INSTRUCTORS: Anne Moore, PhD (biomech@yorku.ca), 2028 Sherman
Lauren Sergio, PhD (lsergio@yorku.ca), 2032 Sherman

OFFICE HOURS: by appointment

LECTURES: Tuesday/Thursday  12:30 - 1:30  SC 212

LABORATORIES: Lab 01: Tuesday  1:30 - 3:30  Stong Coll. 101a
               Lab 02: Thursday  1:30 - 3:30  Stong Coll. 101a

COURSE WEBPAGE: Moodle

TEACHING ASSISTANTS: Alica Rogojin, alicar@yorku.ca
                       Andrew Dang, andrewd7@my.yorku.ca

COURSE OBJECTIVES:
This course teaches the theory and practice of methods for measuring and analyzing the mechanics and control of movement. Methods include collection of biological signals such as electromyography and techniques for both kinematic and kinetic analysis of movement.

PREREQUISITES:
AS/SC KINE 3030 - Introduction to the Biomechanical Analysis of Human Movement
AS/SC KINE 3020 - Skilled Performance and Motor Learning
Or 80 Credits and Course Director’s permission required.

LECTURE NOTES: Lecture notes and laboratory notebooks are available on moodle.


GRADING

a) Participation = 10%
b) Lab Reports (1 x 5, 3 x 10) = 35%
c) Mini-experiment = 20%
d) Lab Practical Exam = 15%
e) Final Examination (Lab Theory) = 20%

GRADING NOTES:
1. Numerical scores will be assigned for each piece of course work. However, there should be no assumption that a certain total course mark corresponds to a specific letter grade. Letter grades will be assigned based on the descriptions found in the York University Undergraduate Calendar.
2. You cannot submit 'extra' work following the posting of a mark in order to raise a grade.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic#</th>
<th>Lecture: 12h30-13h30 SC 212</th>
<th>Laboratory: 13h30-15h30 Stong 101A</th>
</tr>
</thead>
<tbody>
<tr>
<td>R Jan. 5</td>
<td>1</td>
<td>Introduction (ls)</td>
<td>Intro to equip- EMG, Force, position</td>
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<tr>
<td>T Jan. 10</td>
<td>2</td>
<td>EMG1: Basics and Amplitude (Is)</td>
<td>Calibration (Report due Jan 19 - 5%)</td>
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<tr>
<td>R Jan. 12</td>
<td>3</td>
<td>Kinematics &amp; Differentiation (ls)</td>
<td>Kinematics &amp; Differentiation (Report due Jan. 26 - 10%)</td>
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<tr>
<td>T Jan. 17</td>
<td>4</td>
<td>EMG 2: Frequency Domain (am)</td>
<td>Fatigue (Report due Feb. 2 - 10%)</td>
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<tr>
<td>R Feb. 2</td>
<td>5</td>
<td>EMG 3: Filtering and Artifacts (ls)</td>
<td>EMG &amp; movement</td>
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<tr>
<td>T Feb. 7</td>
<td>6</td>
<td>Kinetics - Force plates (am)</td>
<td>Forces &amp; Moments</td>
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<tr>
<td>R Feb. 9</td>
<td>7</td>
<td>Kinetics - Strain gauges (am)</td>
<td>Force Response (Report due Mar 2 - 10%)</td>
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<tr>
<td>T Feb. 14</td>
<td>8</td>
<td>Spinal Reflex (Is)</td>
<td>Spinal Reflex</td>
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<td>R Mar. 2</td>
<td>9</td>
<td>Mini-experiment (am) lecture (both labs attend 12h30-13h30, SC212)</td>
<td>Group Mini-experiment (prep/start), Thursday lab group</td>
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<tr>
<td>T Mar. 14</td>
<td>10</td>
<td>Mini experimental write up/presentation (both labs attend 12h30-13h30, SC212)</td>
<td>Group Mini-experiment (prep/start), Tuesday lab</td>
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<td>R Mar. 16</td>
<td>11</td>
<td>Thursday lab group only</td>
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<tr>
<td>T Mar. 21</td>
<td>12</td>
<td>Group Mini-experiment (collection/analysis) (am)</td>
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<tr>
<td>R Mar. 19</td>
<td>13</td>
<td>Thursday Presentations (am/ls)</td>
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<td>T Mar. 28</td>
<td>14</td>
<td>Mini-experiment - presentations (20% with write-up)</td>
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<tr>
<td>R Mar 30</td>
<td>15</td>
<td>Lab available for practical exam study</td>
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<tr>
<td>T Apr. 4</td>
<td>16</td>
<td>LAB EXAM – practical 12h30-13h30: THURSDAY Group, 1345-14h45: Tuesday Group</td>
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<tr>
<td>Apr.7-24</td>
<td>17</td>
<td>Lab Theory in EXAM period</td>
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RE-EVALUATION POLICY

During the term:
Any requests for remarking of assignments or in-class tests must be received by the course instructor within 7 days of the item’s mark being posted, along with the “Evaluation item remark request” form, which can be found on the course website. Please note that your mark may be raised, lowered, or confirmed.

Re-appraisal of a final grade:
Any requests for re-appraisal of a final mark must be received by the course instructors within 7 days of the final grade posting, along with the “Evaluation item remark request” form, which can be found on the course website. Please note that your mark may be raised, lowered, or confirmed. If the result is still unsatisfactory, requests for a reappraisal of the final grade for a completed course are the responsibility of the Undergraduate Director. You must submit in writing a formal request for a final grade reappraisal to the KINE undergraduate Office. The ‘Reappraisal of Final Grades’ form can be picked up at the KINE Undergraduate Office. You cannot submit 'extra' work following the posting of a mark in order to raise a grade.

For further details: www.registrar.yorku.ca/policies/grade.htm

IMPORTANT GENERAL COURSE INFORMATION FOR STUDENTS

Academic Honesty and Integrity
York students are required to maintain high standards of academic integrity and are subject to the Senate Policy on Academic Honesty (http://www.yorku.ca/secretariat/legislation senate/acadhone.htm). There is also an academic integrity website with complete information about academic honesty. Students are expected to review the materials on the Academic Integrity website (http://www.yorku.ca/academicintegrity).

Access/Disability
York provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. It is the student's responsibility to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Failure to make these arrangements may jeopardize your opportunity to receive academic accommodations.

Additional information is available at www.yorku.ca/disabilityservices or from disability service providers:
• Learning and Psychiatric Disabilities Programs - Counselling & Development Centre: 130 BSB, 416-736-5297, www.yorku.ca/cdc
Religious Observance Accommodation
York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course director immediately.

Please note that to arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete an Examination Accommodation Form, which can be obtained from Student Client Services, Student Services Centre or online at [http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf](http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf)

Student Conduct
Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect and to refrain from actions disruptive to such a relationship. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. A statement of the policy and procedures involving disruptive and/or harassing behaviour by students in academic situations is available on the York website [http://www.yorku.ca/secretariat/legislation/senate/harass.htm](http://www.yorku.ca/secretariat/legislation/senate/harass.htm)

*Please note that this information is subject to periodic update. For the most current information, please go to the CCAS webpage (see Reports, Initiatives, Documents):* [http://www.yorku.ca/secretariat/senate_cte_main_pages/ccas.htm](http://www.yorku.ca/secretariat/senate_cte_main_pages/ccas.htm)