

KINS 3600: Applied Biomechanics Syllabus Spring 2009

INFO	INSTRUCTOR: Dr. Bud Cooper
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Course Description: This course is for physical education, dance and other non-exercise science majors, focusing on:

- Biomechanical principles of human motion and the structure of the human body.
- Laws of mechanics and tissue biomechanics concepts are applied to sport, dance, daily living activities, physical training and injury etiology and prevention.

Text: McGinnis, P.M. (2005). *Biomechanics of Sport and Exercise*. 2nd Edition. Champaign, IL: Human Kinetics.

Overall Course Objectives: The student will be able to apply biomechanical principles to various human movement situations using a movement analysis model to:

- Assess movement technique to diagnose effectiveness and prescribe improvements.
- Evaluate the mechanics of exercises and movements to determine their effectiveness and safety.
- Evaluate external devices used for activities of daily living, exercise and sport.

Course information: All course information is in WebCT under “Course Content and Power Points” These documents are officially part of this course and syllabus. Students are responsible for all content for the following:

- *Syllabus*
- *Important Dates* (see last page of syllabus)
- *All written assignments are due at the beginning of class. Assignments turned in late will be penalized 10% of total for each day late up to a maximum of 20%. Assignments turned in after 2nd late day will not be accepted.*

Evaluation:

A	A-	B+	B	B-	C+	C	C-	F
90.00	89.45	89.01	80.00	79.45	79.01	70.00	69.45	69.44 below
97.99	89.99	89.44	89.00	79.99	79.44	79.00	69.99	

- Quizzes & Assignments: 100 pts
- 4 tests, each worth: 400 pts

Academic Honesty: Please read the following regarding academic honesty:

- UGA Academic Honesty Statement: **“I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others.” UGA Student Honor Code**
- *Information for Success*, section, “A career on the line” to learn specific expectations regarding ethics and professional expectations.
- If unfamiliar with UGA’s, “A Culture of Honesty”, read: http://www.uga.edu/ovpi/honesty/culture_honesty.htm

Tentative Weekly Schedule

(subject progression is subject to change)

WEEK	MONDAY	WEDNESDAY	FRIDAY
1	Introduction to Course	Orientation Terms	Lab 1 <i>Basic Terminology and Gross Bone Identification</i>
2	Chapter 1 Forces	Chapter 1	Chapter 1
3	Chapter 3 Linear Kinetics	Chapter 3	Chapter 3
4	Lab 2 <i>Running Kinematics</i>	Test 1 Intro, Ch 1, 3	Chapter 4 Work, Power, Energy
5	Chapter 4	Lab 3	Chapter 4
6	Chapter 5 Torques and Moments of Force	Chapter 5	Chapter 5
7	Lab 4	Chapter 7 Angular Kinetics	Chapter 7
8	Chapter 7	Lab 5	Test 2 Ch 4, 5, 7
9	Chapter 9 Stress/Strain on the Body	Chapter 9	Chapter 9
10	Lab 6 <i>Mechanical Work</i>	Chapter 10 Skeletal System	Chapter 10
11	Chapter 10	Lab 7	Chapter 11
12	Chapter 11 Muscular System	Chapter 11	Lab 8 <i>Muscle Imbalances</i>
13	Test 4 Ch 9, 10, 11	Chapter 12	Chapter 12
14	Chapter 13	Chapter 13	Chapter 13
15	Chapter 14	Chapter 14	Chapter 14