AUBURN UNIVERSITY

SCHOOL OF KINESIOLOGY

COURSE SYLLABUS

KINE 3621 002 – BIOMECHANICS LAB

FALL 2017

Primary Instructor: Lauren Brewer

Email:leb0060@auburn.edu

Secondary Instructor:Sarah Brinkerhoff / Bryce Munz

Email:sab0042@tigermail.auburn.edu / bbm0004@tigermail.auburn.edu

Office Location: 020 KINE

Office Hours:T/TH 12-2; by appointment (send an e-mail to set-up a time)

Class Meeting Location & Time**:** **Student Activity Center Rm 241, MONDAY 5:00-6:40**

Co-requisite: KINE 3620

### COURSE DESCRIPTION

Laboratory experience focuses on application of knowledge of anatomical, neuromuscular, and biomechanical principles of human movement. Content emphasizes understanding the science of exercise, how to apply and interpret common mechanical measures, and writing about findings using basic scientific writing techniques.

### COURSE OBJECTIVES

Students will:

Use the physical laws of motion to quantitatively analyze human performance

Use physical descriptors of movement to qualitatively analyze human performance

Apply principles of kinetics and kinematics to solve problems of human motion

Gain exposure to the various data collection and analysis tools in biomechanics

Apply critical thinking skills to problem solving and writing assignments

Use teamwork to complete lab assignments

### COURSE MATERIALS

All course materials and information will be supplied on Canvas

\*\*EACH LAB ASSIGNMENT MUST BE PRINTED OUT AND REVIEWED PRIOR TO CLASS\*\*

### EVALUATION AND GRADING

Grading will be based on:

Attendance – 10%

Lab Reports – 90%

Grading is on a straight percentage basis using the following scale:

A: ≥ 90% B: 80-89.9% C: 70-79.9% D: 60-69.9% F: <60%

### CLASS POLICY STATEMENTS

#### ATTENDANCE:

Attendance is required at each class meeting. The absence policy will follow the guidelines as outlined in the Student Policy eHandbook. Excused absences include, but are not limited to, illness certified by a physician, serious illness/death in the student’s immediate family, or any other unavoidable absences cleared with the instructor in advance. Any unexcused absences will count against your grade (a reduction of points per unexcused absence).

#### **Make-up Policy**:

Only students with excused absences will be able to make up missed work. However, instructor retains the right to refuse make-up work from a student. Any student who fails to contact the instructor *prior* to any missed lab assignments may **not** be allowed to make-up the assignment. It is your responsibility to contact the instructor in the case of an emergency. Absences do not exempt students from fulfilling academic requirements.

#### Lab Policy:

NO phones or text messaging during lab is allowed. All phones and electronic devices must be put away prior to the start of class.

NO food or drink in lab. Equipment is expensive and very sensitive to spilled drinks!

Students are expected to arrive to class on time. Those arriving late will not be permitted to hand in assignments. Likewise, classes will end promptly at the scheduled time.

Students are expected to come to lab having completed all assigned work.

While the laboratory sessions are more relaxed, students are expected to conduct themselves in professional and safe manner.

Students are not permitted to play with laboratory equipment. Students will be removed from class if caught playing with any lab or sporting equipment without permission.

Lab attire consists of loose fitting gym shorts, t-shirts, and sneakers for easy movement. In order to participate in laboratory sessions, students must arrive to class in appropriate attire. Students not properly dressed will be asked to leave and will not be allowed to make up the assignments.

We are genuinely interested and invested in helping you understand course material. Students are encouraged to ask questions and seek extra help on a regular basis. Please take advantage of our time if you need additional help! Call or email to set up a time to address academic issues! BE PROACTIVE!

#### PROFESSIONALISM:

As faculty, staff, and students interact in professional settings, they 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

### STUDENT ACCOMMODATIONS:

Academic Honesty Policy:

All portions of the Auburn University student academic honesty code (Title XII) found in eHandbook will apply to university courses. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Disability Accommodations:

Students who need special accommodations in class are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of class, 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 email. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1288 Haley Center, 884-2096 (V/TT).

| Week  | Date (MONDAYS) | Topics Covered | Assignments |
| --- | --- | --- | --- |
| Week 1 | Aug 21 | NO LAB MEETING |  |
| Week 2 | Aug 28 | **Lab 1:** Introduction to Movement Analysis |  |
| Week 3 | Sep 4 | NO LAB MEETING |  |
| Week 4 | Sep 11 | **Lab 2:** Math Review / Lever Lab | **Lab 1 Due** |
| Week 5 | Sep 18 | **Lab 3:** Kinematic Lab – Acceleration, velocity, position | **Lab 2 Due** |
| Week 6 | Sep 25 | **Lab 4:** Kinetic Lab - GRF | **Lab 3 Due** |
| Week 7 | Oct 2 | **Lab 5:** GaitRITE Lab | **Lab 4 Due** |
| Week 8 | Oct 9 | NO LAB MEETING |  |
| Week 9 | Oct 16 | **Lab 6:** Squat Man Lab | **Lab 5 Due** |
| Week 10 | Oct 23 | **Lab 7:** EMG – Upper Extremity Lab | **Lab 6 Due** |
| Week 11 | Oct 30 | **Lab 8:** Movement Analysis Pt 1 | **Lab 7 Due** |
| Week 12 | Nov 6 | **Lab 9:** Movement Analysis Pt 2 | **Lab 8 Due** |
| Week 13 | Nov 13 | **Lab 10:** Gait Analysis | **Lab 9 Due** |
| Week 14 | Nov 20 | NO LAB MEETING |  |
| Week 15 | Nov 27 | **Lab 11:** Court Case Prep | **Lab 10 Due** |
| Week 16 | Dec 4 | **Lab 12:** Court Case Prep |  |