HES 202: Human Motor Behaviour I | Winter Term 2, 2026

Faculty: Faculty of Health and Social Development **Department:** School of Health and Exercise Sciences

Land Acknowledgement

We respectfully acknowledge the Syilx Okanagan Nation and their peoples, in whose traditional, ancestral, unceded territory UBC Okanagan is situated.

Instructors:	**Contact** (*primarily via Canvas message*)		**Office hours:**
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By appointment only. Students may meet in-person and schedule via email or canvas messages

Lecture: FIP 204 (*all times in Pacific Daylight/Standard Time; local time Kelowna, BC)*:

- **Tuesdays and Thursdays, 8:00am – 9:30am**

Course Description

Processes and structures underlying the production human movement. Sensory, motor, and cognitive factors influencing the learning, execution, and control of action will be addressed. Formerly offered as HMKN 202. Credit will be granted for only one of HES 202 or HMKN 202. [3-0-0]

Prerequisite: Either (a) HES 101 or (b) HMKN 190; and either (a) HES 102 or (b) HMKN 101; and either (a) HES 111 or (b) HMKN 191.

Course Format

All course activities are designed for in-person delivery with some asynchronous activities (e.g., videos, readings, assignments). The course is structured with an emphasis on student engagement (e.g., discussion and interaction) in combination with traditional-based learning mediums (e.g., exams and quizzes). Course content will be available via lecture recordings, readings, and online videos. Application of the course concepts will occur during active in-person discussion sessions during scheduled synchronous class times.

All course activities will be delivered in-person and materials will be delivered online, which will consist of a mix of asynchronous and synchronous components. Prior to each week, course content will be posted to Canvas via past lecture recordings and/or assigned readings. Weekly scheduled course meetings will emphasize student engagement and participation via synchronous in-person discussions involving small and large groups that will be facilitated by the instructor and teaching assistants.

Course Overview, Content and Objectives

This course will provide an introduction to the understanding of human motor control from a neurophysiological perspective. This approach draws upon conceptual frameworks from neuroscience as well as cognitive and experimental psychology and physiology, and applying them jointly to the study of motor control.

Canvas:
The majority of course information will be conveyed via the course Canvas site. Please review default Canvas notification settings. In addition to this syllabus, such things as important announcements, readings, handouts, and other course-related materials will be available via Canvas.

Learning Outcomes (LO)

Upon successful completion of this course, students will be able to…

1	Describe sensory and central contributions to motor control
2	Describe the basic anatomical and physiological underpinnings of movement production and control
3	Describe the role of cognition and attention in motor control
4	Describe the contributions of relevant anatomical and physiological systems to the creation and control of voluntary and reflexive movements
5	Determine and evaluate the appropriate neurophysiological mechanisms required for specific movements

Assessments of Learning

1	Participation (LO1-5)	5%
2	In-class discussions (LO1-5)	10%
3	Quizzes (LO1-5)	15%
4	Mid-Term Exam 1 (LO1-2; Tuesday, October 13th)	20%
5	Mid-Term Exam 2 (LO1-4; Thursday, November 19th)	20%
6	Final Exam (LO1-5; TBA)	30%

Learning Activities

1	Lecture
2	Class discussion
3	Group discussion
4	Group work

5	Quizzes
6	iClicker polling
7	Mid-term exams
8	Asynchronous videos and readings

In-class group discussion and participation: Although lecture attendance is not mandatory, there is a participation and discussion component to this class. Throughout the term, you will be required to participate in small group in-class discussions and respond to iClicker questions during synchronous, in-person meetings. Following synchronous meeting discussions, you are required to submit a copy of your discussion question answers. Each submission will include 1-4 students. The maximum number of students on each discussion answer submission will be 4. These discussion submissions along with iClicker responses will be the instructor's mechanism to gauge participation. NOTE: You must be present in synchronous class meetings in order to provide discussion input, iClicker responses and hence, participate in class. Students may miss one discussion submission and 10% of iClicker responses, for any reason, without penalty.

Quizzes: Throughout the term, you will be evaluated via brief online quizzes. The quizzes will be available through a link on Canvas Thursday after class and will remain available until the beginning of class the following Tuesday. The deadline for completion of each quiz will be Tuesday at 8:00 am. If the quiz is submitted after 8:00 am, it will be considered late. All quizzes will consist of multiple choice, True/False, fill-in-the-blanks, or brief short answers. Each quiz will consist of 10-15 questions and will be allotted a 20-minute time limit. Once you open the quiz, the 20-minute time limit will begin, and you will be unable to restart. Your final quizzes grade will be a composite score of all quizzes throughout the term. Your lowest quiz grade will be removed and NOT included in the final quizzes grade.

Exams: All exams will include short questions (multiple choice, fill-in-the-blank, multiple True/False, short answer, listing, diagram drawing, etc.). Mid-Term Exams 1 and 2 will take place during synchronous class meeting time and must be written on the date scheduled. The **cumulative** final exam must be completed in order to pass the course and receive a letter grade. The final exam must be taken during the scheduled final exam period. On Canvas, under Important Information, please see the Examination Expectations module for an outline of HES 202 policies regarding writing examinations.

Dates	Topics and/or exam	Required Reading(s) and/or Videos	Learning Outcome
Week 1 **Sep 7-11**	Week 1-A: Introduction Week 1-B: Motor unit	Readings provided on Canvas	LO1-2
Week 2 **Sep 14-18**	**Intro Quiz due Sep 15 before class** Week 2-A: Force modulation Week 2-B: Muscle spindles	Readings provided on Canvas	LO1-2
Week 3	**Quiz 2 due Sep 22 before class**	Readings provided on Canvas	LO1-2

Sep 21-25	Week 3-A: Muscle spindles Week 3-B: Golgi tendon organs and joint receptors		
Week 4 **Sep 28-Oct 2**	**Quiz 3 due Sep 29 before class** Week 4-A: Vestibular system Week 4-B: Vestibular system	Readings provided on Canvas	LO1-2
Week 5 **Oct 5-9**	**Quiz 4 due Oct 6 before class** Week 5-A: Cutaneous receptors Week 5-B: Midterm Review	Readings provided on Canvas	LO1-2
Week 6 **Oct 12-16**	Week 6-A: **Mid-term exam 1 (in class Oct 13)** Week 6-B: Somatosensation	Readings provided on Canvas	LO1-2 LO3-4
Week 7 **Oct 19-23**	Week 7-A: Kinesthesia Week 7-B: Motor cortex	Readings provided on Canvas	LO3-4
Week 8 **Oct 26-30**	**Quiz 5 due Oct 27 before class** Week 8-A: Basal ganglia Week 8-B: Cerebellum	Readings provided on Canvas	LO3-4
Week 9 **Nov 2-6**	**Quiz 6 due Nov 3 before class** Week 9-A: Visual/ somatosensory/pre-frontal cortex Week 9-B: Simple Reflexes	Readings provided on Canvas	LO3-4
Week 10 **Nov 9-13**	**READING BREAK – No class**		
Week 11 **Nov 16-20**	Week 11-A: Midterm Review Week 11-B: **Mid-term exam 2 (in class Nov 19)**	Readings provided on Canvas	LO1-4
Week 12 **Nov 23-27**	Week 12-A: Reflex modulation Week 12-B: Standing balance	Readings provided on Canvas	LO1-5
Week 13 **Nov 30-Dec 4**	**Quiz 7 due Dec 1 before class** Week 13-A: Standing balance Week 13-B: Locomotion	Readings provided on Canvas	LO1-5
Week 14 **Dec 7-11**	Week 14-A: Supplementary class Week 14-B: Review		LO1-5

Final Exam Period **Dec 12-22**	**Final exam (location and date TBD)**		LO1-5

Late Policy
Quizzes and discussion assignments are due at the specified due date and time indicated on the course outline or Canvas; after that, unless specified by your instructor, the assignment will be considered late. It is expected that you will budget your time accordingly to avoid work overload and manage personal issues to meet academic performance requirements. Be aware of when your work is due as it is common to have several exams and assignments due on the same day or within the same week. If an assignment is submitted greater than 24 hours late, 25% will be deducted from the grade and it will receive a score of 0 after 7 days. Throughout the semester students may miss *one discussion assignment* and *the lowest quiz grade* will be removed and not counted toward the final quiz grade.

Missed Exam Policy:
Re-writing of missed exams will follow the procedures and policies outlined by the School of Health and Exercise Sciences. Writing final exams early is not permitted unless under exceptional circumstances approved by the undergraduate curriculum committee. Please see the School of Health and Exercise Sciences' policies for further details.

Missed Activity Policy:
A make-up exam will be provided for any missed mid-term exam owing to a reasonable circumstance. The make-up exam will be written outside of class time at a specified date and time.

Use of generative artificial intelligence (AI)
Students are permitted to use artificial intelligence tools, including generative AI, to gather information, review concepts or to help produce assignments. However, students are ultimately accountable for the work they submit, and any content generated or supported by an artificial intelligence tool must be cited appropriately. Use of AI tools is not permitted during midterm exams and final exams in this course. Learn more through **the Generative AI website.**

Learning Materials:
All learning materials will be uploaded to Canvas and available via the course's Canvas website.

Other Course Policies

Academic Integrity
The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. **For example, incidences of plagiarism or cheating usually result in a failing grade or mark of zero on the assignment or in the course.** Careful records are kept to monitor and prevent recidivism.

A more detailed description of academic integrity, including the University's policies and procedures, may be found in the UBCO Academic Calendar

Final Examinations
You can find the Senate-approved term and examination dates here. Except in the case of examination clashes and hardships (three or more formal examinations scheduled within a 27-hour period) or unforeseen events, students will be permitted to apply for out-of-time final examinations only if they are representing the University, the province, or the country in a competition or performance; serving in the Canadian military; observing a religious rite; working to support themselves or their family; or caring for a family member. Unforeseen events include (but may not be limited to) the following: ill health or other personal challenges that arise during a term and changes in the requirements of an ongoing job.

Further information on Academic Concession can be found under Policies and Regulation in the UBCO Academic Concession

Grading Practices
Faculties, departments, and schools reserve the right to scale grades in order to maintain equity among sections and conformity to University, faculty, department, or school norms. Students should therefore note that an unofficial grade given by an instructor might be changed by the faculty, department, or school. Grades are not official until they appear on a student's academic record.
UBCO Grading Scale

Student Services Resources:

UBC Okanagan Disability Resource Centre
The DRC facilitates disability-related accommodations and programming initiatives to remove barriers for students with disabilities and ongoing medical conditions. If you require academic accommodations to achieve the objectives of a course please contact the DRC at:
UNC 215 | 250.807.8053
email: drc.questions@ubc.ca
Web: UBCO Disability Resource Centre

UBC Okanagan Equity and Inclusion Office
Through leadership, vision, and collaborative action, the Equity & Inclusion Office (EIO) develops action strategies in support of efforts to embed equity and inclusion in the daily operations across the campus. The EIO provides education and training from cultivating respectful, inclusive spaces and communities to understanding unconscious/implicit bias and its operation within in campus environments. UBC Policy 3 prohibits discrimination and harassment on the basis of BC's Human Rights Code. If you require assistance related to an issue of equity, educational programs, discrimination or harassment please contact the EIO.
UNC 325H | 250.807.9291
email: equity.ubco@ubc.ca
Web: UBCO Equity and Inclusion Office

Student Wellness
At UBC Okanagan health services to students are provided by Student Wellness. Nurses, physicians and counsellors provide health care and counselling related to physical health, emotional/mental health and

sexual/reproductive health concerns. As well, health promotion, education and research activities are provided to the campus community. If you require assistance with your health, please contact Student Wellness for more information or to book an appointment.
UNC 337 | 250.807.9270
email: healthwellness.okanagan@ubc.ca
Web: Student Wellness

Office of the Ombudperson
The Office of the Ombudsperson for Students is an independent, confidential and impartial resource to ensure students are treated fairly. The Ombuds Office helps students navigate campus-related fairness concerns. They work with UBC community members individually and at the systemic level to ensure students are treated fairly and can learn, work and live in a fair, equitable and respectful environment. Ombuds helps students gain clarity on UBC policies and procedures, explore options, identify next steps, recommend resources, plan strategies and receive objective feedback to promote constructive problem solving. If you require assistance, please feel free to reach out for more information or to arrange an appointment.
UNC 328 | 250.807.9818
email: ombuds.office.ok@ubc.ca
Web: Obuds Office

Student Learning Hub
The Student Learning Hub is your go-to resource for free math, science, writing, and language learning support. The Hub welcomes undergraduate students from all disciplines and year levels to access a range of supports that include **tutoring in math, sciences, languages, and writing, as well as help with study skills and learning strategies**. Students are encouraged to visit often and early to build the skills, strategies and behaviors that are essential to being a confident and independent learner. For more information, please visit the Hub's website.
LIB 237 | 250.807.8491
email: learning.hub@ubc.ca
Web: Learning Hub

The Global Engagement Office
The Global Engagement Office provides advising and resources to assist International students in navigating immigration, health insurance, and settlement matters, as well as opportunities for intercultural learning, and resources for Go Global experiences available to all UBC Okanagan students, and more. Come and see us – we are here to help! You may also contact geo.ubco@ubc.ca

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Safewalk
Don't want to walk alone at night? Not too sure how to get somewhere on campus? Call Safewalk at ***250-807-8076.***
For more information, see: Safewalk UBCO