



The mission of Concord University is to provide quality, liberal arts based education, to foster scholarly and creative activities and to serve the regional community (<http://www.concord.edu/academics/>).

## **EXSS 315- Kinesiology and Biomechanics:**

**CRN: 20438; Section: 01**

**Semester Taught (including year): Spring 2019**

**Credit Hours: 3**

**Prerequisites: BIOL 101, BIOL 102, PED 207 or permission**

**Course Time: 9:00-9:50 a.m.**

**Building & Room Number: Carter Center 405**

**Professor: Tracy McCallister-Gill**

**Office Location: Carter Center 401**

**Office Hours: M-W-F 10:00-12:00**

**Email: [tmccallister@concord.edu](mailto:tmccallister@concord.edu)**

**Phone: 304-384-5346**

**Office Fax: 304-384-5117**

**[www.concord.edu/nsmh](http://www.concord.edu/nsmh)**

**Course Description/Rationale:** This course will consider principles of the mechanics of body movement in relation to anatomical structure, body development and muscular efficiency.

**Course Management System:** Blackboard

**Hardware/Software Needed:** Throughout this course we will be utilizing email, word processing, and PowerPoint presentations. Information managed on Blackboard will include, but is not limited to the syllabus and any needed revisions, assignment instructions and rubrics, class presentations, assigned readings, and grades. All assignments must be turned in on time, typed and printed. Therefore, each student must have access to a reliable computer and printer. Emailed or hand written assignments will not be accepted unless the instructor has PREDETERMINED this to be acceptable within the related instructions.

**Text requirements:** Floyd, R. Manual of Structural Kinesiology. 19<sup>th</sup> Ed. McGraw Hill Publishing Company. 2009 ISBN: 978-0-07-336929-7

**Concord University Educational Goal(s):** The educational programs of Concord University are designed to foster skills, knowledge, and attitudes applicable across a wide range of academic fields and professional careers in a culturally diverse, perpetually evolving global community

Baccalaureate degree programs, including the BS in AT with which this course is aligned, building on the General Studies program, and provide the opportunities for in-depth study in a student's chosen field(s).

**Knowledge and skills:**

1. Identify and label major bones in the skeletal system
2. Identify the primary function and purpose of the human skeletal system.
3. Identify and label major muscles in the muscular skeletal system.
4. Identify the primary function and purpose of the human musculoskeletal system.
5. Identify and create an example for each cardinal plane of motion.
6. Classify joints according to structure and explain the relationship between a joint and its capacity for movement(s).
7. Demonstrate and name fundamental movement patterns using correct movement terminology.
8. Define the roles a muscle may play and explain the cooperative action of muscles in controlling joint actions by naming and explaining the muscle roles in specific movement.
9. Name and locate the muscles and muscle groups of the major joints of the body and name the primary actions as agonists, stabilizers, neutralizers, or antagonists.
10. Define and operationalize the terms: biomechanics, kinematics, kinetics, static's, and dynamics.
11. Complete an anatomical description of the following areas: shoulder girdle, shoulder joint, elbow and radioulnar joints, wrist and hand joints, hip joint, pelvic girdle, knee joint, ankle and foot joints, and the trunk and spinal column.

**Attitudes:** Tendencies conducive to self-knowledge, personal growth and development, and responsible citizenship as demonstrated by the following:

1. Habitual reflection on ethical/moral implications of actions when weighing decisions and evaluating outcomes.
2. Exercise of responsible leadership--including leadership by example--and of responsible followership.
3. Respectful attentiveness to differing perspectives and willingness to engage in dialogue across differences in order to seek mutual understanding and equitable conflict resolution.
4. Cultivation of and support for attitudes and practices that foster physical, mental, emotional, and social well-being.
6. Commitment to social responsibility, including community service and civic engagement.
7. Motivation to pursue lifelong learning and ongoing intellectual growth.

**National Standards:**

**West Virginia Physical Education Content Standards Addressed in this course are:**

Standard 1: Movement Forms (PE.S.1)

Students will demonstrate competency in many movement forms and proficiency in a few movement forms.

Standard 2: Development of Motor Skills (PE.S.2)

Students will apply concepts and principles of human movement to the development of motor skills and learning of new skills.

## **Health Praxis Standards Associated with PED 315 (Test No. 0550)**

### I. Fundamental Movements, Motor Development, and Motor Learning

1. Fundamental movements: locomotor/nonlocomotor, manipulative, and falling/landing movement skills; movement concepts such as body, space, effort, and relationship
2. Growth and motor development: role of perception in motor development, neurophysiology of motor control, effects of maturation/experience on motor patterns, biological/environmental influences on gender differences in motor performances

### III. Fitness and Exercise Science

1. Components: cardiorespiratory/muscular endurance, body composition, flexibility
2. Conditioning practices/principles: frequency, intensity, time/duration, the role of exercise
3. Human biology: anatomy/physiology, including identification of major muscles, bones and systems fitness, principles of exercise, roles of body systems in exercise, short and long term effects of physical training, relationship between nutrition and fitness

### V. Biomechanics

1. Terminology: mass, force, and friction
2. Basic principles of movement: summation of forces, center of gravity, force/speed relations, torque
3. Application of basic principles to sports skills
4. Methods of analyzing movement
5. Analysis of basic movement patterns: overhand throw, underhand throw, kick

## **CAATE Competencies and Proficiencies for Athletic Training Students**

### In the content area of Clinical Examination and Diagnosis

1. Describe the principles and concepts of body movement, including normal osteokinematics and arthrokinematics.
2. Describe the influence of pathomechanics on function.

### **Specific Learning Outcomes:**

- Demonstrate the strong foundation in exercise science necessary to effectively work in the exercise science field/profession.
- Apply knowledge and skills required to assess human performance related characteristics of individuals from diverse populations.
- Design and implement exercise programs for apparently healthy individuals and those with the leading controlled chronic diseases.
- Evaluate the behavioral and cultural factors that influence the adoption and maintenance of a physically active lifestyle.
- Apply knowledge of exercise science in a real world setting.

## **Course Requirements:**

### **Cellular Phone Policy:**

Cellular phones can be a very big distraction in class, therefore anyone consistently utilizing their cellular phone during lecture classes will be asked to leave without warning and will be counted as absent (unexcused) for that day. Cellular phone usage during examination periods is **STRICTLY PROHIBITED**. **Cellular phones should either not be brought to class at all on days of examinations, or left in your bag out of sight. If a cellular phone is even out on the desk during an examination, your exam will be taken and you will receive a zero for that examination.**

### **Evaluation Procedure:**

#### *Course Grade Percentage:*

Homework	30%
Online Quizzes	20%
Tests	<u>50%</u>
	100%

### **Attendance/Participation:**

On-time attendance to class is **EXPECTED**. Therefore, attendance will be taken ***daily***. The policy is as follows: Any student who has ZERO unexcused absences at the end of the semester will be awarded 5 bonus percentage points to their final grade. Any student who misses 6 classes or more will be automatically failed for the term with a grade of F. College is a preparation for the working world, and it is not acceptable behavior to be consistently late to a job, therefore, tardiness will also affect this aspect of your grade. Every 3<sup>rd</sup> tardy will count as one unexcused absence. Tardies will be given to anyone who comes in once lecture has started. If this is your first class of the day come early enough that minor traffic delays, parking, etc. do not cause you to be late. If this is not your first class, then you can get from any classroom to the next on this campus in the 10 minutes allotted. **IT IS YOUR RESPONSIBILITY TO STAY AFTER CLASS AND ENSURE YOU HAVE BEEN COUNTED AS TARDY AND NOT ABSENT IF YOU COME INTO CLASS LATE.**

It is the student's responsibility to check with the instructor about assignments, materials, and other information missed during any absence. For any unexcused absence, make-up work will **NOT** be permitted and any homework that was due on a day that you have an unexcused absence will be considered late. If a student is absent during a test/evaluation period, it is his/her responsibility to make arrangements to take the test/evaluation prior to the scheduled date. An unexcused absence will **NOT** permit you to make-up a missed test/evaluation.

Excused absences include:

- 1) **YOU** are hospitalized
- 2) Death in the family; please notify prior to departure from school
- 3) **Participation in a college recognized activity with advance notice**
- 4) Illness with advance notice to class instructor or with a doctor's excuse. Class instructor reserves the right to request a doctor's excuse for any absence due to illness.

**Here is an abbreviated explanation of the absence policy:**

<b>No unexcused absences</b>	Awarded 5 bonus percentage points to final grade
<b>6 or more Absences</b>	Automatic Failure of the course with grade of F
<b>Tardiness</b>	Every 3 <sup>rd</sup> tardy will count as one absence

**Homework:**

Homework opportunities are not meant to be busy work. These are tools to aid students that are not always good test takers. It gives the student a chance to show they have an understanding of the material and have made an effort to review the material. Homework assignment due dates are included in the semester at a glance, but are subject to change. Students will need to purchase a set of colored pencils with approximately 20 different colors. If this is a financial hardship for any student, please feel free to see the instructor after class and arrangements will be made for you. Any evidence of submitting work that is not your own will be considered academic dishonesty and will result in loss of entire semester's homework points (30% of the student's final grade) on the 1<sup>st</sup> offense, 2<sup>nd</sup> offense will result in automatic failure of the course. Homework will be graded as quickly as possible so that student will have homework assignments to help study for quizzes and tests.

**Late assignments will have the following penalty:**

Any work handed in after class meeting the same day it is due will have a 10% deduction from the final grade.

Assignments handed in the next class meeting will have a 20% deduction from the final grade.

Assignments handed in two class periods after it is due will have a 50% deduction from the final grade.

Assignments will not be accepted after the 2<sup>nd</sup> class period after it is due.

*[Worth 30% of your final grade]*

**Quizzes:**

Quizzes will be given throughout the semester and be worth 10 points each. Quizzes will be on blackboard and available the first day of the start of each unit and will remain up on blackboard until the test on that unit. While you can use your book and your notes for each 10 point quiz, this should not be worked on together and will have a 20 minute time limit. It is the student's responsibility to make sure you take the quiz during the time it will be available. Students will be reminded of quizzes if they are in class, if you are absent it is still your responsibility to either go ahead and take the quiz or make other arrangements with the Instructor. To avoid the temptation of allowing one student to take the quiz and then share correct answers with other students, the quiz answers will not be released to students after completing. If you have any questions about quiz questions those can be directed to the instructor in person or by email.

*[Worth 20% of your final grade]*

**Examinations:**

There will be a total of 5 examinations (4 unit examinations, and one comprehensive final examination). Each examination will be worth 100 points. Examination dates are included in the semester at a glance. Cellular phone usage during examination periods is **STRICTLY PROHIBITED**. **Cellular phones should either not be brought to class at all on days of examinations, or left in your bag out of sight. If a cellular phone is even out on the desk during an examination, your exam will be taken and you will receive a zero for that examination.**

The final examination will be a comprehensive in class examination , but is not required. Final examination score will be used to replace any lower scoring unit examination grade. In other words student who opt not to take the final will use their 4 unit test grades in their final grade calculation. Students who chose to take the final will use the highest 4 test scores with the lowest test score dropped in their final grade calculations.

*[Worth 50% of your final grade]*

**Grading Policy and Scale, Make-up Policy, Late Work:**

**Grading Scale:**

- 90-100% = A
- 80-89% = B
- 70-79% = C
- 60-69% = D
- 59-0% = F

Late Work and Make-up exams will only be accepted/given in instances involving excused absences. Other late work policy is addressed under the homework section of this syllabus. Make-up exams are not permitted for unexcused absences.

**Course Timeline (Schedule of Assignments/Assessments/Presentations)**

Semester-at-a-Glance-Subject to Change

<b>Week</b>	<b>Date</b>	<b>Activity</b>
<b>1</b>	<b>M Jan. 14</b>	<ul style="list-style-type: none"><li>• Introduction to the Course</li></ul>
	<b>W Jan. 16</b>	<ul style="list-style-type: none"><li>• Foundations of Structural Kinesiology-Chapter 1</li></ul>
	<b>F Jan. 18</b>	<ul style="list-style-type: none"><li>• Foundations of Structural Kinesiology cont.</li><li>• Chapter 1 Homework Due</li></ul>
<b>2</b>	<b>M Jan. 21</b>	<ul style="list-style-type: none"><li>• No Class Martin Luther King Day</li></ul>
	<b>W Jan. 23</b>	<ul style="list-style-type: none"><li>• Foundations of Structural Kinesiology cont.</li></ul>
	<b>F Jan. 25</b>	<ul style="list-style-type: none"><li>• Neuromuscular Fundamentals-Chapter 2</li><li>• Chapter 2 Homework Due</li></ul>

<b>3</b>	<b>M Jan. 28</b>	<ul style="list-style-type: none"> <li>• Neuromuscular Fundamentals cont.</li> </ul>
	<b>W Jan. 30</b>	<ul style="list-style-type: none"> <li>• Neuromuscular Fundamentals cont.</li> </ul>
	<b>F Feb. 1</b>	<ul style="list-style-type: none"> <li>• Basic Biomechanical Factors and Concepts-Chapter 3</li> <li>• Chapter 3 Homework Due</li> </ul>
<b>4</b>	<b>M Feb. 4</b>	<ul style="list-style-type: none"> <li>• Basic Biomechanical Factors and Concepts cont.</li> </ul>
	<b>W Feb. 6</b>	<ul style="list-style-type: none"> <li>• Basic Biomechanical Factors and Concepts cont.</li> </ul>
	<b>F Feb. 8</b>	<ul style="list-style-type: none"> <li>• Catch Up/Test Review</li> <li>• Quizzes 1,2, and 3 should be completed before test on Friday</li> </ul>
<b>5</b>	<b>M Feb. 11</b>	<ul style="list-style-type: none"> <li>• TEST 1 (Chapters 1-3)</li> </ul>
	<b>W Feb. 13</b>	<ul style="list-style-type: none"> <li>• The Shoulder Girdle- Chapter 4</li> <li>• Chapter 4 Homework Due</li> </ul>
	<b>F Feb. 15</b>	<ul style="list-style-type: none"> <li>• The Shoulder Girdle cont.</li> </ul>
<b>6</b>	<b>M Feb. 18</b>	<ul style="list-style-type: none"> <li>• The Shoulder Joint- Chapter 5</li> <li>• Chapter 5 Homework Due</li> </ul>
	<b>W Feb. 20</b>	<ul style="list-style-type: none"> <li>• The Shoulder Joint cont.</li> </ul>
	<b>F Feb. 22</b>	<ul style="list-style-type: none"> <li>• The Shoulder Joint cont.</li> </ul>
<b>7</b>	<b>M Feb. 25</b>	<ul style="list-style-type: none"> <li>• Catch up-Test review</li> <li>• Quizzes 4 and 5 should be completed before Test on Wednesday.</li> </ul>
	<b>W Feb. 27</b>	<ul style="list-style-type: none"> <li>• TEST 2 (Chapters 4-5)</li> </ul>
	<b>F Mar. 1</b>	<ul style="list-style-type: none"> <li>• The Elbow and Radioulnar Joint-Chapter 6</li> <li>• Chapter 6 Homework Due</li> </ul>
<b>8</b>	<b>M Mar. 4</b>	<ul style="list-style-type: none"> <li>• The Elbow and Radioulnar Joint cont.</li> </ul>
	<b>W Mar. 6</b>	<ul style="list-style-type: none"> <li>• The Wrist and Hand Joint- Chapter 7</li> <li>• Chapter 7 Homework Due</li> </ul>
	<b>F Mar. 8</b>	<ul style="list-style-type: none"> <li>• Catch-up if needed</li> </ul>
<b>SPRING BREAK MARCH 9-17</b>		
<b>9</b>	<b>M Mar. 18</b>	<ul style="list-style-type: none"> <li>• The Wrist and Hand Joint cont.</li> </ul>
	<b>W Mar. 20</b>	<ul style="list-style-type: none"> <li>• The Wrist and Hand Joint cont.</li> </ul>
	<b>F Mar. 22</b>	<ul style="list-style-type: none"> <li>• Catch-up/Test Review</li> <li>• Quiz 6 and 7 should be completed before test on Wednesday</li> </ul>
<b>10</b>	<b>M Mar. 25</b>	<ul style="list-style-type: none"> <li>• TEST 3 (Chapters 6-7)</li> </ul>
	<b>W Mar. 27</b>	<ul style="list-style-type: none"> <li>• Upper Extremity Biomechanics and Skill Breakdown</li> </ul>
	<b>F Mar. 29</b>	<ul style="list-style-type: none"> <li>• The Hip Joint and Pelvic Girdle-Chapter 9</li> <li>• Chapter 9 Homework Due</li> </ul>
<b>11</b>	<b>M Apr. 1</b>	<ul style="list-style-type: none"> <li>• The Hip Joint and Pelvic Girdle cont.</li> </ul>

	<b>W Apr. 3</b>	<ul style="list-style-type: none"> <li>The Hip Joint and Pelvic Girdle cont.</li> </ul>
	<b>F Apr. 5</b>	<ul style="list-style-type: none"> <li>The Hip Joint and Pelvic Girdle cont.</li> </ul>
<b>12</b>	<b>M Apr. 8</b>	<ul style="list-style-type: none"> <li>The Knee Joint- Chapter 10</li> <li>Chapter 10 Homework Due</li> </ul>
	<b>W Apr. 10</b>	<ul style="list-style-type: none"> <li>The Knee Joint cont.</li> </ul>
	<b>F Apr. 12</b>	<ul style="list-style-type: none"> <li>Catch up/Test Review</li> <li>Quizzes 9 and 10 should be completed before test on Monday</li> </ul>
<b>13</b>	<b>M Apr. 15</b>	<ul style="list-style-type: none"> <li>TEST 4 Chapters (9-10)</li> </ul>
	<b>W Apr. 17</b>	<ul style="list-style-type: none"> <li>The Ankle and Foot Joints –Chapter 11</li> <li>Chapter 11 Homework Due</li> <li>There will be a quiz on Chapter 11 and it will be tested on final examination</li> </ul>
	<b>F Apr. 19</b>	<ul style="list-style-type: none"> <li>The Ankle and Foot Joints cont.</li> </ul>
<b>14</b>	<b>M Apr. 22</b>	<ul style="list-style-type: none"> <li>The Ankle and Foot Joints cont.</li> </ul>
	<b>W Apr. 24</b>	<ul style="list-style-type: none"> <li>The Trunk and Spinal Column</li> <li>Chapter 12 Homework Due</li> <li>There will be a quiz on Chapter 12, but it will not be tested on the final examination</li> </ul>
	<b>F Apr. 26</b>	<ul style="list-style-type: none"> <li>The Trunk and Spinal Column cont.</li> </ul>
<b>15</b>	<b>M Apr. 29</b>	<ul style="list-style-type: none"> <li>The Trunk and Spinal Column cont.</li> </ul>
	<b>W May 1</b>	<ul style="list-style-type: none"> <li>Lower Extremity Biomechanics and Skill Breakdown</li> <li>Quiz 11 must be completed by class on Friday</li> </ul>
	<b>F May 3</b>	<ul style="list-style-type: none"> <li>Catch-up Day/Final Review</li> </ul>
<b>16</b>		<ul style="list-style-type: none"> <li>FINAL EXAMINATION</li> <li>Wednesday May 8th 9:00 a.m.-11:15 a.m.</li> </ul>

### **Accessibility/Accommodations:**

Concord University is committed to responding to the needs of students with disabilities as defined by the Americans with Disabilities Act. Please inform your instructor at the beginning of the class semester if you have a disability and are requesting accommodations. It is your responsibility to self-disclose that you are requesting accommodations. The University and instructor will provide you with a reasonable accommodation. You should register with CU's Disability Services Office, located in the Athens campus Jerry and Jean Beasley Student Center, Bottom Floor, across from the Campus Post Office. The Disability Services Office phone is 304-384-6086 or you can email the Director, Nancy Ellison, at nellison@concord.edu for assistance.

### **Academic Dishonesty:**



Academic dishonesty is morally unacceptable as well as destructive to the learning and teaching atmosphere. Academic dishonesty includes the giving or receiving of improper help on examinations or assignments, falsifying documents, and plagiarism (the act of stealing and using, as one's own, the ideas or the expression of the ideas of another). Such dishonesty can lead to a variety of penalties — including but not limited to failure of assignment, failure of course, loss of institutional privileges, or dismissal from the University. (See University Catalog Academic Policies and Procedures.)

### **Concord University Honor Code:**

A Concord University Honor Code was approved by students, staff, faculty, administration, and the CU Board of Governors. The Code states:

*"As a member of the Concord University Community I will act with honesty and integrity in accordance with our fundamental principles and I will respect myself and others while challenging them to do the same."*

The Honor Code is intended to unite the Concord community behind a culture of honesty, integrity, and civility.

### **Class/Online Attendance PolicyL**

Regular class attendance is part of a student's academic obligation at Concord. Irregular attendance may affect academic performance adversely and is detrimental to the atmosphere of a class. (See University Catalog Academic Policies and Procedures.)

### **Emergency Alert System:**

In an effort to increase safety and security on our campus, Concord University encourages everyone to register for instant text message alerts. Alerts will only be used for security and safety notices. All students, faculty, and staff are eligible to receive text message alerts on their cell phones or email alerts. Please contact the IT Help Desk for further assistance (304-384-5291).

### **Emergency Information:**

Emergency/courtesy telephones are located at the main entrance of each residence hall and at various other locations on campus. Emergency telephones can be identified by the flashing blue light and will provide the user with a direct link to Public Safety at the press of a button. To report an on-campus emergency, call 304-384-5357 or 911. The Office of Public Safety is located on the bottom floor of the Rahall Technology Center. For further emergency information go to:

<http://www.concord.edu/administration/office-public-safety>.

### **Inclement Weather Policy:**

As a general policy, the University will remain in normal operations during adverse weather conditions. In the event of severe weather conditions, the following may occur:

#### University Closure

No students or employees are to report.

#### Classes Cancelled

Students do NOT report BUT employees are expected to report to work at their normal time.

### Operating on an Inclement Weather Delay

Under this schedule, all 8 a.m. classes will start at 10 a.m. Students and faculty will follow the Inclement Weather Schedule. (See <http://www.concord.edu/emergency-alerts> for Athens/Beckley Inclement Weather Schedules.)

*\*Announcements invoking the late schedule or other options referenced above are aired on area radio and television stations and are sent as text and email messages to those enrolled for this service.*

### **Student Conduct:**

In classrooms, online, laboratories, and during any activities that are part of course requirements, students are expected to observe reasonable rules of conduct.

### **Sexual Harassment & Assault:**

Federal law, Title IX, and Concord University policy prohibits discrimination, harassment, and violence based on sex and gender (Including sexual harassment, sexual assault, domestic/dating violence, stalking, sexual exploitation, and retaliation). If you or someone you know has been harassed or assaulted, you can receive confidential counseling support through the Concord University Counseling Center (304-384-5290). Alleged Violations can be reported non-confidentially to the Concord University Title IX Coordinator at 304-384-6327 or [titleix@concord.edu](mailto:titleix@concord.edu). Reports to Campus Security can be made at (304-384-5357). As an employee at Concord University, I am a mandatory reporter which means I must report any sexual misconduct I am made aware of. This includes verbal or written (such as in an assignment) disclosures of sexual harassment or sexual assault.

### **Technology Services:**

Contact the CU Help Desk at extension 5291 from campus or 304-384-5291 off campus. You may also e-mail [cuhelpdesk@concord.edu](mailto:cuhelpdesk@concord.edu).

### **Syllabus Disclaimer**

**"This syllabus is subject to change based on the needs of the class. Please check it regularly."**