

EDKP 444 ERGONOMICS (3 credits), Fall 2020
Department of Kinesiology & Physical Education, McGill University

Instructor: Julie Côté, Ph.D., Associate Professor
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 Office hours: ***Mondays 1:05 – 2:25pm, by appointment booked via email***

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Course aids: Cassandra Castro-Barquero, B.Sc. Kinesiology (Honours) student
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 Availabilities: ***by appointment booked via email***

Time & location: Mondays and Wednesdays 1:05pm – 2:25pm (weekly material available in myCourses on Mondays, class meetings scheduled in Zoom on Wednesdays)
 Wednesdays zoom meeting address: <https://mcgill.zoom.us/j/98737575983>

Format: Each week's course content will be delivered in myCourses on the Monday, and you will be expected to read it at your own time before Wednesday. *There will be no class meeting on Mondays.* On Wednesdays, there will be a synchronous (live), recorded Zoom session where I will briefly summarize that week's material, I will take Q&As, and we may do a few practice exercises. There may also be some guest lecturers on some Wednesdays (TBD). In weeks where there are quizzes planned (see schedule below), they will be delivered Wednesdays at around 1:30pm. ** any additional detail in course format and delivery will be communicated throughout the semester through myCourses. If you need specific help adapting to this mode of learning, take a look at [Student-specific Guidelines for Remote Teaching and Learning](#) and [Remote Learning Resources](#).

Pre/co-requisites: ANAT 315 and EDKP 206 or their equivalent

Suggested (i.e. NOT mandatory) reference texts:

Chaffin DB, Andersson GBJ, Martin BJ. Occupational Biomechanics (4th ed.)
 Kroemer K, Kroemer H, Kroemer-Elbert K. Ergonomics –How to Design for Ease and Efficiency, 2nd ed.
 Konz S, Johnson S. Work Design. Occupational Ergonomics (7th ed.), Scottsdale: Holcomb Hathaway.

Description:

An examination of ergonomic issues including: injury mechanisms, evaluation and assessment techniques, occupational health and safety legislation, and ergonomic interventions.

Objectives:

- Become aware of the major risk factors associated with the development of workplace injuries;
- Be able to understand and apply various workplace injury risk assessment tools;
- Be able to design ergonomic and kinesiological interventions to minimize and prevent the risk of workplace injuries.

STUDENT ASSESSMENTS

Quizzes (4 quizzes of 12.5% each)

They will be short quizzes delivered online at 1:30pm on the Wednesday of the week identified below in the schedule. Each quiz will be open for 48h, but you will have 1h to complete it once you open it. Each quiz will focus in majority (but not entirely) on the material viewed since the previous quiz.

Projects (mode of delivery: by email to Julie.cote2@mcgill.ca)

Project 1: Computer workstation / Office ergonomics analysis: 10%
Due date: Monday Oct. 26th 5pm

Project 2: Non-office ergonomics analysis (topic requiring pre-approval)
 Project proposal: 10%; **Due date:** Tuesday Oct. 13th 5pm
 Knowledge Transfer flyer: 10%; **Due date:** Monday Nov. 23rd 5pm
 Final Written report: 20%; **Due date:** Thursday Dec. 3rd 1pm

The shorter Project 1, conducted in groups of 2, will focus on office ergonomics (by definition: work centering on the use of a computer). In the longer Project 2, conducted in groups of 4, you will conduct a full ergonomic analysis of a work situation of your choice (excluding an office workstation). More information on both, as well as their grading rubrics, will be provided on MyCourses. Both projects will be conducted in groups that you will form at your initiative.

** All group members will receive the same mark on all components of the group assignments unless agreement is signed by all group members to request otherwise; there will be 10% automatic deduction for every 24h an assignment is late being submitted. There will be no supplementary work allowed and no reweighing of marks towards the final mark*

Course schedule:

DATES	TOPICS
Week 1: W Sept. 2	Intro to the course; Intro to Ergonomics
Week 2: W Sept. 9	(Monday: Labor Day, Legal Holiday); Before Ergonomics: Physical Demand Analysis, Functional Capacity Evaluation, anthropometry
Week 3: MW Sept. 14-16	Mechanisms of Musculoskeletal Disorders (MSDs); MSD Risk factors
Week 4: MW Sept. 21-23	Principles of computer/office ergonomics; ***** Quiz 1
Week 5: MW Sept. 28-30	MSDs of the neck and upper limbs Assessment tools and questionnaires-1
Week 6: MW Oct. 5-7	Assessment tools and questionnaires-1 & 2
Week 7: W Oct. 14	(Monday: Thanksgiving, Legal Holiday); Assessment tools and questionnaires-2; review **** Quiz 2
Week 8: MW Oct. 19-21	Hand tool ergonomics; MSDs of the back and lower limbs
Week 9: MW Oct. 26-28	Assessment tools & questionnaires-3
Week 10: MW Nov. 2-4	Assessment tools & questionnaires-3 & 4; **** Quiz 3
Week 11: MW Nov. 9-11	Occupational biomechanics
Week 12: MW Nov. 16-18	Occupational physiology: selected issues (e.g. environmental & systems)
Week 13: MW Nov. 23-25	Psychosocial and personal factors relevant to occupational health Beyond Ergonomics: evidence for the effectiveness of various types of occupational health interventions ***** Quiz 4
Week 14: MW Nov 30- Dec. 2	Term project finalization

Recording of zoom sessions:

Please read the *Guidelines on Remote Teaching and Learning* [<https://www.mcgill.ca/tls/instructors/class-disruption/strategies/guidelines-remote>] and the course outline for this course in myCourses. You will be notified through a 'pop-up' box in Zoom if a lecture or portion of a class is being recorded. By remaining in sessions that are recorded, you agree to the recording, and you understand that your image, voice, and name may be disclosed to classmates. You also understand that recordings will be made available in myCourses to students registered in the course.

Academic Integrity:

McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures" (see [McGill's guide to academic honesty](#) for more information).

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le [guide pour l'honnêteté académique de McGill](#)).

I encourage you to visit the above mentioned websites as soon as possible to ensure that you are aware of the definitions of cheating, plagiarism and other academic offences that are used by McGill. Simply taking this initiative may help you avoid accidental and unfortunate situations. You are responsible for informing yourself to avoid such situations ("I didn't know" is not a valid defense in case there is evidence of plagiarism).

Language of Submission:

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded. This does not apply to courses in which acquiring proficiency in a language is one of the objectives.

Conformément à la Charte des droits de l'étudiant de l'Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté (sauf dans le cas des cours dont l'un des objets est la maîtrise d'une langue).

Please contact the instructor at the beginning of the semester should you wish to explore this option further.

Additional Statements:

- The [University Student Assessment Policy](#) exists to ensure fair and equitable academic assessment for all students and to protect students from excessive workloads. All students and instructors are encouraged to review this Policy, which addresses multiple aspects and methods of student assessment, e.g. the timing of evaluation due dates and weighting of final examinations.

- *Note that to support academic integrity, your assignments may be submitted to text-matching or other appropriate software (e.g., formula-, equation-, and graph-matching).*
- *Instructor-generated course materials (e.g., handouts, notes, summaries, exam questions) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the University under the Code of Student Conduct and Disciplinary Procedures.*
- *As the instructor of this course I endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the [Office for Students with Disabilities](#), 514-398-6009.*
- *McGill University is on land which has long served as a site of meeting and exchange amongst Indigenous peoples, including the Haudenosaunee and Anishinabeg nations. We acknowledge and thank the diverse Indigenous people whose footsteps have marked this territory on which peoples of the world now gather.*
- *L'Université McGill est sur un emplacement qui a longtemps servi de lieu de rencontre et d'échange entre les peuples autochtones, y compris les nations Haudenosaunee et Anishinabeg. Nous reconnaissons et remercions les divers peuples autochtones dont les pas ont marqué ce territoire sur lequel les peuples du monde entier se réunissent maintenant.*
- *[End-of-course evaluations](#) are one of the ways that McGill works towards maintaining and improving the quality of courses and the student's learning experience. You will be notified by e-mail when the evaluations are available. Please note that a minimum number of responses must be received for results to be available to students.*
- *In keeping with McGill's preparedness planning strategies with respect to potential pandemic or other concerns, the Administration suggests that all course outlines contain the statement: "In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.*
- *Additional policies governing academic issues which affect students can be found in the McGill Charter of Students' Rights (see [document](#)).*
- *McGill has policies on sustainability, paper use and other initiatives to promote a culture of sustainability at McGill. (See the [Office of Sustainability](#).)*
- *Guidelines for the use of mobile computing and communications (MC2) devices in classes at McGill have been approved by the APC. For more information on what is acceptable and unacceptable use of MC2, please consult the [Guidelines](#).*