College of Charleston  
EXSC 330 Kinesiology  
Fall 2017  3 Semester Credit Hours

TIME & PLACE: M-W-F 9:00-9:50 AM-206 Johnson Center

INSTRUCTOR: William R. Barfield, Ph.D., FACSM  
Professor

OFFICE HOURS: M-W-F 10:00-11:00 AM & Tu-Th-8:30-9:00 AM

OFFICE: #213 Silcox Physical Education & Health Center

PHONE/FAX: (843) 953-6746 / (843) 953-6757

EMAIL: barfieldw@cofc.edu

PREREQUISITE: PEHD 201, BIOL 202, and or permission of instructor  
You must have successfully completed these classes prior to enrolling in PEHD 330.


COURSE DESCRIPTION: Kinesiology will explore techniques of human motion analysis. Particular emphasis is placed on the anatomical, mechanical, and physical principles of motion analysis.


STUDENT LEARNING OUTCOMES:

1. Students will identify the skeletal framework, movements, reference planes, definitions, biomechanical nomenclature and kinesiological history.
   a. bone and muscle microstructure
   b. linear, angular, and general plane motion (GPM)
   c. sagittal, transverse, and coronal planes
   d. kinematics and kinetics of motion
2. Students will critique muscular function, roles and types:
   a. length-tension
   b. force-time relationships
c. force-velocity relationships

3. Basic anatomy of upper and lower extremities, the spine and how mechanics apply will be described and identified.
   a. shoulder girdle and joint
   b. elbow
   c. wrist and hand
   d. hip
   e. knee
   f. foot and ankle

4. Students will gather information collectively on a group project to comprehend research in their kinesiological area of interest for oral presentation to the class. Each group will provide Dr. Barfield one typed referenced paper.

5. Students will be able to outline and explain and assess sport and other forms of human movement following completion of this course.

REQUIREMENTS:

Exam #1 (20%) will cover history of kinesiology, terminology, planes of motion, microstructure and gross structure of bone and muscle, muscle architecture, and joint classification.
Exam #2 (20%) will cover applied anatomy of the upper extremity, and the lower extremity.

Exam #3 (20%) will be the final exam and will cover all information presented through group projects.

Pop-Tests (20%) will be announced and unannounced. If you miss the quiz your score will be zero. Make-ups are not available.

EVALUATION SCALE:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>88-89%</td>
<td>A-</td>
</tr>
<tr>
<td>85-87%</td>
<td>B+</td>
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<tr>
<td>80-84%</td>
<td>B</td>
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<tr>
<td>78-79%</td>
<td>B-</td>
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<tr>
<td>75-77%</td>
<td>C+</td>
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<tr>
<td>70-74%</td>
<td>C</td>
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<tr>
<td>68-69%</td>
<td>C-</td>
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<td>66-67%</td>
<td>D+</td>
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<tr>
<td>64-65%</td>
<td>D</td>
</tr>
<tr>
<td>62-63%</td>
<td>D-</td>
</tr>
<tr>
<td>&lt;62</td>
<td>F</td>
</tr>
</tbody>
</table>

ATTENDANCE POLICY:

1. All students will be allowed two (2) unexcused absences, except during major evaluations. Each UNEXCUSED ABSENCE in excess of 2 will result in 2% being deducted from your final average. Students who miss more than 5 classes for ANY REASON will be dropped for excessive absences.

2. Class will begin and end in a timely manner. You are expected to be prepared when class begins. Persistent tardiness will not be tolerated and will result in loss of points and/or being dropped from the course. Two tardies will be the equivalent of one unexcused absence. Tardy means you are one minute + late for class.

3. You are responsible for any worked missed when you fail to attend class.

CELL PHONE/PDA/LAPTOP COMPUTER POLICY:

The use of all PDA devices, including cell phones and laptop computers are expressly forbidden in the classroom. Texting, receiving or sending messages, cell phone use, or the use of laptop computers will result in immediate loss of points from your final class average and an absence will be recorded.
there is a 2nd violation of the class policy you will be awarded an F. The first violation will result in a 20 point deduction from your final class average. The 2nd violation is another 20 points, therefore making it impossible to successfully complete the class with a passing grade. Students must keep these devices turned off and out of sight during class. It is a violation of this policy to keep such devices on your lap, in your pocket or on the floor by your desk. Any suspicion of your use on my part will result in loss of points.

MAKE-UP POLICY:

1. Make-up exams (excluding pop tests) will be given at the discretion of the professor when extenuating circumstances exist. It is the student's responsibility to see the instructor within three calendar class days to request a make-up exam time and date.
2. Assignments that are not turned in at the designated time will be accepted at the discretion of the professor. Be aware that unusual circumstances must exist for acceptance of late assignments, and if accepted, points will be deducted based on tardiness of the assignment.

DISABILITY ACCESS STATEMENT:
Any student eligible for and needing accommodations because of a disability is requested to speak with the professor during the first two weeks of class or as soon as the student has been approved for services so that reasonable accommodations can be arranged.

ACADEMIC HONOR CODE:
Students will be expected to abide by the academic honor code found in the most current edition of the Student Handbook.

TENTATIVE COURSE OUTLINE:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 23</td>
<td>Syllabus and Introduction to Kinesiology</td>
</tr>
<tr>
<td>August 25</td>
<td>Reference Planes and Nomenclature &amp; History of Kinesiology</td>
</tr>
<tr>
<td></td>
<td><strong>Learning Activities: lecture and class discussion.</strong></td>
</tr>
<tr>
<td>August 28</td>
<td>The Skeletal System microstructure</td>
</tr>
<tr>
<td>August 30</td>
<td>The Skeletal System microstructure</td>
</tr>
</tbody>
</table>
Learning Activities: lecture, examples, discussion, audiovisual aids, and hands-on activity with skeleton, and anatomical models.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 1</td>
<td>The Neuromuscular System</td>
<td>microstructure, muscle histology, behavioral characteristics</td>
</tr>
<tr>
<td>September 4</td>
<td>The Neuromuscular System</td>
<td>muscle architecture, sliding filament theory and contractile proteins</td>
</tr>
<tr>
<td>September 6</td>
<td>The Neuromuscular System</td>
<td>muscle contraction types</td>
</tr>
<tr>
<td>September 8</td>
<td>The Neuromuscular System</td>
<td>force/time, force/velocity, force/length curves</td>
</tr>
<tr>
<td>September 11</td>
<td>The Neuromuscular System</td>
<td>elastic components and properties, muscle fiber types, roles muscles assume</td>
</tr>
</tbody>
</table>

Learning Activities: lecture, examples and discussion

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Subtopics</th>
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</thead>
<tbody>
<tr>
<td>September 13</td>
<td>Skeletal Articulations</td>
<td>Range of motion based on joint type</td>
</tr>
<tr>
<td>September 15</td>
<td>Skeletal Articulations</td>
<td>types of articulations and characteristics, range of motion and influence on movement</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
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</table>
| September 18 | Skeletal Articulations  
form and function  
gender and age issues |
| September 20 | Review and Discussion for Exam #1  
Learning Activities: lecture, Q&A |
| September 22 | Exam #1                                                             |
| September 25 | Applied Anatomy of Upper Extremity  
shoulder bony articulations  
Shoulder ligaments |
| September 27 | Applied Anatomy of Upper Extremity  
muscular support  
impingement area  
scapular role |
| September 29 | Applied Anatomy of Upper Extremity  
rotator cuff |
| October 2    | Applied Anatomy of Upper Extremity  
elbow stability and muscular support |
| October 4    | Applied Anatomy of Upper Extremity  
movements at elbow  
skeletal anatomy |
| October 6    | Applied Anatomy of Upper Extremity  
bony protuberances |
| October 9    | Applied Anatomy of Upper Extremity  
extrinsic muscular movement in wrist  
and hand |
| October 11   | Applied Anatomy of Upper Extremity  
intrinsic muscular movement in wrist  
and hand |
<table>
<thead>
<tr>
<th>Date</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 13</td>
<td>Applied Anatomy of Upper Extremity carpal tunnel, wrist, hand, and finger skeletal and muscular support</td>
</tr>
<tr>
<td>October 18</td>
<td>Applied Anatomy of Lower Extremity pelvis and skeletal development, pelvic muscular support</td>
</tr>
<tr>
<td>October 20</td>
<td>Applied Anatomy of Lower Extremity movements and constraints at hip, anatomically and mechanically</td>
</tr>
<tr>
<td>October 23</td>
<td>Applied Anatomy of Lower Extremity angle of inclination and influence on movement</td>
</tr>
<tr>
<td>October 25</td>
<td>Applied Anatomy of Lower Extremity anteversion/retroversion, ligamentous and muscular support</td>
</tr>
<tr>
<td>October 27</td>
<td>Applied Anatomy of Lower Extremity, Estimation of joint reaction force at hip, Mechanical uses of canes and crutches, on hip mechanics</td>
</tr>
<tr>
<td>October 30</td>
<td>Applied Anatomy of Lower Extremity, knee anatomy skeletally and muscually</td>
</tr>
<tr>
<td>November 1</td>
<td>Applied Anatomy of Lower Extremity</td>
</tr>
</tbody>
</table>
knee anatomy ligamentously

November 3  Applied Anatomy of Lower Extremity
movements, anatomy and mechanics of
knee

November 6  Applied Anatomy of Lower Extremity
gender differences at knee

November 8  Applied Anatomy of Lower Extremity
injury mechanism
controllable and noncontrollable risk
factors

November 10 Applied Anatomy of Lower Extremity
application of qualitative mechanical
principles
anatomy, movements and mechanics of
the foot and ankle

November 13 Applied Anatomy of Lower Extremity
bony anatomy of the foot and ankle

November 15 Applied Anatomy of Lower Extremity
muscular support of the foot and ankle
and Review for Test #2

Learning Activities: lecture, audiovisual aids, examples,
and discussion.

November 17 Test #2

November 20 Student Projects

November 27 Student Projects

November 29 Student Projects

December 1  Student Projects

December 4  Final Class Day for Fall 2017
Review for Final Exam
| December | Exam for 8:00-M-W-F Class-8-11 AM |
| December | Exam for 9:00-M-W-F Class-8-11 AM |