KINE 3020 – Scientific Foundations of Health and Human Performance (4 hour credit)

Meetings:
Monday, Tuesday, Wednesday & Thursday - 8:00-9:15 AM (MC 1081)

Instructors:
Ms. Sumner - Biomechanics - 844-1468 weimawh@auburn.edu
Dr. Blessing - Exercise Physiology - 844-1459 blessda@auburn.edu
Mike Urbin - Motor Behavior - 844-1480 fischmg@auburn.edu

Textbook: Abernathy, B., Kippers, V., Mackinnon, L.T., Neal, R.J., & Hanrahan, S. (1997). The biophysical foundations of human movement. Champaign, IL: Human Kinetics.

Course Description: Overview of the scientific basis of physical activity, including the biomechanical, physiological and psychological foundations of human movement.

Course Objectives: Upon completion of this course, students will understand:
1. The concept of a scientific perspective of physical activity;
2. The historical origins of the scientific study of human movement;
3. The definitions, distinctions and interrelationships of biomechanics, exercise physiology, motor behavior and exercise/sport psychology;
4. The role of kinematic and kinetic factors in human motion (7.a.3);
5. The changes that occur in the musculoskeletal system, physiological capacity and performance over the life span of an individual (7.a.2.i);
6. Basic concepts of exercise metabolism as it relates to the physiological basis of human movement and performance (7.2.a.ii);
7. The physiological and musculoskeletal adaptations that result from training (7.a.ii);
8. The basic psychological principles influencing human performance (7.a.4.i);
9. The specific contributions that motor control, motor development, motor learning and sport and exercise psychology offer to the study of human performance (7.a.4.iii).

Note: For students in the Physical Education Teacher Education Program, each objective that is followed by a Class B, N-12 certification rule number in parentheses must be achieved in order to pass the course.

Course Requirements: One examination (multiple choice and/or essay format) will be given at the end of each unit of study: Biomechanics, Exercise Physiology, and Motor Behavior/Sport Psychology. Each examinations is worth 100 point and counts one third of the course total. The third exam will be given during final exam week.

Grading and Evaluation Procedures: Item Final Grade Exam 1 - 33 1/3 > 90 = A Exam 2 - 33 1/3 > 80-90 = B Exam 3 - 33 1/3 > 70-80 = C > 60-70 = D <60 = F

Class Policy Statements: There are no unannounced quizzes in this course.
"Taking a class" means attending all meetings of that class. One point for each unexcused absence will be subtracted from the student's final average. Please refer to the current edition of the Tiger Cub for definition of excused absences.

Students with Special Needs Who Require Accommodations: Students who need special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with the Program for Students with Disabilities, 1244 Haley Center, 844-2096.

Course Content:

Week	Dates	Topics
1	8/18-8/21	Human movement studies as a discipline and a profession (Chapter 1&2) - Introduction to exercise physiology as a discipline (pg 182-184) - how is exercise physiology integrated into movement studies?
2	8/25-8/28	Structure and function of the musculoskeletal system (pg 49-56). Lifespan musculoskeletal changes (Chapter 5)
3	9/2-9/4	Basic concepts of exercise metabolism (Chapter 12)
4	9/8-9/11	Physiological adaptations to training (Chapter 13)
5	9/15-9/18	Changes in physiological capacity and performance throughout the lifespan (Chapter 14)
Exam 1	9/21	This session will end on September 22, 2008
7	9/23-9/25	Introduction (Chapter 1 & 2) - Mechanical Basis of human movement: The sub discipline of biomechanics (pg106-109)
8	9/29-10/2	Basic concepts of kinetics/kinematics (Chapter 7 & 8)
9	10/6-10/9	Basic concepts of energy (Chapter 9)
9	10/13-10/16	Biomechanical changes throughout the lifespan (Chapter 10)
10	10/20-10/22	Biomechanical adaptations to training (Chapter 11)
Exam2	10/22	This session will end on October 23, 2008
11	10/27-10/30	Introduction to the neural basis of human movement (pg 264-268). Basic concepts of motor control: Neurophysiology perspectives (Chapter 16)
12	11/3-11/6	Basic concepts of motor control: Psychological perspectives (Chapter 17)
13	11/10-11/13	Motor learning: Control adaptations to training (Chapter 19)
14	11/17-11/20	Introduction to the sub discipline of Sport and Exercise Psychology (pg 356-358). Basic concepts of Sport Psychology (Chapter 20)

15	12/1-12/8	Basic concepts of Exercise Psychology (Chapter 21)
Exam 3	12/10	8:00 AM- 10:30 AM