

**THE UNIVERSITY OF BRITISH COLUMBIA**  
**School of Kinesiology**  
**Kinesiology 211 (previously KIN 230)**  
**Winter 2021-2022: Term 2**

**Human Motor Behaviour**

<b>Instructor:</b> Professor Nicola Hodges	<b>Teaching Assistants (TAs):</b> Carrie Peters Grant Phillips-Hing
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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 will 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. We can choose to be intentional about supporting each other. 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 will be available too (in person when permitted and online).*

**Lectures and seminars:** Tuesday, Thursday: 3:30 – 4:50pm. The aim is to adopt a blended model, with at least one in-person (or live/synchronous Zoom) class each week (on Tuesdays most weeks). Content for ~one class each week will be pre-recorded & posted on canvas. There will be 5 motor-lab/tutorial sessions. These are self-directed, but in-class and/or 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 feedback. Please use the module appropriate discussion board for asking questions or responding to queries to test your own knowledge.

**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:**

Carrie Peters' Personal Meeting Room:

<https://ubc.zoom.us/j/3044285172?pwd=SkZhQlJkb1RERjV0YUJ4TnBJdXhsUT09>

Grant Phillips-Hing Personal Meeting Room:

<https://ubc.zoom.us/j/2366869449?pwd=aWtsbWpkN1hTc0tnRDNpQVQ2b0I0QT09>

**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  
Step 2: Discuss questions and cross-check notes with class/study-mates  
Step 3: Post questions on the Canvas "Discussion board" or chat and engage in Q&A forum  
Step 4: Email TA  
Step 5: Email Me

### **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 (previously 330). 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., and Lee, T.D. (2019). *Motor Learning and Performance (6th Ed.)*. Champaign, Illinois: Human Kinetics (and web study guide). I do not recommend using an old version of the book as it does not include study guides and narratives and there have been some changes to content. If you use an old version of the book, it is up to you to make sure you have the right chapters/content and page numbers (organization is different).
- MotorLabs software (2022) license required for running online labs <<https://motorlab.ca/purchase>>. There is a small cost of \$5 to purchase the license.

### **Course Learning Objectives**

-- As part of the learning objectives of this course, students will:

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 section/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 these 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. Please also use the online/study quizzes from the course-text, web study-guide to test your knowledge of the readings.

**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. Labs. are to be completed individually so that each person has their own data. However, you can work with others and in small groups when doing these labs., **as long as each person has their own data.** Time will be made available to do the labs in class tutorial times. 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 will be **graded and formative quizzes associated with the labs.** FOUR of the labs will be 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.

**Note,** the final exam will include assessment of material from ALL the motor labs. 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 is a powerpoint with instructions, an excel sheet to enter and graph your data and a lab. activity to make sure you understand the lab and material. **AFTER** you have completed the lab., you can then do the quiz. Quizzes will be available outside of class time; >12pm on the day of the lab for 3 working days (until Fri 11:59pm, for Tuesday class or until Tues 11:59pm for Thursday class (if there are 2 labs/quizzes due you will get one week). The quiz will be open for 45 mins after you start and the graded labs can only be completed once.

**Supplementary resources:** I have added podcast, video and reading resources associated with the text (e.g., application narratives) to canvas to help you understand and apply the material. I strongly recommend reading/watching/listening to this material throughout the course to help you study and remember for the long term. The final exam will include questions directly related to the supplementary resources with a specific focus on the narratives.

## Assessments and Examinations

Assessment of learning objectives will be conducted through quizzes and exams (2 Midterms and 1 Final, 4 MotorLab quizzes). Exams will cover material from all lectures and assigned readings (supplementary resources) and Motor Labs. Examinations will include multiple choice, true/false

and short-answer/fill-in-the-blank or numeric answer questions. Motor lab quizzes will be conducted through the Quizzes online in canvas. \*The structure of the midterms for now will also be online through Canvas. This might change depending on COVID. 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, Jan 25th; Slater-Hammel/anticipation, Fitts Law -both Mar 8th and Contextual Interference, Mar 31<sup>st</sup>. 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 once started.

**Midterms 1 and 2 (50% total)** - The midterms are closed book and are scheduled for now 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; Th Feb 10<sup>th</sup> (45 min)
- Midterm 2 (25%) -all material between midterm 1 and midterm 2; Tu Mar 22nd (45min)

**Final exam (35%)** -all material between midterm 2 and final, all Motor Labs (graded and ungraded labs) and supplementary material from whole course (~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 recorded presentations and hence available online. Any live/in-person lectures will be recorded or live-streamed or the zoom recording will be made available. Please use the discussion board on canvas to ask ANY and 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**

All UBC students are expected to behave as honest 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

I affirm that I will not give or receive any unauthorized help on this examination, that all work will be my own, and that I will abide by any special rules for conduct set out by the examiner.

### **Remote Access to Some University Services**

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

### **COVID guidelines (as of Dec 22nd 2021):**

<https://broadcastemail.ubc.ca/2021/12/22/covid-19-planning-for-2021-22-winter-session-term-2/>

Classes will be online until Jan 24<sup>th</sup>. You are required to wear a non-medical mask during our class meetings, for your own protection and the safety and comfort of everyone else in the class. For our in-person meetings in this class, it is important that all of us feel as comfortable as possible engaging in class activities while sharing an indoor space. Non-medical masks that cover our noses and mouths are a primary tool for combating the spread of COVID-19. According to the provincial mandate, masks are required in all indoor public spaces including lobbies, hallways, stairwells, elevators, classrooms and labs. There may be students who have medical accommodations for not wearing a mask. Please maintain a respectful environment. If you are sick, it is important that you stay home. Complete a self-assessment for COVID-19 symptoms here: <https://bc.thrive.health/covid19/en>.

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 sit in and attend an online session. In this instance: One of the TAs may substitute **OR** I may ask you to do an activity or read something in place of class time, **OR**, if I am well enough to teach, but am 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.

**Tentative Course schedule (note; this is the planned schedule as of Jan 4th 2022, but there may need to be adjustments. Any changes will be announced through Canvas)**

Date	Topic Outline		Textbook Readings(s)
1. (wk1) Jan 11(tu)	Lecture 1 <i>ZOOM</i>	Intro, Lecture 1a What is Motor Behaviour (1b)	Ch1
2. Jan 13 (th)	Lecture 2 <i>recorded</i>	Classification of Motor Skills (2a) and Measuring Motor Performance(2b)	Ch1 & Ch 2
3. (wk2) Jan 18 (tu)	Lecture 3 <i>ZOOM</i>	Measuring Motor Performance (3a) and Information Processing I (3b)	Ch2
4. Jan 20 (th)	Lecture 4 <i>recorded</i>	Information Processing II	Ch2
(wk3) Jan 25 (tu)	<b>LAB 1</b> <i>(on your own &amp; live support)</i>	<b><u>MOTOR LABS &amp; TUTORIAL: COURSE MATERIAL 1-4</u></b> 1 = Error calculation; 2 = <u>Hicks Law (+online graded quiz)</u> <i>(recommend also Donders, S-R compatibility, simple RT as a complement to lectures and aid to learning)</i>	
5. Jan 27 (th)	Lecture 5 <i>recorded</i>	Memory (5a) & Attention I (5b)	Ch2 & Ch3
6. (wk4) Feb 1 <sup>st</sup> (tu)	Lecture 6 <i>in-person</i>	Attention II: attention (6a) and PRP (6b)	Ch3 (ch4)
7. Feb 3rd (th)	Lecture 7 <i>recorded</i>	Sensory Contributions to Skill	Ch4
(wk 5) Feb 8 <sup>th</sup> (tu)	<b>LAB 2</b> <i>(on your own &amp; in-class live support)</i>	<b><u>MOTOR LABS &amp; TUTORIAL: COURSE MATERIAL 5-7</u></b> 3 =Memory, 4 =PRP, (not graded) <i>(recommend also doing Probe RT, Stroop as complement to lectures and aid to learning)</i>	
Feb 10th (th)	<b>MIDTERM EXAM #1 (3:30pm) online... (details to be confirmed)</b>		
8. (wk6) Feb 15th (tu)	Lecture 8 <i>in-person</i>	Vision (8a) & 8b &c sensory systems	Ch4
9. Feb17th (th)	Lecture 9 <i>recorded</i>	Open-loop control (9a) & motor programs (9b)	Ch5
<b>(wk 7) Feb 21<sup>st</sup> - 25<sup>th</sup> MIDTERM READING BREAK</b>			
10. (wk8) Mar 1 (tu)	Lecture 10 <i>in-person</i>	GMPs (10a) and GMPs/schema theory (10b)	Ch5
11. Mar 3rd (th)	Lecture 11 <i>recorded</i>	Principles of Speed and Accuracy	Ch6
(wk9) Mar 8th (tu)	<b>LAB 3</b> <i>(on your own &amp; in-class live support)</i>	<b><u>MOTOR LABS &amp; TUTORIAL: COURSE MATERIAL 8-11</u></b> 5 = Slater-Hammel anticipation; 6 = Fitts Law (+ online graded quiz for both) <i>(recommend also doing Henry &amp; Rogers/response complexity as complement to lectures &amp; learning aid)</i>	
12. Mar 10 <sup>th</sup> (th)	Lecture 12 <i>recorded</i>	Learning Defined (12a) & Measured (12b)	Ch8
13. (wk10) Mar 15 <sup>th</sup> (tu)	Lecture 13 <i>in-person</i>	Learning & Transfer	Ch8&9

Mar 17 <sup>th</sup> (th)	<b>LAB 4</b> <i>(on your own &amp; in-class live support)</i>	<b><u>MOTOR LABS &amp; TUTORIAL: COURSE MATERIAL 12-13</u></b> 7 = Practice Variability (not graded)	
(wk 11) Mar 22 <sup>nd</sup> (tu)	<b>MIDTERM EXAM #2 (3:30pm) online... (details to be confirmed)</b>		
14. Mar 24 (th)	Lecture 14 <i>recorded</i>	Conditions of Practice 1 (practice organization)	Ch9 &10
15. (wk12) Mar 29 <sup>th</sup> (tu)	Lecture 15 <i>in-person</i>	Conditions of Practice2 (practice methods)	
Mar 31 <sup>st</sup> (th)	<b>LAB 5</b> <i>(on your own &amp; in-class live support)</i>	<b><u>MOTOR LABS &amp; TUTORIAL: COURSE MATERIAL 14-16</u></b> 8 = CI (+graded quiz) 9= Feedback/KR	
16. (wk13) Apr 5 <sup>th</sup> (tu)	Lecture 16 <i>in-person</i>	Conditions of Practice3 (16a), Challenge point (16b)	Ch10
17. Apr 7 (th)	Lecture 17 <i>recorded</i>	Augmented information (post practice info.)	Ch11