**BIOMECHANICS [KINE 3620]**

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| Instructor | Gretchen D. Oliver PhD, FACSM, ATC, LAT |
| Meeting Times | Tuesday/Thursday 9:30-10:45am |
| Office | COLSM 2034  |
| E-mail Address | goliver@auburn.edu |
| Office Hours | Monday/ Wednesday: 10:00-12:00 pmTuesday/ Thursday: 10:45-12:00 pm(Appointment is best) |
| Credit Hours | 4 semester hours |
| Pre-requisites | KINE 3020, MH 1610 |
| Co-requisites | None |
| Date Syllabus Prepared | Fall 2012 |

**REQUIRED TEXTBOOK**

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)

**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.

**COURSE INSTRUCTIONAL OBJECTIVES**

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 exams will be given during this course. “Pop” quizzes may also be given during the class. If a computer problem occurs with the blackboard or canvas system you must notify Dr. Oliver immediately. Surprise quizzes will cover material that is already covered in class, thus it is vital to keep up with the information throughout the semester. There will be no make-up quizzes for missed surprise quizzes unless an excused absence is pre-arranged.

**GRADING SCALE**

The grading scale for this course is as follows:

**A = 90 – 100% Labs:**  20%

**B = 80 – 89% Participation/ Quizzes:** 5%

**C = 70 – 79% Exams:** [3 @ 25% each] 75%

**D = 60 – 69% Total:** 100%

**F = Under 59%**

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, pop 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** TigerMail is the official means of communication for Auburn University. The instructor will communicate with the class through Tiger Mail. 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 Dr. Oliver **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 Dr. Oliver prior to the missed class if possible. A doctor’s statement for verification of sickness is required and should clear the absence with Dr. Oliver the day the return to class. Other unavoidable absences from campus must be documented and cleared with Dr. Oliver in advance. No late assignments or quizzes will be accepted outside of extreme circumstances noted by the Dr. Oliver. Please carefully adhere to established assignment deadlines. In such a case Dr. Oliver will have the discretion of lowering the assignmenta 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 eValuate Fall Semester

OPEN: November 29, 2012 [8:00am]

CLOSE: December 2, 2012 [11:59pm]

**TENTATIVE SCHEDULE**

Subject to change:

AUGUST

Thursday 16 Introduction

Tuesday 21 Intro to Biomechanics Chapter 1 and Questions [Oliver ISG Whales]

Thursday 23 Musculoskeletal System Chapter 2 and Questions [Oliver ISG Whales]

Tuesday 28 Intro Biomechanics Review

Thursday 30 Musculoskeletal System Review

SEPTEMBER

Tuesday 4 Musculoskeletal System Chapter 3

Thursday 6 Neuromuscular Basics Chapter 4

Tuesday 11 Upper Extremity Chapter 5

Thursday 13 Upper Extremity Chapter 5

Tuesday 18 Upper Extremity Chapter 6

Thursday 20 Review

Tuesday 25 Exam I [Chapters 1-6]

Thursday 27 Lower Extremity Chapter 7

OCTOBER

Tuesday 2 Lower Extremity Chapters 7 & 8

Thursday 4 Lower Extremity Chapter 8

Tuesday 9 Terminology & Math Review Chapter 10

Thursday 11 Chapter 10

Tuesday 16 Description of Movement Chapter 11

Thursday 18 Chapter 11

Tuesday 23 Linear Motion Chapter 12

Thursday 24 Chapter 12

Tuesday 30 Rotary Motion Chapter 13

NOVEMBER

Thursday 1 Chapter 13

Tuesday 6 Center of Gravity Chapter 14

Thursday 8 Pushing & Pulling Chapter 16

Tuesday 13 Aquatics Chapter 19

Thursday 15 TBA

Thanksgiving Break November 19-23

Tuesday 29 TBA [AU eValuate OPENS]

Thursday 27 TBA

Final TBA