

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/course/view.php?id=87003>

Term: Fall 2023

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

Course Instructor: Dr. Anne Moore, 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

Time and Location:

Lectures Tuesday and Thursday 10 am MC 101

Laboratory Tuesday 11:30-12:30 SC 101A

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 2023, 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.

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. Lecture slides and audio recordings are designed to supplement, not replace lecture attendance.

Grading, Assignment Submission, Lateness Penalties and Missed Tests

Evaluation

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| 1. Laboratory Reports: 5 due (5 x 6%) due 1 week following lab | = 30% |
| 2. Test 1 (<i>Thursday October 19, 2023</i>) | = 20% |
| 3. Test 2 (<i>Thursday November 16, 2023</i>) | = 20% |
| 4. Ergonomic Assessment report (<i>due Tuesday November 28, 2023</i>) | = 15% |
| 5. Test 3 (<i>Tuesday December 5, 2023</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 *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) 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) at least 7 calendar days ahead of the test and attach relevant documentation, so that appropriate accommodations can be made.

Appendix B

IMPORTANT COURSE INFORMATION FOR STUDENTS

York University seeks to provide for equal rights and opportunities without discrimination for all students. The overall aim is a climate of understanding and mutual respect for the dignity and worth of each community member so that each person feels a part of York University and is able to fully participate in university life.

The following information describes some of your important rights and responsibilities as students, along with the supports, accommodations and services made available to you by York.

Health and Safety Information:

- In this course, all university community members must comply with York's health and safety protocols. We all 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 the pandemic and its far-reaching consequences. If you need mental health help, the following list of websites (this is not an exhaustive list) may be a good place for you to start:
- [Good2Talk](#)
- [Student Counselling, Health and Well-being](#)
- [Well-being at York](#)
- [Virtual Health Clinic](#)
- [York University Psychology Clinic](#)
- [York International](#)
- [Calumet College and Stong College Student Success Programs](#)
- [Calumet College and Stong College Online Student Support](#)

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 Directors, 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.

Academic Honesty and Integrity

In efforts to help maintain academic integrity to the fullest extent possible, please familiarize yourself with the University's [Senate Policy on Academic Honesty](#). 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 can be punishable according to information that can be found on the Faculty of Health's [Academic Integrity Tutorial](#). As already [communicated](#) to students, according to York's [Senate Policy on Academic Honesty](#), using text-, image-, code- or video-generating AI-tools to complete academic work without your instructor's **knowledge** or **permission**, is considered to be a breach of academic honesty. More specifically, using text-generating tools (such as ChatGPT) would be considered to be cheating (Senate Policy, section 2.1.1) and using image-generating tools (such as DALL-E) would be considered to be plagiarism (Senate Policy, section 2.1.3). For more information on AI and academic integrity, please go [here](#).

Intellectual Property Notice: These course materials (course lecture recordings, lecture notes, quizzes 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> or *Senate Policy and Procedures on Disruptive and/or Harassing Behaviour in Academic Situations* (secretariat-policies.info.yorku.ca/policies/disruptive-andor-harassing-behaviour-in-academic-situations-senate-policy/).

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/>.

Ethics Review Process. York students are subject to the York University *Policy for the Ethics Review Process for Research Involving Human Participants* (secretariat-policies.info.yorku.ca/policies/ethics-review-process-for-research-involving-human-participants-policy/). Ethics approval must be obtained prior to the starting any research activities involving human participants, including research conducted by students in a graduate or undergraduate course, for an undergraduate thesis or project, or for a Major Research Paper, Thesis or Dissertation. If you are in doubt as to whether this requirement applies to you, contact your Course Director immediately. More information can be found at: www.yorku.ca/research/human-participants/

Religious 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 your course syllabus pose such a conflict for you, contact the Course Director within 14 days of the date for which accommodation is sought. Other procedures are outlined in the York University policy, guidelines and procedures on *Academic Accommodation for Students' Religious Observances* (secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-religious-observances-policy-guidelines-and-procedures/). 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 a Religious Accommodation Agreement, which can be found at: registrar.yorku.ca/pdf/exam-accommodation.pdf

Accessibility Services. Student Accessibility Services (accessibility.students.yorku.ca/) provides academic accommodations and supports for students with temporary and permanent disability including physical, sensory, medial, learning, and mental health disabilities. Students who had an Individualized Education Plan (IEP) in high school are eligible for support. Please note that registering with disabilities services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs.

Academic Skills Support. York University Libraries (www.library.yorku.ca) and the Learning Commons (learningcommons.yorku.ca/) provide students with academic support for their course assignments and research requirements. The Libraries offer an array of supports, services, workshops, resources and people available to help ensure continued success during a student's academic career.

Centre for Human Rights, Equity, and Inclusion. The Centre for Human Rights, Equity and Inclusion (rights.info.yorku.ca/) facilitates confidential processes to discuss allegations of discrimination and harassment by York Community members. There are also robust training opportunities and workshops available to the community year round.

Counselling, Health and Well Being. Student Counselling, Health & Well Being (counselling.students.yorku.ca) supports students in realizing and developing their personal potential in order to maximally benefit from their university experience and manage the challenges of university life. Services include: peer-led workshops, certificate training programs,

support groups, same-day and appointment-based counselling, short-term therapy, and more.

Sexual Violence Response and Support. The Centre for Sexual Violence Response, Support and Education (thecentre.yorku.ca) facilitates support, services and accommodations for those who have experienced sexual violence. The support offered is based on the needs and wishes of the person disclosing/reporting.

Student Community Relations. The Office of Student Community Relations (oscr.students.yorku.ca/) supports students impacted by critical incidents, facing personal crises or multiple complex issues, such as, but not limited to, critical illness or injury of a student, student death, attempted suicide and sexual assault. OSCR provides advice, referrals, alternate dispute resolution methods and judicial processes (local adjudication, tribunals).