

COURSE SYLLABUS



COURSE TITLE: AET 320 – Motor Control

CLASS SECTION: 001A, 001B, X01A, X01B

TERM: 2022 Fall

COURSE CREDITS: 3

DELIVERY METHOD(S): Lecture, Lab

Camosun College campuses are located on the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.

Learn more about Camosun's [Territorial Acknowledgement](#).

For COVID-19 information please visit <https://legacy.camosun.ca/covid19/index.html>.

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.

INSTRUCTOR DETAILS

NAME: Steve Van Schubert

EMAIL: vanschuberts@camosun.ca

OFFICE: PISE 306K

HOURS: Wednesdays 10:00 am – 12:00 pm by appointment only

As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.

INSTRUCTIONAL ASSISTANT DETAILS

NAME: Mike Davies

EMAIL: daviesm@camosun.ca

OFFICE: CC 107

CALENDAR DESCRIPTION

The psychological influences and underlying neural mechanisms of skilled performance and motor control are discussed including central and peripheral nervous systems control of movement, reflexes, voluntary behaviour and neuromuscular disorders. Further topics include the role of attention, information processing and feedback in controlling performance.

PREREQUISITE(S): • C in EXW 230 • C in SPEX 210 OR • C in KIN 230 • C in KIN 210

CO-REQUISITE(S): none

EXCLUSION(S): none

COURSE LEARNING OUTCOMES / OBJECTIVES

- Describe the relationship between psychology and the neurophysiology of skilled motor learning and performance
- Explain central and peripheral nervous system control of movement.
- Discuss the differences among motor skill, behavior, and performance with consideration for different ages and populations.
- Demonstrate the ability to analyze motor skills, behaviors, and performance.
- Discuss neuromuscular disorders which affect movement such as Parkinson's disease, spinal cord injury, stroke and Multiple Sclerosis.
- Identify successful treatment practices to improve or maintain function for a variety of neuromuscular disorders.
- Design safe and effective therapy programs for individuals with neuromuscular disorders.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Required:

- Magill, R., & Anderson, D. (2020). *Motor Learning and Control: Concepts & Applications* (12th Edition). New York: NY. McGraw Hill LLC.

Referenced:

- Ives, J. C. (2019). *Motor Behavior – Connecting Mind and Body for Optimal Performance* (2nd ed). Lippincott Williams & Wilkins, Philadelphia
- Lundy-Ekman, L. (2018). *Neuroscience: Fundamentals for Rehabilitation* (5th Edition). St. Louis: MI. Elsevier
- Purves, D., Augustine, G. J., Fitzpatrick, D., Hall, W. C., LaMantia, A. S., McNamara, J. O., & Williams, S. M. (2004). *Neuroscience* (3rd Edition). Massachusetts: Sinauer Associates Inc Publishers.
- Tortora, G., & Derrickson, B. (2014). *Principles of Anatomy & Physiology* (14th edition). John Wiley & Sons

COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

WEEK	ACTIVITY or TOPIC - Lecture	ACTIVITY or TOPIC - Lab	NOTES
Week 1	Introduction to Motor Control Overview of the Nervous System	001A, X01A Labour Day	Labour Day
Week 2	Neural Control of Movement - Upper Motor Neurons Basal Ganglia and Cerebellum	001B, X01B Measurement of Motor Performance	
Week 3	Neural Control of Movement - Lower Motor Neurons Motor Tracts	001A, X01A Measurement of Motor Performance	
Week 4	Peripheral Neuromuscular Mechanisms Sensory Components of Motor Control - Touch	001B, X01B Dermatomes, Myotomes, Reflexes	Lab Quiz 1
Week 5	Sensory Components of Motor Control - Proprioception & Reflexes The Visual & Vestibular System & Motor Control	001A, X01A Dermatomes, Myotomes, Reflexes	Lab Quiz 1
Week 6	Sensory-Motor Integration Oculomotor Function Classification of Motor Skills & Abilities	001B, X01B Thanksgiving	Thxgiving
Week 7	Motor Control Theories Attention and Motor Control	001A, X01A No Lab	
Week 8	Mid-Term	001B, X01B Mid-Term	Mid-Term
Week 9	Functional Skills - Locomotion and Central Pattern Generator Posture, Balance, and Coordination	001A, X01A Proprioceptive Neuromuscular Facilitation (PNF)	Lab Quiz 2
Week 10	Introduction to Motor Learning Stages of Learning & Transfer	001B, X01B Proprioceptive Neuromuscular Facilitation (PNF)	Lab Quiz 2
Week 11	Feedback & Learning Practice Conditions	001A, X01A Posture, Balance, and Coordination	Lab Quiz 3
Week 12	Improving Motor Function	001B, X01B Posture, Balance, and Coordination	Lab Quiz 3
Week 13	Presentations	001A, X01A Physical Literacy & Motor Learning	
Week 14	Presentations	001B, X01B Physical Literacy & Motor Learning	

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced noticed is required. Deadlines can be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING	
Quizzes – Lab	15%	
Written Exam – Mid-Term	25%	
Written Exam – Final	35%	
Assignment	25%	
TOTAL		100%

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the [Grade Review and Appeals](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) policy for more information.
<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

COURSE GUIDELINES & EXPECTATIONS

Professional standards for students

- Students are expected to exhibit polite, mature and respectful behaviour in class (lectures, labs, seminars or practicums) and actively participate as needed.
- If students are late for class they should enter by the door at the back of the classroom, if available, with materials out and ready to be used.
- Students are expected to conduct themselves in a manner that maximizes the learning of all students. Please wait until a class break to take garbage or recyclables to the appropriate bins.
- Students are expected to dress appropriately for class/lab activities. Please bring clothes and footwear that will allow you to participate fully.
- Students are expected to maintain good personal hygiene standards for all classes. If students have been active immediately prior to a class/lab, they should attempt to shower/wash prior to attending class and/or change into clean dry clothing/shoes. Please be considerate to others and do not wear strong perfumes or scents.
- Students will be practicing skills involving direct physical contact (such as palpation, muscle testing, exercise assistance/spotting) on each other. Students must refrain from any inappropriate touching. Students with concerns are to speak to the instructor prior to the beginning of the course or as concerns arise during the semester. There can be no exception to this participation.

STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit <http://camosun.ca/students/>.

Support Service	Website
Academic Advising	http://camosun.ca/advising
Accessible Learning	http://camosun.ca/accessible-learning
Counselling	http://camosun.ca/counselling
Career Services	http://camosun.ca/coop
Financial Aid and Awards	http://camosun.ca/financialaid
Help Centres (Math/English/Science)	http://camosun.ca/help-centres
Indigenous Student Support	http://camosun.ca/indigenous
International Student Support	http://camosun.ca/international/
Learning Skills	http://camosun.ca/learningskills
Library	http://camosun.ca/services/library/
Office of Student Support	http://camosun.ca/oss
Ombudsperson	http://camosun.ca/ombuds
Registration	http://camosun.ca/registration
Technology Support	http://camosun.ca/its
Writing Centre	http://camosun.ca/writing-centre

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](#) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started: <http://camosun.ca/services/accessible-learning/>

Academic Integrity

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf> for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

Academic Progress

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf> for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

Course Withdrawals Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <http://camosun.ca/learn/fees/#deadlines>.

Grading Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf> for further details about grading.

Grade Review and Appeals

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the "Attendance" section under "Registration Policies and Procedures" (<http://camosun.ca/learn/calendar/current/procedures.html>) and the Grading Policy at <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>.

Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf> to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence and Misconduct Policy: <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf> and camosun.ca/sexual-violence. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-3703841

Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

Changes to this Syllabus: Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.