

**AUBURN UNIVERSITY  
SYLLABUS**

**KINE 3620 – Biomechanical Analysis of Human Movement**  
- 4 credit hours; LEC 3, LAB 1.

**Fall 2013**

Lecture: Tuesday/Thursday- 9:30 – 10:45 AM. Memorial Coliseum room 1081.

Lab: Wednesday- 12:00 - 1:40 pm. Kinesiology Building 014.

Course Master: Wei Liu, PhD.

Lab Instructor: Hillary Plummer M.AT, ATC, LAT

Office: 301 Wire Road (New Kinesiology Building), Room 107

Email: [wzl0022@auburn.edu](mailto:wzl0022@auburn.edu)

Phone: 334-844-1597

Office Hours: by appointment

**Texts or Major Resources:**

Hamilton, N., Weimar, W. & Luttgens, K. (2011) Kinesiology – Scientific Basis of Human Motion. Twelfth Edition, McGraw-Hill: New York, New York. (ISBN 978-0-07-297297-9).

Power point presentations and handouts will be provided through Canvas.

**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 student will demonstrate an understanding of and the ability 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 REQUIREMENTS:**

Three midterm exams and one final exam will be given during this course. Quizzes may also be given during the class throughout the semester. In addition to exams and quizzes, laboratory assignments will be graded. If a computer problem occurs with the Canvas system you must notify the instructor immediately.

**GRADING SCALE:**

The grading scale for this course is as follows:

<b>A = 90 – 100%</b>	<b>Labs:</b>	20%
<b>B = 80 – 89%</b>	<b>Quizzes:</b>	10%
<b>C = 70 – 79%</b>	<b>Midterm Exams:</b> [3 @ 15% each]	45%
<b>D = 60 – 69%</b>	<b>Final Exam:</b>	<u>25%</u>
<b>F = Under 59%</b>	<b>Total:</b>	100%

Extra Credit opportunities will be provided during this semester. Every student will have an equal opportunity to earn the credit. A grade will be given based on the accumulation of the “exams, quizzes, lab assignments, and extra credits.”

### **STATEMENT OF STUDENT ACCOMMODATION**

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).  
<https://fp.auburn.edu/disability/faculty/syllabus.asp>.

**E-MAIL** Outlook360 is the official means of communication for Auburn University. The instructor will communicate with the class through Outlook360. You are responsible for this information, so please check your account regularly.

### **CONTINGENCY PLAN**

If normal classes are disrupted due to a high number of students experiencing illness or an emergency or crisis situation (such as a widespread H1N1 flu outbreak), the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials. Additionally, course content and assignments may be made available to you via Blackboard.

### **HONESTY CODE**

The University Academic Honesty Code and the **Student Policy eHandbook** [www.auburn.edu/studentpolicies] pertaining to cheating and plagiarism will apply to this class.

### **CLASS POLICY STATEMENTS**

**Participation:** Students are expected to participate in all class discussions. It is the student’s responsibility to contact the instructor **PRIOR** to class if an illness or emergency requires the student to miss class. Any missed work due to a University approved excuses **MUST** be made-up within 5 days.

**Attendance/ Absences:** Attendance is required at each class meeting. If an exam is missed, a make-up exam will be given only for University-approved excuses as outlined in the **Student Policy eHandbook**. Arrangements to take the make-up exam **must be made in advance** and the exam taken within 5 days of the missed exam. Students who miss an exam because of illness should inform the instructor prior to the missed class if possible. A doctor’s statement for verification of sickness is required and should clear the absence with the instructor the day the return to class. Other unavoidable absences from campus must be documented and cleared with the instructor in advance. No late assignments or quizzes will be accepted outside of extreme circumstances noted by the instructor. Please carefully adhere to established assignment deadlines. In such a case the instructor will have the discretion of lowering the assignment a percentage of the overall grade for each day that it is late.

**Questions/ Help:** Students are encouraged to ask questions and seek extra help on a regular basis. Please do not wait until the day before an exam.

### **Classroom and Laboratory Policies:**

- All electronic devices must be turned off during classroom or laboratory periods, with the exception of laptops, which may be used for note taking only. NO phones or text messaging

during class is allowed. All phones and electronic devices must be put away prior to the start of class. If these are found out – The student will be asked to leave the class.

- Students are expected to arrive to class on time. Those arriving late will not be permitted to hand in homework. Likewise, classes will end promptly at the scheduled time.
- Students are expected to come to class having completed the reading and prepared to discuss them.
- 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.
- 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.

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

AU Evaluation Dates: AU eValue Fall Semester

OPEN: November 29, 2013 [8:00am]

CLOSE: December 2, 2013 [11:59pm]

**Tentative Class Schedule:** (Subject to change)

Week	Monday	Tuesday	Wednesday	Thursday	Friday
		<b>Lecture: 9:30am-10:45am</b>		<b>Lecture: 9:30am-10:45am</b>	
1	Aug 19	Aug 20	Aug 21	Aug 22 Introduction/Ch1	Aug 23
2	Aug 26	Aug 27 Intro of Biomechanics/Ch1-2	Aug 28	Aug 29 Musculoskeletal System: Ch2-3	Aug 30
3	Sept 2 <b>Labor Day</b>	Sept 3 Neuromuscular System: Ch3-4	Sept 4	Sept 5 Vector Analysis, Math Review I Ch10 [Quantitative]	Sept 6
4	Sept 9	Sept 10 Vector Analysis, Math Review II Ch10 [Quantitative]	Sept 11	Sept 12 Biomechanics Concept Kinematics Ch11	Sept 13
5	Sept 16	Sept 17 Biomechanics Concept Kinematics Ch11	Sept 18	Sept 19 Biomechanics Concept Kinetics I Ch12	Sept 20
6	Sept 23	Sept 24 Biomechanics Concept Kinetics I Ch12	Sept 25	Sept 26 Biomechanics Concept Kinetics II Ch13	Sept 27

7	Sept 30	Oct 1 Biomechanics Concept Kinetics II Ch13	Oct 2	Oct 3 Center of Gravity II (Graphic Approach: FBD) Ch14[Qualitative]	Oct 4
8	Oct 7	Oct 8 Center of Gravity II (Graphic Approach: FBD) Ch14 [Qualitative]	Oct 9	Oct 10 <b>Review 1</b>	Oct 11
9	Oct 14	Oct 15 <b>Exam 1</b>	Oct 16	Oct 17 Biomechanics Applied to <b>UE</b> Activity I	Oct 18
10	Oct 21	Oct 22 Biomechanics Applied to <b>UE</b> Activity II	Oct 23	Oct 24 Biomechanics Applied to <b>UE</b> Activity III	Oct 25
11	Oct 28	Oct 29 <b>Review 2</b>	Oct 30	Oct 31 <b>Exam 2</b>	Nov 1
12	Nov 4	Nov 5 Biomechanics Applied to <b>LE</b> Activity I	Nov 6	Nov 7 Biomechanics Applied to <b>LE</b> Activity II	Nov 8
13	Nov 11	Nov 12 Biomechanics Applied to <b>LE</b> Activity III:	Nov 13	Nov 14 Biomechanics Applied to <b>LE</b> Activity IV:	Nov 15
14	Nov 18	Nov 19 <b>Review 3</b>	Nov 20	Nov 21 <b>Exam 3</b>	Nov 22
15	Nov 25	Nov 26	Nov 27	Nov 28	Nov 29
	<b>Thanksgiving</b>				
	<b>Holiday</b>				
16	Dec 2	Dec 3 Final Review	Dec 4	Dec 5 Final Review (TBA)	Dec 6