

COURSE SCHEDULE

Tuesday / Thursday

2:35 - 3:55 PM

Offered via Zoom.

OUR COURSE WITHIN THE COVID-19 CONTEXT

Lectures, announcements and other materials will be provided in MyCourses. Attendance will not be enforced, however participation in all aspects of the course is highly encouraged for your own benefit. Lectures will be recorded and presentation slides for each lecture will be provided.

INSTRUCTOR INFORMATION

Professor: Dorelle Hinton, PhD

Please call me: Dorelle or Dr. / Prof. Hinton (she / her)

Email: dorelle.hinton@mcgill.ca
(response within 24 hours, 48 hours on weekends)

Office Hours: Wed 10 am - 12 pm
EST via Zoom

TA: Julien Clouette
(iulien.clouette@mail.mcgill.ca)

Motor Control: EDKP 447

DEPARTMENT OF KINESIOLOGY AND
PHYSICAL EDUCATION

Instructor: Dr. Dorelle Hinton

Teaching Assistant: Julien Clouette

No textbook required. Assigned readings and presentation slides will be provided.

Welcome!

This course aims to introduce the field of motor control. It will provide information concerning how information is processed, the types of sensory information used in motor control, and simple models of control processes.

Here, you will gain a detailed understanding of how posture and movement are maintained in humans, the neural basis of motor control, and current theories behind how humans learn complex movements.

Finally, you will learn about the importance of effective scientific communication of diseases of the nervous system and, using this knowledge, create a communication strategy aimed towards patients affected by a clinical condition affecting motor control.

Course Format and Organization

Each week, there will be assigned readings and a weekly tutorial. We will spend time together during scheduled lecture times (Tuesdays and Thursdays 2:35 – 3:55 PM, EST) via Zoom.

On **Tuesdays**, I will provide a lecture over Zoom using PowerPoint slides to summarize and present pertinent information from your assigned readings.

On **Thursdays**, I will provide a summary of the weekly tutorial over Zoom using PowerPoint slides (15- 20 minutes). The tutorial will be a series of short videos and/or activities that you will do ahead of time (1 hour). Each tutorial will be posted 1 week before the lecture summary (i.e. on the previous Thursday). A Q&A session will follow the summary to answer any of your questions.

Course Engagement: We will use polling as a means of engagement, **not** to record attendance. During a class with polling questions, you will be able to respond to questions from a personal device (smartphone, tablet, or laptop). To participate in polling sessions, you **MUST** first register for an account by clicking on *Register Your Account* at www.mcgill.ca/polling by logging in with your McGill username and password. For more information, please visit *Getting Started for Students* at www.mcgill.ca/polling.

Course Schedule

The course calendar on the last page of this syllabus details the topic for each scheduled lecture and tutorial, and the assigned reading(s) each week. **Before each lecture/tutorial** you will need to read or watch the lecture/tutorial materials. **During or immediately after each lecture/ tutorial**, note your questions, discussion points, or concerns over material that is not clear and submit via the the Zoom chat function or via the Discussions feature in MyCourses. Teaching and learning online can be difficult. Therefore, I welcome feedback on how to best keep lectures interesting and worthwhile!

LEARNING OBJECTIVES

By the end of this course, you will be able to:

- Explain how various structures of the brain control human movement.
- Summarize how different factors influence information processing and motor preparation.
- Summarize the processes underlying the preparation and regulation of movement.
- Explain feedforward and feedback processes in the control of movement.
- Describe how the brain utilizes visual information to control skilled movement.
- Explain the dynamical systems principles that are involved in movement coordination.
- Explain how diseases of the nervous system affect the control of movement.

ASSESSMENT

How will your success be measured?

50% Term Project

This project is made up of 4 parts:

- 1) *Outline (10%)*
- 2) *Infographic (10%)*
- 3) *Video Presentation (10%)*
- 4) *Final Paper (20%)*

Total: 50%

20% Take-home Midterm Exam

30% Take-home Final Exam

Course Assessments and Activities

You will demonstrate your success in this class through:

1) Term Project: 50% of Final Grade

Great news! You have been hired by a (*fictional*) Canadian not-for-profit organization, **Patient Education Network**. Your assignment as the newly hired “Patient Education Leader” will be to create a **communication strategy** for patients who have been diagnosed with a disease or condition that affects motor control, and their support network of family and friends.

Your communication strategy will be made up of 4 deliverables:

- a. A **project outline** comprised of an annotated bibliography, due October 9, 2020 (10% of final grade)
- b. An **infographic** suitable for posting on a website, Facebook page or Instagram account, due October 30, 2020 (10% of final grade);
- c. A short explanatory **video presentation** that could be shared on social media, due November 13, 2020 (10% of final grade);
- d. A short but informative **literature review** for detailed education, due November 29, 2020 (20% of final grade).

**See Term Project Description document for further details.*

2) Take-home Midterm Exam: 20% of Final Grade

Your midterm exam will be a mixture of short and long answer questions based on course readings, lectures and tutorials.

The exam will be released on **Wednesday October 14, 2020, at 9 AM EST** via MyCourses.

The exam will be due on **Friday October 16, 11:59 PM EST** via MyCourses.

**There will be no lecture or tutorial on Thursday October 14, 2020.*

3) Take-home Final Exam: 30% of Final Grade

Your final exam will be a mixture of short and long answer questions based on course readings, lectures and tutorials.

Exam release date and due date TBA via Exam Office.

I understand that there are new challenges that exist when learning online.

If you cannot meet the required deadline for the Term Project or Midterm/Final exam, please contact Prof. Hinton *prior* to the deadline for an extension.

Expectations

What I expect from you

I expect everyone to contribute to a collegial environment in which all individuals and their rights to learn are respected. For more information, please see [McGill's Student Rights and Responsibilities](#) and [Code of Student Conduct and Disciplinary Procedures](#) websites.

Since this course has no textbook, additional readings will be part of the lecture and tutorial material. I will strive to keep the length of these readings as short as possible, however I expect you to be able to read them outside of lecture hours. If you are having trouble keeping up with the readings and assignments, please get in touch. You are expected to take responsibility for your own learning by working with/through the material, and resources are there to be used and will be provided on MyCourses. **Please ask for help as needed.**

Copyright. Please note that the format for the delivery of this course requires a lot of work. On average, for each 1 hour of lecture time and activities, it usually takes me around 4 hours of preparation. Therefore, I ask for everyone's collaboration and cooperation in ensuring that course materials prepared explicitly for this course (i.e. lecture notes, presentations, videos etc.) are **not reproduced or placed in the public domain**. This means that each of you can use these resources for your own personal purposes, but you cannot allow others to use them, either by putting them up on the internet or by giving or selling them to others.

What you can expect from me

Equity and inclusion. As the instructor of this course I endeavor to provide an equitable and inclusive learning environment. Given that this is a fully online course, I understand that there may be challenges to this type of learning that you do not typically encounter during an in-person course. If you experience barriers to learning in this course, do not hesitate to discuss them with me and the Office for Students with Disabilities (phone: 514-398-6009).

Course material. All course material will be available via MyCourses. Lecture presentations will be posted 24 hours prior to the lecture. Tutorial materials will be posted 1 week prior to the tutorial.

Communication. Outside of lectures, I will be available via email, Zoom video call or Zoom audio calls. I will answer emails within 24 hours (Sunday – Thursday) or within 48 hours (Friday-Saturday). I will host online office hours on Wednesdays between 10 am and 12 pm EST via Zoom for individual consultations. If this time does not work with your schedule, please email to book an appointment.

Final Notes:

Right to write in English or in French

“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.”

Consequences of not completing assignments as requested

An individual who does not complete a required assignment and does not have a university recognized reason for deferral would receive a zero (0) in that portion of the evaluation. Assignments submitted late will receive a penalty of 10% per day late, including weekends.

Use of McGill Email Address

We will only communicate with students on their official email address. No response will be provided on non-McGill email addresses.

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](#)

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](#)

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.

Also, I encourage you to visit the following website for precious help on how to refer to internet resources in your assignments, and especially, how to critically evaluate the scientific value of what you read on the internet: <http://www.mcgill.ca/library/library-findinfo/internet/>

EDKP 447 - Course Calendar Fall 2020

Wk	Reading	Tuesday - Lecture	Thursday - Tutorial	Term Project
			Sept 3 Introduction to Motor Control	Introduction to Project
1	#1 and #2	Sept 8 Refresher: Nervous and muscular systems	Sept 10 Tutorial 1 - SciCommunication - Translating Science to the Public	
2	#3	Sept 15 Information Processing	Sept 17 Tutorial 2: Motor Lab	September 18: Submit Topic
3	#4 & #5	Sept 22 Sensory Contributions	Sept 24 Tutorial 3: Goodale & al 1991	
4	#6, #7a and #7b	Sept 29 Central Contributions	Oct 1 Tutorial 4 - SciCommunication - Infographic Design	
5	#8	Oct 6 Motor Programs	Oct 8 Tutorial 5: Review	Project Outline Due (10%) Oct 9 11:59 pm
6	-	Oct 13 Review Session	Oct 15 NO TUTORIAL: Take-home midterm due October 16, 11:59 pm (20%)	
7	#9, #10a and #10b	Oct 20 Descending/Ascending Pathways	Oct 22 Tutorial 6: SciCommunication - Oral Presentations	
8	#11 and #12	Oct 27 Motor Learning	Oct 29 Tutorial 7: Barbeau & S. Rossignol 1987	Infographic Due (10%) Oct 30 11:59 pm
9	#13a, #13b #14a, #14b	Nov 3 Motor Adaptation	Nov 5 Tutorial 8: SciCommunication - Scientific Writing	
10	#15 and #16	Nov 10 Posture 1	Nov 12 Tutorial 9: Capaday & Stein 1996	Video Presentation Due (10%) Nov 13 11:59 pm
11	#15	Nov 17 Posture 2	Nov 19 Tutorial 10: Motor Lab	
12	#17a and #17b	Nov 24 Motor Control Across the Lifespan	Nov 26 Tutorial 11: Review	Final Paper Due (20%) Nov 27 11:59 pm
13	-	Dec 1 Review Session	Take-home final exam (30%), date TBA.	