

THE UNIVERSITY OF BRITISH COLUMBIA
School of Kinesiology
Kinesiology 211
Winter 2023: Term 2

Human Motor Behaviour

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We are living and working in extraordinary times where the impacts of the COVID-19 pandemic are still being felt by many people. Given these challenges, it is important to remember to be kind and patient with yourselves, with each other, with the TAs and with me. We still need to be flexible in delivery of content in these uncertain times and as such, please be aware that the course syllabi may need to change to adjust to current circumstances. This is a large class, so please be respectful and considerate in your interactions. Please do use the discussion board for each module to ask content questions which are not addressed in class, rather than emailing the instructor. Where possible, try and set up a small support group of class mates to help you study and navigate the material. TAs are available too (in person and online).

Lectures and seminars: Tuesday, Thursday: 3:30 – 5pm. We will have a blended teaching model, with at least one in-person class each week (on Tuesdays most weeks). Content for ~one class each week will be pre-recorded & posted on canvas (along with self-study quizzes). There will be 5 motor-lab/tutorial sessions with live in-class scheduled time. These are self-directed, online short activities. In-class and online support (canvas chat and zoom) will be available during scheduled times. Discussion boards are available on Canvas for all Q&A between students and with TA/instructor. Please use the module appropriate discussion board for asking questions & responding to queries to test your own knowledge. **If your question might be helpful/relevant for others in the class, use the discussion board and NOT individual email. Email is for personal matters only.**

Instructor Zoom link: Dr Hodges
<https://ubc.zoom.us/j/64360440998?pwd=L2dpMytMeVA4VHlvTWtmN0d1VmFBZz09>
Meeting ID: 643 6044 0998
Passcode: 141270
One tap mobile: +17789072071

Personal Zoom for TAs:
Please see CANVAS homepage

Office Hours: TBD

* All course information can be found at <https://canvas.ubc.ca/>

* If you need help/ have questions ACT early. Please follow the 5 steps below.

Step 1: READ the book/check class notes/check notes on Canvas/ cross-check with class-mates
 Step 2: POST questions on Canvas “Discussion board” for specific Module or general questions
 Step 3: CHAT and engage in LIVE Q&A forum or Zoom during tutorial times and recorded lectures and Come to all live TUTORIALS/Motor Labs for in-person feedback and discussion.
 Step 4: EMAIL TA and ATTEND TA office hours
 Step 5: EMAIL me and SCHEDULE/ATTEND office hours

Course Description

KIN 211 provides a foundation for understanding the characteristics and principles of motor learning and control and how different factors influence learning and performance with a focus on sport application. This course is an introduction to the area of human motor learning/motor skill acquisition and control. It introduces students to the visual-cognitive processes that underlie human movement, the process of learning motor skills and the factors that influence acquisition, performance, and control. Students of this course will gain knowledge, appreciation, and understanding of the conceptual and empirical foundations in motor learning and control.

Rationale

This course exists to give you basic knowledge concerning how and why we move and acquire motor skills. It is designed to make you think about how and why we respond, plan and organize actions and attend to and process visual and verbal information in order to move, learn and teach motor skills. This course is a foundational course in motor behavior, which provides a background for KIN 311. This course fits generally with neuro-mechanical related courses and sport psychology/sport performance courses. Concepts covered in this course have broad application to the field of Kinesiology with respect to workplace design, coaching, rehabilitation, physical education, strength and conditioning and sport performance.

Required Course Text and Lab software

- Schmidt, R.A., & Lee, T.D. (2019). *Motor Learning & Performance (6th Ed.)*. Champaign, Illinois: Human Kinetics (& web study guide). Do not use old version of the book as it does not include study guides and *Narratives**. E-book is fine to use (with web study guide), but the page numbers are different from hard text and those detailed in course notes** .
- MotorLabs software (2022) license required for running online labs
 <<https://motorlab.ca/purchase>>. There is a small cost of \$5 to purchase the license.

**All the narratives, included with the web study guide, are also in this book: Lee, T.D. (2011). “Motor control in everyday actions” <https://canada.humankinetics.com/products/motor-control-in-everyday-actions>*

*** For the e-book, a file with page numbers is posted on Canvas, these are different from hard text.*

Course Learning Objectives

1. Discuss fundamental principles and concepts in motor learning and control.
2. Define and explain the essential terms and language used in motor learning and control.
3. Understand the role of cognition, attention, and memory in motor learning and control.
4. Know the roles of augmented information and practice organization in motor skill acquisition.
5. Know how the information-processing framework is applied to motor learning and control.
6. Demonstrate understanding of how and why certain research methods and experiments aid our knowledge of motor learning and control.
7. Apply concepts and principles in motor learning and control to teaching, coaching, skill development, and overall motor performance.

Structure

This is a 3-credit course with mostly lectures (and tutorials & online labs) on Tuesdays and Thursdays. The lectures will focus upon the concepts, principles, and research in human motor behaviour and will **complement** the readings from the text and other posted resource materials. Students are responsible for reading the text book and any assigned readings/listenings.

Formative quizzes: For every Module of the course there are “test yourself” quizzes. These are 5-10 questions designed to test knowledge of the material. These are formative quizzes only and are not graded. Feedback is provided through the canvas quiz function and you can take the quiz up to 3 times. The quizzes are not available until AFTER the last lecture related to the module. You are also strongly encouraged to use the online/study quizzes from the course-text, web study-guide to test your knowledge of the readings. *There are also self-study quizzes for all video lecture content*

Lecture notes: Class notes will be made available in .pdf file-format through the canvas course website.

Motor labs: There are 9 motor labs associated with this course which complement lecture and reading material (and content from these labs is also tested on the final exam). Labs are to be completed individually so that each person has their own data. You can work with others and in small groups when doing these labs., **as long as each person has their own data.** Time is available in class tutorial times to do the labs. TAs will be available for live help with these labs and any other questions from the course (5 tutorial/lab sessions throughout the term).

There are BOTH **graded and non-graded quizzes associated with the labs during the term.** **FOUR** of the labs are graded (Hicks, Slater-Hammel, Fitts Law and CI lab.). The rest of the labs and associated quizzes are for practice/study. I will take your best 3 labs as your final grade, BUT, ALL 4 quizzes must be completed otherwise the final % grade for the lab (15%) will be marked out of 20.

To purchase the license and download motor labs please go to: <https://motorlab.ca/>. All the details you will need for each motor lab are listed in canvas for each module. There are 3 attachments for each lab and a link to a QUIZ:

1. **Powerpoint** with lab instructions and some background information
2. **Excel sheet** to enter and graph your data
3. **Word document** containing details about the motor lab. activity and what to do with your data.
4. **QUIZ:** After you have completed the lab., you can then do the quiz (quizzes will be available outside of class time; >5pm on the day of the lab until Friday 11:59pm, for Tuesday class or until Tuesday 11:59pm for Thursday class). The quiz will be open for 45 mins after you start and the graded labs can only be completed once (all others, max 3 attempts).

Supplementary resources: I have added podcast, video and reading resources associated with the text to canvas to help you understand and apply the material. I strongly recommend reading/watching/listening to this material to help you study and remember for the long term. None of the extra content associated with supplementary resources will be directly examined.

Assessments and Examinations

Assessment of learning objectives will be conducted through:

- Exams splits into three sections: 2 Midterms (sections 1 and 2; content pre midterm1 and 2) and 1 Final (section 3 content after midterm 2 and all motor labs and narratives)
- MotorLab quizzes: Four graded in response to data collected during online Motor Labs.

Exams will cover material from all lectures and assigned readings, narratives and Motor Labs. Examinations will include multiple choice, true/false and short-answer or numeric answer questions. Motor lab quizzes will be conducted through the Quizzes online in canvas. The midterms will be online through Canvas. The final exam is scheduled to be in-person.

Summary of Assignments and grading (please see canvas modules for details)

Motor Lab Quizzes (15%) – 5% /lab; 4 in total will be graded out of 9 total labs. Your best 3 labs will be counted towards final grade only IF all 4 labs are completed. If not, the final % grade will be based on a total score out of 20. Graded Labs = Hicks Law, Slater-Hammel/ anticipation, Fitts Law and Contextual Interference. You will need to have completed the labs and have your own data **BEFORE doing the quiz**. Quizzes open only after the scheduled lab time. These can be open book. You have 45 min to complete the quiz **individually based on your own data** once started.

Midterms 1 and 2 (50% total) – The midterms are closed book and are scheduled to be completed through Canvas during scheduled class time. Announcements will be made in advance if there is a switch to in-person.

- Midterm 1 (25%) –all material up until midterm 1; Feb 9th (45 min)
- Midterm 2 (25%) –all material between midterm 1 and midterm 2; Mar 21st (45min)

Final exam (35%) -all material after midterm 2, all Motor Labs (graded and ungraded labs) and all Narratives (~1.5 hr, date tbd, in-person)

Missed exams: Individuals who do not write a mid-term exam will get a 0 for the exam unless acceptable supportive reasons and/or documentation is provided to the instructor. If an exam is missed, then any concessions to write a make-up exam or get reweighting of grades, need to be conveyed to the instructor BEFORE the missed exam and will only be available in exceptional circumstances. The instructor reserves the right to decide on any concessions regarding make-up exams or changing the weighting for other exams (only with valid reasons). Academic concessions are a privilege not a right. If you are feeling ill at the time of a final exam, do not attend the exam. You must apply for deferred standing (an academic concession) through Academic Advising (<https://kin.educ.ubc.ca/undergraduate/bkin/academic-concession/>).

Missed lectures/content: I will post lecture notes (pdfs) associated with course content. Approximately half of the course content will consist of pre-recorded presentations and hence available online. Where possible (technology allowing), live/in-person lectures will be recorded and posted. Please use the discussion board on canvas to ask ALL content related questions.

Academic Accommodation for Students with Disabilities

The University's goal is to ensure fair and consistent treatment of all students, including students with a disability, in accordance with their distinct needs and in a manner consistent with

academic principles. Students with a disability who wish to have an academic accommodation should contact Access and Diversity without delay.

Academic Integrity (<https://academicintegrity.ubc.ca/>)

All UBC students are expected to behave as honest, trustworthy and responsible members of an academic community. Breach of those expectations or failure to follow the appropriate policies, principles, rules, and guidelines of the University with respect to academic honesty may result in disciplinary action. **It is your responsibility to become familiar with the University of British Columbia's Academic Honesty and Plagiarism Policies**, as well as the Student Declaration and the consequences of violating these policies.

Honesty Pledge (to be reaffirmed before all exams/graded quizzes): I hereby pledge that I have read and will abide by the rules, regulations, and expectations set out in the UBC Academic Calendar, with particular attention paid to:

1. The Student Declaration
(<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,285,0,0>)
2. The Academic Honesty and Standards
(<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,286,0,0>)
3. The Student Conduct During Examinations
(<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,41,90,0>)
4. And any special rules for conduct as set out by the examiner (for online Canvas exams, this means **closed book, writing alone and NOT leaving the Canvas page** during the quiz).

I affirm that I will **not give or receive any unauthorized help on midterm exams, that all work will be my own, & that I will abide by any special rules** set by the instructor.

Remote Access to Some University Services

A Virtual Private Network (VPN) allows users to access networks/services over a secure connection. Some university services, including library access, may require you to connect to the library servers by VPN. To download & install the Cisco VPN, visit UBC VPN Website.

COVID guidelines (as of Sep 1st 2022)

For up-to-date guidance on COVID restrictions please see: <https://srs.ubc.ca/covid-19/>

There is no longer a requirement to wear masks on the UBC campus and during class meetings. However, for your own protection and the safety and comfort of everyone else in the class, you may still decide to wear a mask. Non-medical masks that cover our noses and mouths are a primary tool for combating the spread of COVID-19. Please maintain a respectful environment.

If you are sick, it is important that you stay home. If I am feeling ill I will not come to class. I will make every reasonable attempt to communicate plans for class as soon as possible (by email, on Canvas, etc.). Our classroom will still be available for you to attend. In this instance: One of the TAs may substitute, I may ask you to do an activity or read something in place of class time, if I am well enough to teach, but taking precautions to avoid infecting others, we may hold the class online (ZOOM) or the lecture may be cancelled and (recorded) notes posted online as soon as possible after the missed class.

Course schedule (any changes will be announced through canvas)

Date	Topic Outline		Textbook Readings(s) and "Narratives"
1. (wk1) Jan10(tu)	Lecture 1 <i>in-person</i>	Intro, Lecture 1a What is Motor Behaviour (1b)	Ch1
2. Jan12 (th)	Lecture 2 <i>recorded</i>	Classification of Motor Skills (2a) and Measuring Motor Performance(2b)	Ch1 & Ch 2 "Cutting wood & missing putts"
3. (wk2) Jan17 (tu)	Lecture 3 <i>in-person</i>	Measuring Motor Performance (3a) and Information Processing I (3b)	Ch2 "Jumping the gun"
4. Jan19 (th)	Lecture 4 <i>Recorded</i>	Information Processing II	Ch2 "Red light, Green light" "Grocery store" "Push or pull"
(wk3) Jan24(tu)	LAB 1 <i>(on your own & in-class live support)</i>	<u>MOTOR LABS & TUTORIAL: COURSE MATERIAL 1-4</u> 1 = Errorcalculation; 2 = Hicks Law (+online graded quiz) <i>(Donders, S-R compatibility, simple RT motorlabs = also good learning aids)</i>	
5. Jan26 th (th)	Lecture 5 <i>Recorded</i>	Memory (5a) & Attention I (5b)	Ch2 & Ch3 "Gumbo" "Turn right at next Gorilla"
6. (wk4) Jan31 (tu)	Lecture 6 <i>in-person</i>	Attention II: attention (6a) and PRP (6b)	Ch3 (ch4) "Toad and centipede" "Fakes"
7. Feb2nd (th)	Lecture 7 <i>Recorded</i>	Sensory Contributions to Skill	Ch4 "Curling draw" "Tickling"
(wk 5) Feb7 th (tu)	LAB 2 <i>(on your own & in-class live support)</i>	<u>MOTOR LABS: COURSE MATERIAL 5-7 & Revision for midterm1</u> 3 =Memory, 4 =PRP, (none are graded) <i>(Probe RT & Stroop motorlabs = also good learning aids)</i>	
Feb9th (th)	MIDTERM #1 (3:45pm) online... (details to be confirmed)		
8. (wk6) Feb14 (tu)	Lecture 8 <i>in-person</i>	Vision (8a) & 8b &c sensory systems	Ch4
9. Feb16 (th)	Lecture 9 <i>Recorded</i>	Open-loop control (9a) & motor programs (9b)	Ch5 "anti-lock brakes" "point-of-no-return"
MIDTERM BREAK (NO CLASS FEB 21ST AND 23RD)			
10. (wk7) Feb28 th (tu)	Lecture 10 <i>in-person</i>	GMPs (10a) and GMPs/schema theory (10b)	Ch5 "forensic motor control"
11. Mar 2nd (th)	Lecture 11 <i>Recorded</i>	Principles of Speed and Accuracy	Ch6 "the calculator" "the gimme putt"

(wk8) Mar7 th (tu)	LAB 3 <i>(on your own & in-class live support)</i>	<u>MOTOR LABS & TUTORIAL: COURSE MATERIAL 8-11</u> 5 = Slater-Hammel anticipation; 6 = Fitts Law (Online graded quiz for both)	
12. Mar 9 th (th)	Lecture 12 <i>Recorded</i>	Learning Defined (12a) & Measured (12b)	Ch8 <i>"learning to win from losing"</i>
13. (wk9) Mar14 (tu)	Lecture 13 <i>in-person</i>	Transfer and learning (13a & b)	Ch8&9 <i>"like riding a bicycle"</i>
Mar16 th (th)	LAB 4 <i>(on your own & in-class live support)</i>	<u>MOTOR LABS: COURSE MATERIAL 12-13 & Revision for midterm2</u> 7 = Practice Variability (not graded) <i>(Henry & Rogers motorlab = also a good learning aid)</i>	
(wk10) Mar 21 st (tu)	MIDTERM #2 (3:45pm) online... (details to be confirmed)		
14. Mar23 rd (th)	Lecture 14 <i>Recorded</i>	Conditions of Practice 1 (practice organization)	Ch9 &10
15. (wk11) Mar28 th (tu)	Lecture 15 <i>In-person</i>	Conditions of Practice 2 (practice methods)	Ch9 & 10 <i>"but I was great on the practice range"</i>
Mar 30 th (th)	LAB 5 <i>(on your own & in-class live support)</i>	<u>MOTOR LABS & TUTORIAL: COURSE MATERIAL 14-17</u> 8 = Contextual Interference (CI) (+graded quiz) 9= Feedback/KR (not graded, relevant to lecture 17)	
16. (wk12) Apr4 th (tu)	Lecture 16 <i>in-person</i>	Conditions of Practice3 (16a), Challenge point (16b)	Ch10&11 <i>"The Golfers little Helper"</i>
17. Apr6 th (th)	Lecture 17 <i>Recorded</i>	Augmented information (post practice info.)	Ch11 <i>"The Coach as a dictionary"</i>
18. (wk 13) Apr11 (tu)	Lecture 18 <i>in-person</i>	Observation & imagery (pre-practice information)	Ch10
Apr13 th (th)	<i>(tbd, likely in person)</i>	<u>Revision session lectures 14-18 (+Narratives & Motor labs)</u>	