Plymouth State University
Department of Health and Human Performance

PE 3570 - Kinesiology

Spring 2010	**Instructor**: Dr. Cheryl Coker
MWF 8-8:50	D & M 430
D & M 314	535-3113
	cacoker@plymouth.edu

Needed: One semester license of Dartfish Software for your computer.

Other: You will also need a calculator with trigonometric functions and a USB drive with at least 500 MB for this class.

A. Course Description

1. The purpose of this course is to study and apply biomechanical principles and concepts to human movement. Fundamental principles of muscular movement, the mechanics of human motion, and analysis of human motion, particularly as these apply to selected physical activity will be examined.

2. Prerequisites: BI 2110 (may be concurrent)

B. Course Goal

1. Each student will acquire a working knowledge of biomechanical concepts as they relate to their future profession.

C. Course Objectives

1. Become knowledgeable of what constitutes effective and safe motor skill techniques and exercises.
2. Apply anatomical and mechanical principles to the teaching and coaching of motor skills.
3. Become familiar with use of video equipment and methods of observing, analyzing and correcting motor skills.

D. Course Policies

Cell Phones: Cell phone use (including texting) is prohibited in class. Also, please respect your classmates by turning off your phone prior to class start time. Failure to comply with both policies will result in the individual having to give their cell phone to the instructor prior to the start of class time. Phones will be returned after the class has ended. In the event of extenuating circumstances, please see the instructor.

Attendance: Attendance is required for all classes, unless excused by the instructor, illness (certified by doctor), as official university travel (documentation submitted).

ADA Policy: If you have a documented disability, please inform Plymouth Academic Support Service (PASS) located at Lamson Library, (603) 535-2270 and the instructor at the beginning of the semester, so that the instructor can make adaptations to meet your needs.

Missed Exams: If you know that you will not be available to take a scheduled exam, it is your responsibility to notify the instructor and arrange to take the exam at an alternative time. This must be done *prior* to the date of the exam. Any missed exams will be given a grade of 0 unless extenuating circumstances are a factor (i.e. medical reasons supported by a doctor's note). In the event that extenuating circumstances do exist, it is your responsibility to notify the instructor IMMEDIATELY. Failure to do so will result in 10% being subtracted from the grade obtained for each day of delinquency. If a student needs to make alternative arrangements to take an exam because of an excused absence, the grade achieved on the individual exam will be used as the grade for the team exam also. The student does NOT receive the team grade.

Late Assignments: All assignments are due at the beginning of the class. Any **assignment turned in after the first 5 minutes of the class will** be considered late. For each 24 hr period an assignment is late, 10% will be subtracted from the grade obtained. Late assignments/ projects will no longer be accepted after the 3rd 24-hour period that it is late and a zero will be given in such cases. Weekends **do count** as e-mail and BlackBoard function 24 hours.

Academic Dishonesty: Cheating and plagiarism are very serious forms of academic dishonesty. Any use of unauthorized assistance on exams, papers, homework assignments, or other course work constitutes cheating. Knowingly providing assistance during an exam or allowing other students to copy one's work is also a serious form of academic dishonesty. Plagiarism consists of submitting written work that has been developed wholly or partially by someone else. Submitting written work in which the ideas of others have been duplicated or even paraphrased without proper reference to the author is also a form of plagiarism. Also considered plagiarism is the acquisition of term papers or other assignments from another source and subsequent presentation of these materials as the student's own work. In addition, students may not use papers in more than one course without the permission of both instructors.

Any student suspected of academic dishonesty will be reported to the Chair of the HHP Department immediately. A full description of academic integrity, violations and procedures when a violation to academic integrity in a course is suspected can be found at http://www.plymouth.edu/registrar/policies/academic_standing.html.

Check Framework

The tenets which comprise the Plymouth State University Conceptual Framework have been organized around the words '**C**ommitment', **'H**olistic', '**E**xperience', '**C**ollaborative' and '**K**nowledge' (CHECK), and this course utilizes all of these facets of learning.

G. Organization

Intro
Terminology/Anatomical Term.
Articulations and Muscles
Qualitative Analysis
Skill Analysis – 8 principles

1. Stability
2. Use of All Joints
3. Sequential Joint Action
4. Impulse
5. Long and fast
6. Direction
7. Off Center Forces
8. Moment of Inertia

Exam 1

Biomechanical Research and Quantitative Analysis
Kinetic Concepts
Linear Kinematics
Angular kinematics
Trigonometry
Projectiles
Linear Kinetics
Angular Kinetics
Fluid Mediums

Exam 2

Equilibrium
Mechanical loads
Biomechanics of the Spine
Biomechanics of Exercise
Loads on Upper & Lower Extremities
Biomechanics in the weight room
Biomechanics of biological structures
Ergonomics

** FINAL EXAM – **Wednesday May 19th, 8-10:30**
** FINAL PROJECT DUE - **beginning of class- Monday April 26th, 2010**

NOTE: THE ABOVE CLASS ORGANIZATION MAY BE MODIFIED DUE TO CLASS SIZE, STUDENT NEEDS, TIME RESTRAINTS, OR UNFORESEEN CIRCUMSTANCES.

ALL ASSIGNMENTS ARE NOT INCLUDED IN THIS GUIDE. IF YOU MISS A CLASS SEE DR. COKER!

G. Evaluation Criteria

Exams x 2		20%
Final Exam (cumulative)		15%
Homework Assignments and Quizzes		5%
Anatomical Analysis*		15%
Skill Analysis**		10%
Dartfish Practice Assn.		5%
Journal Article**		5%
Project**		25%
	Total	100%

* Group Assignment
** Individual or Partner Assignment

Grades are based on total point system. Grading criteria will be based on the following:

93	=	A	73	=	C
90	=	A-	70	=	C-
87	=	B+	67	=	D+
83	=	B	63	=	D
80	=	B-	60	=	D-
77	=	C+	59	=	F