Course Title: Biomechanics and Anatomical Kinesiology Laboratory  
Course Number: KINE 3135  
Credits: 1.00  
Co-requisite: KINE 3334  
Days/Hours of Lab:  
  KINE 3135.001  Friday 8:00am – 10:00am  
  KINE 3135.002  Friday 10:00am – 12:00pm  
  KINE 3135.003  Friday 1:00pm – 3:00pm  
  KINE 3135.004  Friday 3:00pm – 5:00pm  
Dates: 01/12/2015 – 5/2/2015  
Lab Room: HPC 2165  

Instructor Information  
Name and Title: X. Neil Dong, Ph.D., Associate Professor  
Office location: HPC2166 (within Biomechanics Lab)  
Phone number: 903-565-5615  
Email address: ndong@uttyler.edu  
Office hours: Tuesday 2:00 pm – 5:00 pm  
Or by appointment  

Teaching Assistant Information  
Name: Mr. Raul Ramos  
Email address: rramos4@patriots.uttyler.edu  
Office location: HPC2170 (within Biomechanics Lab)  

Textbook:  

Catalog description:  
Laboratory and field analyses related to mechanics and musculoskeletal involvement in movement.  

Methods of Instruction  
Student learning experiences include but are not limited to: a) problem solving situations and laboratory experiences, b) observations and analysis of movement performances, c) reading designated textbooks and supplementary materials upon assignment.  

Student Learning Outcomes: After the full completion of this course the student will be:  
1. Able to decide what biomechanical questions should be asked and studied related to activities of daily living, sports, basic movements and work related tasks.
2. Able to develop research to answer the biomechanical questions asked related to activities of daily living, sports, basic movements and work related tasks.
3. Able to distinguish kinematic from kinetic research related to the mechanics of human motion.
4. Able to list and explain the differences between qualitative and quantitative analysis.
5. Able to develop and implement kinematic, kinetic, and electromyography (EMG) research

Evaluation:
The students will be evaluated on the basis of completing of laboratory experiences, and participation in analysis projects. A percentage of total points possible will determine the course grade.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90 – 100</td>
<td>A</td>
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<td>80 – 89</td>
<td>B</td>
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<td>70 – 79</td>
<td>C</td>
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<td>60 – 69</td>
<td>D</td>
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<td>0 – 59</td>
<td>F</td>
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Course Structure:
- 150 points Attendance (10 points for each lab, 30 points for attendance of oral presentation)
- 100 points Peer Evaluation within Group Members
- 100 points Project Report
- 50 points Oral Presentation
- 50 points Project Proposal
- 50 points Signed Group Contract

Total Possible Points: 500 points

Biomechanics Project:
The purpose of the project is to allow the students the opportunity to utilize the biomechanics equipment to help answer interesting questions relating to movement. The students will be able to use Electromyography, 2D Kinematic Analysis Equipment and a Force Plate to investigate movement. These projects, together with the principles acquired throughout class projects, will provide students a unique prospective to human movement. These projects will be written as well as presented orally via PowerPoint and poster presentation style.

EMG Project: Each laboratory group will be responsible for collecting EMG data on a selected topic (e.g., different abdominal exercises) and subsequent presentation of the findings in both written and oral form. Although both class lectures and laboratory times will be set aside for this project, significant out of class time will be required for the successful completion of this project. I feel that this project will not only be fun, but will give you, as students, a distinct advantage when applying for graduate schools, or jobs requiring movement analysis. Additional information will be forthcoming regarding EXACTLY what this project entails.

2D Kinematics Project: Each laboratory group will be responsible for collecting 2-Dimensional Kinematic data on a selected topic (e.g., running, jumping, diving, etc) and subsequent presentation of the findings in both written and oral form. Although both class lectures and laboratory times will be set aside for this project, significant out of class time will be required for
the successful completion of this project. I feel that this project will not only be fun, but will give you, as students, a distinct advantage when applying for graduate schools, or jobs requiring movement analysis. Additional information will be forthcoming regarding EXACTLY what this project entails.

Kinetic Force Plate Project: Each laboratory group will be responsible for collecting kinetic force plate data on a selected topic (e.g., ground reaction forces) and subsequent presentation of the findings in both written and oral form. Although both class lectures and laboratory times will be set aside for this project, significant out of class time will be required for the successful completion of this project. I feel that this project will not only be fun, but will give you, as students, a distinct advantage when applying for graduate schools, or jobs requiring movement analysis. Additional information will be forthcoming regarding EXACTLY what this project entails.

Course Outline

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>January 16</td>
<td>Introduction to Biomechanics Lab</td>
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<tr>
<td>January 23</td>
<td>EMG Lab</td>
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<td>January 30</td>
<td>Motion Capture Lab</td>
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<td>February 6</td>
<td>Force Plate Lab</td>
</tr>
<tr>
<td>February 13</td>
<td>Biomechanics Project: Forming Hypothesis</td>
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<tr>
<td>February 20</td>
<td>Biomechanics Project: Setting up a pilot test</td>
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<tr>
<td>February 27</td>
<td>Biomechanics Project: Collecting data</td>
</tr>
<tr>
<td>March 6</td>
<td>Biomechanics Project: Collecting data</td>
</tr>
<tr>
<td>March 13</td>
<td>Spring Break; No Class</td>
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<tr>
<td>March 20</td>
<td>Biomechanics Project: Collecting data</td>
</tr>
<tr>
<td>Date</td>
<td>Activity</td>
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<tr>
<td>March 27</td>
<td>Biomechanics Project: Data Analysis</td>
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<td>April 3</td>
<td>Biomechanics Project: Working on the project report</td>
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<tr>
<td>April 10</td>
<td>Biomechanics Project: Working on the project report</td>
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<tr>
<td>April 17</td>
<td>Oral Presentation</td>
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<td>April 24</td>
<td>No Class</td>
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University Policies

ACADEMIC DISHONESTY POLICY
At The University of Texas at Tyler students and faculty are responsible for maintaining an environment that encourages academic integrity. Students and faculty members are required to report an observed or a suspected case of academic dishonesty immediately to the faculty member in charge of an examination, classroom or laboratory research project, or other academic exercise.

Since the value of an academic degree depends on the absolute integrity of the work done by the student for the degree, it is imperative that a student maintain a high standard of individual honor in scholastic work. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, and collusion:

"Cheating" includes:
1. Copying from the paper of another student, engaging in written, oral or any other means of communication with another student, or giving aid to or seeking aid from another student when not permitted by the instructor;
2. Using material during an examination or when completing an assignment that is not authorized by the person giving the examination or making the work assignment;
3. Taking or attempting to take an examination for another student, or allowing another student to take an examination for oneself;
4. Using, obtaining, or attempting to obtain by any means, the whole or any part of an unadministered examination or work assignment.

"Plagiarism" includes the unacknowledged incorporation of the work of another person in work that a student offers for credit.

"Collusion" includes the unauthorized collaboration with another person in preparing written work that a student offers for credit.

GRADE APPEAL PROCEDURE
A student who wishes to contest a grade given by an instructor must initiate the procedure by contacting the instructor who assigned the grade. The instructor and the student should informally review the criteria for assignment of grades and the student's performance. The instructor may affirm the grade or revise the grade.

If the student is not satisfied after the informal discussion with the instructor, then the student may initiate a formal grade appeal by completing a Grade Appeal Form that may be obtained from the Office of Student Records. Normal grade appeals should be filed at the earliest date possible, but no later than six months from the final date of assignment. The instructor and the student should complete the appropriate parts of the form clearly indicating the instructor's rationale for the grade given and the student's basis for the grade appeal.

At each administrative level of the appeal process, an attempt will be made to resolve the issue. If the instructor holds one of the administrative positions used in the appeal process, then that level is omitted. If no resolution is reached at a particular level, then the appeal is forwarded with the recommendation of the administrator at that level with all documentation.

If the appeal is to be considered by the vice president for academic affairs, then a copy of the Grade Appeal Form shall be forwarded by the academic dean of the students. The Office of the President is the final step in the appeal process at The University of Texas at Tyler.

FOOD AND DRINK IN CLASSROOMS
Consumption of food and drink in university classrooms is prohibited.

INDOOR SMOKE-FREE CAMPUS
The University of Texas at Tyler is an indoor smoke-free campus. No smoking will be permitted in any building, office, hallway, classroom, laboratory, restroom, lounge, or any other indoor location.

CLASS ATTENDANCE
Responsibility for class attendance rests with the student. When a student has a legitimate reason for being absent, the instructor has the option of permitting make-up work. The university reserves the right to consider individual cases of nonattendance. In general, students are graded on the basis of intellectual effort and performance. In many cases, class participation is a significant measure of performance, and nonattendance can adversely affect a student's grade. When, in the judgment of the instructor, a student has been absent to such a degree as to jeopardize success in the course, the instructor informs the Office of Student Records that the student is to be dropped from the course.

APPROVED STUDENT ABSENCES
On those occasions when it may be necessary for students to miss a regularly scheduled class in order to participate in an official university event or activity, faculty sponsors and program directors are requested to observe the following procedures:
1. Faculty sponsors or program directors should draft a memorandum to the vice president for academic affairs. This memorandum should include information concerning the nature of the event, the date(s) on which students would be absent from class, and the names of the students involved.
2. Copies of the memorandum addressed to the vice president should be given to each of the students listed on the memorandum.
3. Students should be directed to communicate with their instructor(s) prior to the date of the planned absence.
It is expected that students will not abuse the privilege of being absent from class for authorized university activities, and that make-up assignments will be made at the discretion and convenience of the instructor.

GRADE REPLACEMENT
If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to file an intent to use grade forgiveness will result in both the original and repeated grade being used to calculate your overall grade point average. A student will receive grade forgiveness (grade replacement) for only three (undergraduate student) or two (graduate student) course repeats during his/her career at UT Tyler (2006-2008 Catalog, P. 35).

DISABILITY STATEMENT
If you have a disability, including a learning disability, for which you request disability support services/accommodations(s), please contact Ida MacDonald in the Disability Support Services office so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability support services/accommodations(s) must provide appropriate documentation of his/her disability to the Disability Support Services counselor. Visit University Center, Room 282 or call 903-566-7079 for more information.