Course Number : KINE 5327  
Instructor: Toyin Ajisafe, Ph.D.  
Class Location: Online (TR)  
Office: Island Hall 372  
Semester: Spring 2016  
Office hours: MW from 12:00 pm - 3:00 pm  
Phone: 361-825-3834  
Email: toyin.ajisafe@tamucc.edu

Important Note:  
Because this is a blended course, some content, including assessments are delivered via Blackboard. Students must enter a User Name and Password to access their Blackboard account. Student User Names will be your user ID (e.g. lsmith12). If a student experiences technical difficulties, please call the Island Online (IOL) support line at 361-825-2825. Additionally, please notify the instructor right away via phone or e-mail.

Prerequisites: KINE 4327

I. Course Description  
Given its pervasiveness across many sports and physical activity, this course will use jumping (a fundamental movement skill) as a paradigm to introduce students to some of the techniques and instrumentation used to study kinetic and kinematic aspects of human movement performance, including writing basic custom code to post process data in MATLAB. Students will interact with pertinent biomechanics literature in a peer review capacity. In addition, students will collect, analyze, and present data in the form of an abstract using standard research formatting.

II. Rationale  
Graduate students in Kinesiology ought to be able to explore basic biomechanics-related questions in human movement. Therefore, this course will expose students to fundamental quantitative biomechanics research and present them with the opportunity to practically demonstrate the knowledge they acquire during the course of the class.

III. State Adopted Proficiencies for Teachers and/or Administrators/Counselors

1. **LEARNER-CENTERED KNOWLEDGE:** The teacher possesses and draws on a rich knowledge base of content, pedagogy, and technology to provide relevant and meaningful learning experiences for all students.

2. **LEARNER-CENTERED INSTRUCTION:** To create a learner-centered community, the teacher collaboratively identifies needs; and plans, implements, and assesses instruction using technology and other resources.

3. **EQUITY IN EXCELLENCE FOR ALL LEARNERS:** The teacher responds appropriately to diverse groups of learners.

4. **LEARNER-CENTERED COMMUNICATION:** While acting as an advocate for all students and the school, the teacher demonstrates effective professional and interpersonal communication skills.
5. LEARNER-CENTERED PROFESSIONAL DEVELOPMENT: The teacher, as a reflective practitioner dedicated to all students’ success, demonstrates a commitment to learn, to improve the profession, and to maintain ethics and personal integrity.

IV. TExES COMPETENCIES & CAATE COMPETENCIES & PROFICIENCIES

a. TExES COMPETENCIES

Domain II - HEALTH-RELATED PHYSICAL FITNESS
Competency 006 - The teacher understands major body systems, principles of physical fitness development and training, and the benefits of a healthy, active lifestyle.

Domain III - THE PHYSICAL EDUCATION PROGRAM
Competency 011 - The teacher understands factors relevant to learning and performance in physical education and uses this knowledge to create learning environments and opportunities that promote students' development in various domains (e.g., cognitive, social, emotional).
Competency 012 - The teacher understands the structure, organization, goals, and purposes of physical education programs.

b. NATIONAL COMPETENCIES & PROFICIENCIES FOR ATHLETIC TRAINING (CAATE 4th Ed.)

Diagnosis Competencies Taught & Evaluated
DI-C4: Explain directional terms and cardinal planes used to describe the body and the relationship of its parts.

V. Course Objectives and Student Learning Outcomes

At the conclusion of this course, students will be able to:
1. Explain the internal and external forces that impact human motion.
2. Utilize technology and equipment associated with quantitative human movement analysis.
3. Identify examples of linear, angular, and general forms of human motion.
4. Identify different types of mechanical loads on the human body.
5. Explain the impulse-momentum relationship.
6. Explain the significance of center of gravity location in the human body.
7. Identify the major muscles and muscle groups of the human body, and relate muscle/joint function to physical education and sport activities.
8. Apply basic biomechanical principles to a fundamental movement and sports skill, such as jumping.
9. Analyze selected movement patterns and sport skills.
10. Conduct basic quantitative research in Biomechanics.

VI. Course Topics

The major topics to be considered are:
1. Force
2. Linear Kinematics
3. Linear Kinetics
4. Technology in Biomechanics
5. Work, Power and Energy
6. Torques and Moments of Force
7. Angular Kinematics
8. Angular Kinetics
9. Mechanics of Biological Materials
10. The Muscular System
11. Qualitative Biomechanical Analysis to Understand Injury Development
VII. Instructional Methods and Activities
A. Traditional Experiences (Lecture; discussions; research collaboration; peer review; writing research; video)
B. Online Experiences (On-line deliveries; exams)

VIII. Evaluation and Grade Assignment
Your grade in this class will be determined from your cumulative percent points on all assigned work. The grading scale is as follows:

A. Grading
1. Exams
   a. Exam #1 15%
   b. Exam #2 15%
   c. Exam #3 15%
   d. Article Synopsis/discussion 5%
   e. Literature Review 5%
   f. Research Proposal Presentation 10%
   g. Research Abstract Presentation 10%
   h. Research Abstract 25%
   Total: 100%

B. Grading Scale
The percentage score for each letter grade will be as follows:

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<tr>
<th>Grade</th>
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<td>80 – 89</td>
<td>C</td>
<td>70 – 79</td>
<td>D</td>
<td>60 - 69</td>
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IX. Course Schedule and Policies
The entire course including assignments, quizzes and exams are available on-line and are available according the course schedule. Students are required to complete all work by the respective deadlines. Excused absences are limited to participation in a TAMUCC-sanctioned event or participation in a religious holy day as outlined in the University catalog. Any assignment, quiz, or test missed due to a TAMUCC-sanctioned event must be completed prior to the absence. Coursework, assignments, and quizzes may not be made up due to tardiness. **Consistent attention to assignment instructions and submission deadlines is critical to the successful completion of this course.**

**Academic Integrity/Plagiarism**
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as plagiarism, cheating on an exam, unauthorized collaboration, illicit possession of examinations or examination materials, or forgery. **Plagiarism** is the presentation of the work of another as one’s own work; **cheating on examinations** involves giving or receiving unauthorized help before, during, or after an examination; **unauthorized collaboration** is the submission for academic credit of an entire work (or part thereof) as one's own effort, when it has been developed in substantial collaboration with another person or source without the professor’s permission.

Disciplinary action for academic misconduct is the responsibility of the faculty member assigned to the course. The faculty member is charged with assessing the gravity of any case of academic dishonesty, and with giving sanction to any student involved. Penalties that may be applied to individual cases of academic dishonesty include one or more of the following:

1. Written reprimand
2. Requirement to re-do work in question
3. Requirement to submit additional work
4. Lowering of grade on work in question
5. Assigning grade of “F” to work in question
6. Assigning grade of “F” for course
7. Recommendation for more severe punishment, such as dismissal from the program or university. (See the University Catalog for more information).

**Dropping a Class**
In the event that you decide to drop this class, please consult with me to ensure that it’s the best course of action. Once you decide to drop the class, you must initiate the process by going to the Student Services Center and filling out a course drop form. Your enrollment in the class WILL NOT be automatically terminated, because you stop attending class. **11/11/2016** is the last day to drop a class with an automatic grade of “W” this term.

**Preferred methods of scholarly citations**

**Classroom/professional behavior**
Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.
Statement of Civility (can be in place of classroom/professional behavior)
Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

Grade Appeals
As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Dean’s office in the college in which the course is taught or the Office of the Provost.

Disabilities Accommodations
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116.
If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

Statement of Academic Continuity
In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student. NOTE: Printing online tests and/or quizzes is strictly prohibited.

X. Required or Recommended Readings
(List of required text and reading)

Website: (required if on-line course)
The Website that accompanies and is coordinated with this course is
XI. Bibliography

The knowledge bases that support course content and procedures include:


# KINE 5327: Fall 2016 Course Calendar

<table>
<thead>
<tr>
<th>DATE</th>
<th>Topic</th>
<th>Book chapter</th>
<th>Assignment Due</th>
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<tbody>
<tr>
<td>Thurs, Oct. 13</td>
<td>Day 1: Review of Syllabus; Forces&lt;br&gt; Select Jump-related movement for Project</td>
<td>Chapter 1</td>
<td>Pretest</td>
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<tr>
<td>Tues, Oct. 18</td>
<td>Day 2: Linear Kinematics</td>
<td>Chapter 2</td>
<td>Quiz 1&lt;br&gt;Article Synopsis</td>
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<tr>
<td>Thurs, Oct. 20</td>
<td>Day 3: Linear Kinetics</td>
<td>Chapter 3</td>
<td>Quiz 2&lt;br&gt;Article Synopsis</td>
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<tr>
<td>Tues, Oct. 25</td>
<td>Day 4: Technology in Biomechanics</td>
<td>Chapter 16</td>
<td>Quiz 3&lt;br&gt;Article Synopsis</td>
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<tr>
<td>Thurs, Oct. 27</td>
<td>Day 5: <strong>Exam #1 (chapters 1, 2, 3, 16) Online</strong></td>
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<tr>
<td>Tues, Nov. 1</td>
<td>Day 6: Work, Power and Energy</td>
<td>Chapter 4</td>
<td>Quiz 4&lt;br&gt;Article Synopsis</td>
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<tr>
<td>Thurs, Nov. 3</td>
<td>Day 7: Torques and Moments of Force</td>
<td>Chapter 5</td>
<td>Quiz 5&lt;br&gt;Article Synopsis</td>
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<tr>
<td>Tues, Nov. 8</td>
<td>Day 8: Angular Kinematics</td>
<td>Chapter 6</td>
<td>Quiz 6&lt;br&gt;Article Synopsis</td>
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<tr>
<td>Thurs, Nov. 10</td>
<td>Day 9: <strong>Exam #2 (chapters 4, 5, 6) Online</strong></td>
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<tr>
<td>Tues, Nov. 15</td>
<td>Day 10: Angular Kinetics</td>
<td>Chapter 7</td>
<td>Quiz 7&lt;br&gt;Research Proposal - 1st draft</td>
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<tr>
<td>Thurs, Nov. 17</td>
<td>Day 11: Mechanics of Biological Materials</td>
<td>Chapter 9</td>
<td>Quiz 9</td>
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<td>Tues, Nov. 22</td>
<td>Day 12: The Muscular System</td>
<td>Chapter 11</td>
<td>Quiz 11</td>
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<td>Thurs, Nov. 24</td>
<td>Day 13: <strong>THANKSGIVING HOLIDAY (NO CLASS)</strong></td>
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<td>Tues, Nov. 29</td>
<td>Day 14: Qualitative Biomechanical Analysis to Understand Injury Development</td>
<td>Chapter 15</td>
<td>Research Proposal - Final draft</td>
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<tr>
<td>Thurs, Dec. 1</td>
<td>Day 15: <strong>Exam #3 (chapters 7, 9, 11, 15)</strong> Online</td>
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*The course syllabus provides a general plan for the course; deviations may be necessary.*