have the graded material reassessed at a later date.

Late Assignment Policy: It is very important that students submit work on time, or they will find it very difficult to catch up. Any assignment that is submitted after the due date will have one letter grade deducted from it per day late. Students should reach out to their instructor immediately to discuss any concerns. In situations where you are experiencing technical difficulties submitting your assignment near the deadline, please consult the Canvas help desk resources available in left navigation. Please work to avoid encountering technical difficulties near the assignment due dates by completing your work ahead of deadlines.

*Make-Up Assignment Policy*: Students who miss the normal exams will need to contact the instructor and turn in the valid excuse within 48 hours from the time that the exams were given. The makeup exam schedule is determined by the instructor and will need to be done within ONE week (5 work days) from the time that the exams were given. Students will need to check the class email for the makeup details. Students who miss the makeup without valid excuses will get zero on the exam.  
  
Valid excuses include: 1). illness documented by a physician. 2) evidence of personal or family emergency. 3) official university excuses.

Email: Tigermail is the official means of communication for Auburn University. The instructor will communicate with the class through Tigermail regularly. You will be responsible to obtain this information and should check your Tigermail account frequently.   
  
Students should give the instructor 48 hours to get back to them on any communication, and one week for grading turnaround time on major assignments. The instructor reserves the right to alter these feedback parameters due to contingencies such as holidays, course progress, campus emergencies, weather, holidays, professional activities, etc. with notice provided. If students have concerns about communication or feedback, they should always go to the professor first. Students should explain their concern as clearly as possible without judgment or emotion. Effective communication is an important skill, and every interaction in their program is an opportunity to develop this skill.

Accommodations: Students who need accommodations are asked to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternative time can be arranged. To set up this meeting, please contact me by e-mail. Bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have an Accommodation Memo but need accommodations, make an appointment with the Program for Students with Disabilities at 1244 Haley Center, 844-2096 (V/TT).

Questions/Help: Students are encouraged to ask questions and seek extra help on a regular basis. Please do not wait 1 minute to 48 hours prior to a quiz or exam to seek assistance.

Honesty Code: The University Academic Honesty Code and the Student Policy e-Handbook Rules and Regulations pertaining to cheating will apply to this course.

Professionalism: As faculty, staff, and students interact in professional settings, we are expected to demonstrate professional behaviors as defined in the College’s conceptual framework. These professional commitments or dispositions are listed below:

* + - Engage in responsible and ethical professional practices
    - Contribute to collaborative learning communities
    - Demonstrate a commitment to diversity
    - Model and nurture intellectual vitality

#### Diversity Statement: Names and Pronouns: Many people might go by a name in daily life that is different from their legal name. In this classroom, we will refer to people by the names that they go by. Pronouns are a way to affirm someone's identity. They are simply a public way in which people are referred to in place of their name (e.g. "he" or "she" or "they" or "ze" or something else). In this classroom, you are invited to share what pronouns you go by, and we will refer to people using the pronouns that they share.