

Acknowledgement of Indigenous Peoples and Traditional Territories: York University recognizes that many Indigenous nations have longstanding relationships with the territories upon which our campuses are located that precede the establishment of York University. We acknowledge our presence on the traditional territories of the Mississaugas of Credit First Nation, the Huron-Wendat, the Haudenosaunee Confederacy and the Métis Nation of Ontario

**York University**  
**Faculty of Health**  
**SCHOOL OF KINESIOLOGY AND HEALTH SCIENCE**

**Course:** HH/KINE 4460 3.0 Occupational Biomechanics

**Course Webpage:** <https://eclass.yorku.ca/eclass/course/view.php?id=73723>

**Term:** Fall 2022

**Prerequisite / Co-requisite:** HH/KINE 3030 3.00 Introduction to Biomechanical Analysis of Human Movement

---

**Course Instructor:** Dr. Anne Moore, [biomech@yorku.ca](mailto:biomech@yorku.ca) (416) 736-2100 ext. 40498  
Office Hours will be run weekly through zoom and information will be posted on eClass

**TA:** Cecilia Powers

**Course Description**

This course examines topics in occupational biomechanics and applied ergonomics. This course will lay the groundwork necessary to become an occupational biomechanist or ergonomist. The course combines lecture material with practical experience through a lab experience.

**Course Objectives**

The objective of the course is to study the effect of work on the musculoskeletal system. The assessment of risk and prevention of work-related musculoskeletal disorders of the back and upper limb will be taught

**Specific learning outcomes**

- To be able to describe the role of biomechanics in occupational health and safety issues
- To estimate the risk of injury in manual material handling tasks and repetitive upper limb tasks using a range of qualitative and quantitative tools
- To be able to identify the musculoskeletal tissues at risk based on the posture adopted, forces applied, and time performed
- To be able to propose workstation redesigns that would reduce risk of injury and increase productivity

**Organization of the Course:**

For Fall 2022, KINE 4460 lectures and laboratories will take place in-person, on campus. Students are encouraged to attend lectures in person, as there is substantial evidence that physically attending lectures improves text/exam performance.

## Time and Location:

Lectures      Tuesday 10 am HNE 030  
                  Thursday 10 am BC 230  
Laboratory    Tuesday 11:30-1:30 SC 101A

## Course Text / Readings

Lecture material and Required Readings will be available on eClass

## Lecture Slides and Recordings

Lecture slides are posted on eclass and where possible, lecture slides will be posted prior to the lecture. Lectures will not be recorded, however lecture topic recordings will be posted following the lecture.

## Grading, Assignment Submission, Lateness Penalties and Missed Tests

### Evaluation

- |   |       |
|---|-------|
| 1. Laboratory Reports: 5 due (5 x 6%) due 1 week following lab          | = 30% |
| 2. Test 1 ( <i>Thursday October 20, 2022</i> )                          | = 20% |
| 3. Test 2 ( <i>Thursday November 17, 2022</i> )                         | = 20% |
| 4. Ergonomic Assessment report ( <i>due Tuesday November 29, 2022</i> ) | = 15% |
| 5. Test 3 ( <i>Thursday December 1, 2022</i> )                          | = 15% |

**Grading:** The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York University. Assignments will bear either a letter grade designation or a corresponding number grade. For a full description of York's grading system, see the York University Undergraduate Calendar. Final course letter grades may be adjusted to conform to Program or Faculty grades distribution profiles.

### Labs and Assignments:

- the purpose of these labs is to provide the student with a 'hands-on' application of the major techniques discussed during lecture
- A laboratory schedule and laboratory instructions will be posted on eclass. Please review the schedule and read the instructions prior to the lab.
- you **MUST** submit your lab assignment to your TA on the day that it is due (1 week following the lab). Late material (both labs and your final report) will be penalized 10% per day late. Exceptions to the lateness penalty for valid reasons such as illness, compassionate grounds, etc., may be entertained by the Course Instructor. To request this please email Dr. Moore at [biomech@yorku.ca](mailto:biomech@yorku.ca) before the lab is due.

**Missed Tests:** If you miss a test for a legitimate reason (i.e. illness), you are expected to email the instructor ([biomech@yorku.ca](mailto:biomech@yorku.ca)) and attach the Faculty of Health Missed Test Documentation (<https://health.yorku.ca/current-student-information/missed-test-form/>) within 7 calendar days of the test to be considered for a deferred test. No further supporting documentation is required. There will be one makeup per test  
If you know IN ADVANCE that you will be missing a test, please notify the instructors ([biomech@yorku.ca](mailto:biomech@yorku.ca)) at least 7 calendar days ahead of the test and attach relevant documentation, so that appropriate accommodations can be made.

### **Technical Requirements for the Course:**

If we are required to change to remote modes of delivery, two platforms will be used, (eClass and Zoom), through which students will interact with the course materials, the Course Director, TA, as well as with one another. Therefore, a computer or smart device with a camera and microphone is required to complete the course. Additional information will be provided, as needed.

### **Important Course Information For Students**

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Academic Standards, Curriculum & Pedagogy webpage (see Reports, Initiatives, Documents) -

<http://secretariat.info.yorku.ca/files/CourseInformationForStudentsAugust2012.pdf>

- Senate Policy on Academic Honesty and the Academic Integrity Website <https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities <https://accessibility.students.yorku.ca/>
- Student Conduct Standards <https://oscr.students.yorku.ca/student-conduct>
- Religious Observance Accommodation <https://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-religious-observances-policy-guidelines-and-procedures/>

### **Health and Safety Information:**

In this course, all university community members must comply with York's health and safety protocols, found on the [Better Together](#) website. All are strongly encouraged to:

- wear masks while indoors on campus;
- self-screen using the [YU Screen](#) tool prior to coming to campus for any in-person activities; and
- **NOT** attend in-person activities at any of York's campuses/locations if feeling unwell or if you answer yes to any of the screening questions.

All members of the York community share in the responsibility of keeping others safe on campuses and ensuring respectful interactions with one another.

### **Please Take Care of You and Each Other:**

We continue to deal with the impact of COVID-19 and its far-reaching consequences. Please be kind and gentle with yourselves and others. There are a number of online free resources available to help support you. If you need help, the following list of websites (this is not an exhaustive list) may be a good place for you to start:

<https://good2talk.ca/>

<https://counselling.students.yorku.ca/>

<https://yubettertogether.info.yorku.ca>

<https://yorkinternational.yorku.ca/>

### **Academic Honesty and Integrity**

Students are expected to maintain the highest standards of academic integrity related to issues such as cheating, enabling cheating, plagiarism, authentic documentation, etc. Breaches of academic integrity will not be tolerated.

The School of Kinesiology and Health Science takes academic dishonesty very seriously and will abide by York University's Senate Policy of Academic Honesty to adjudicate all cases. Students are expected to make efforts to discourage any and all (un)intentional breaches from their course work. Students are expected to complete their own work without assistance, in part or whole, on assignments and tests. Students are expected to act in accordance with the Senate Policy of Academic Honesty and are responsible for familiarizing themselves with these guidelines. Breaches of academic integrity will be handled under the disciplinary proceedings as outlined in: <https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>.

To familiarize yourself with the meaning of academic integrity by completing SPARK's Academic Integrity module at the beginning of the course. Breaches of academic integrity range from cheating (i.e., the improper crediting of another's work, the representation of another's ideas as your own, etc.) to aiding and abetting (helping someone else to cheat). All breaches in this course will be reported to the appropriate university authorities, and can be punishable according to the Senate Policy on Academic Honesty.

To promote academic integrity in this course, students will be normally required to submit selected written assignments to Turnitin (via the course Moodle) for a review of textual similarity and the detection of possible plagiarism. In so doing, students will allow their material to be included as source documents in the Turnitin.com reference database, where they will be used only for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin service are described on the Turnitin.com website.

**Intellectual Property Notice:** These course materials (course lecture recordings, lecture notes, quiz and labs) are designed for use as part of the (HH/KINE 4460) course at York University and are the intellectual property of the instructor unless otherwise stated. Third party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.

*Copying this material for distribution (e.g. uploading material to a commercial third-party website) may lead to a charge of misconduct under York's [Code of Student Rights and Responsibilities](#) and the Senate Policy on [Academic Honesty](#) and/or legal consequences for violation of copyright law if copyright law has been violated.*

### **Student Code of 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 environment, and the responsibility of the student to cooperate in that endeavour. Students must conduct themselves in accordance with York University's Student Code of Conduct. This includes all aspects of the course, including online environments. A statement of the policy and procedures involving disruptive and/or harassing behaviour by students in academic situations is available at: <https://oscr.students.yorku.ca/student-conduct>.

### **Student Code of Rights and Responsibilities:**

This code is intended to be educative and promote accountability among students toward their peers and other members of the York community. This code identifies those behaviours that are disruptive to the educational purposes of the University, make the campus less safe, diminish the dignity of individuals and groups, and the enjoyment of their rights. It applies specifically to

students because the behaviours of non-student members of the University community are held to comparable standards of account by provincial laws, University policies, and their unions' collective agreements. Information about how to address a concern or a complaint regarding a faculty or staff member can be found at: <http://oscr.students.yorku.ca/>.

### **Test Banks:**

The offering for sale of, buying of, and attempting to sell or buy test banks (banks of test questions and/or answers), or any course specific test questions/answers is not permitted in the Faculty of Health. Any student found to be doing this may be considered to have breached the Senate Policy on Academic Honesty. In particular, buying and attempting to sell banks of test questions and/or answers may be considered as "Cheating in an attempt to gain an improper advantage in an academic evaluation" (article 2.1.1 from the Senate Policy) and/or "encouraging, enabling or causing others" (article 2.1.10 from the Senate Policy) to cheat.

**Test and examinations are to be taken by the student and no one else.** It is the expectation of the instructors that only specified course materials may be used. Websites should not be accessed while you are taking a test – doing so may result in the immediate closing of the online test and instructors will not re-open a test in this situation.

### **Accessibility:**

York University provides services for students with accessibility concerns (including physical, medical, learning, and psychiatric), who require accommodation related to teaching and evaluation methods/materials. It is the student's responsibility to register with Student Accessibility Services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to email a copy of your accommodation letter to your instructors as early as possible in the semester, and to schedule a time early in the term to meet with your instructor to discuss your accommodation needs. Failure to make these arrangements may jeopardize your opportunity to receive academic accommodations. Requiring accommodation does not relieve students from following course policies. Student Accessibility Services can be accessed here: <https://accessibility.students.yorku.ca/>.