



University
of Victoria

**Faculty of Education
School of Exercise Science, Physical and Health Education**

**Fall 2019
Neuroscience in Physical Activity and Health
EPHE 487/582 A01 13852/11597**

Instructor: Dr. Olav E. Krigolson

Class Location: MCK 150

Class Times: Mondays 4:30pm to 7:20pm

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Web Site: <http://www.krigolsonteaching.com/ephe-487--582.html>

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Office Hours: By appointment

Calendar Description

This course is a seminar course highlighting seminal and cutting-edge research in the area of human motor control with a specific focus on goal directed action. Students will also gain hands on research experience with technology used in motor control studies.

Learning Outcomes

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

1. Appreciate and discuss seminal research in the area of human motor control.
2. Appreciate and discuss current research in the area of human motor control.
3. Describe and use experimental techniques pertinent to motor control research.

These learning outcomes will be achieved through:

- Consistent participation in class discussion and activities,
- Thorough understanding of the course readings, and
- Successful completion of the motor control research project

Text/Reading List

See: <http://www.krigolsonteaching.com/ephe-487--582.html>

Course Outline

September 9 th	History and Overview of Motor Control	
September 16 th	Neural Disorders: ALS	Motor Neurons Sensory Neurons
September 23 rd	Visual and Sensory Processing	Posterior Parietal Cortex Primary Sensory Cortex
September 30 th	Movement Planning	Premotor Cortex Supplementary Motor Area
October 7 th	Movement Execution	Primary Motor Cortex
October 14 th	THANKSGIVING	
October 21 st	Online Control	Posterior Parietal Cortex
October 28 th	Movement Evaluation	Anterior Cingulate Cortex
November 4 th	Forward and Inverse Models	Cerebellum
November 11 th	READING BREAK	
November 18 th	Neural Disorders: Ataxia	Cerebellum
November 25 th	Neural Disorders: Stroke	Motor Cortex
December 2 nd	Neural Disorders: Parkinson's Disease	Basal Ganglia

The course instructor reserves the right to make and changes to this course outline and the course content at any time.

Assignments

Due Date	Activity	Details	Grade
Every Class	Quizzes	Each class will start with a quiz on the assigned readings. There will be 11 quizzes in total worth 50% of your course grade. The quizzes will be graded out of 5 points. If you miss a class, there is no chance to redo the quiz. I will count your 10 best quiz scores towards your final grade.	50%
End of Semester	Option One: Research Paper	You will write a review paper on a motor control topic of your choice that has been approved by the course instructor. The paper must be at least 20 pages in length written following APA guidelines. You must cite at least 30 original research articles in your review.	50%
End of Semester	Option Two: Research Project	You will work with a group to conduct an original research study related to motor control. The course instructor will support the project by approving the research idea, teaching relevant research methodologies, and helping with data analysis. The research group will submit a manuscript draft at the end of the semester which is what will be graded.	50%

Final Course Grade

Final Grade (100) = Quiz Grade (50) + Paper OR Project (50)

Marking

For detailed grading rubrics for your midterm and final exams please see my teaching website.

Grade Restrictions

To pass this course you must have a passing grade in the laboratory portion of the course. If you fail the laboratory portion of the course, you fail the course as a whole.

Missing / Late Work

Any late work (assignments, labs, etc) will be assigned a grade of zero. No exceptions.

Redo Policy

In this course, you will have the opportunity to redo your class exams. For exams, there is a set redo date (i.e., the Final Exam) when you can attempt to improve your score based on the feedback that is provided to you. You will also be given an additional opportunity to redo Exam One and Two before the Final Exam (late October, late November – exact date TBD). There will also be redo opportunities in the laboratory section of the course. These opportunities will come in the form of being able to show your assignment to the teaching assistant BEFORE it is formally due. It will be up to you to ensure that the teaching assistant has sufficient time to provide feedback.

Missed Exams

Due to the redo policy any missed exams will not be made up. The student will be assigned a grade of zero and will simply have the redo opportunity on the Final Exam unless express approval is given by the course instructor before the scheduled exam date. If a student misses the Final Exam they will be given an opportunity to rewrite the exam in December of 2019. There are no exceptions to this policy.

Grade Scaling

In order to fight grade inflation, the grades of this course may be scaled up or down at the course instructor's discretion. Grade scaling will also apply to the laboratory section of the course.

Course Experience Survey (CES)

I value your feedback on this course. Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete a confidential survey regarding your learning experience (CES). The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey you will receive an email inviting you to do so. Please ensure that your current email address is listed in MyPage. If you do not receive an email invitation, you can go directly to <http://www.uvic.ca/learningandteaching/students/resources/ces/login.php>.

You will need to use your UVic netlink ID to access the survey, which can be done on your laptop, tablet, or mobile device. I will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

Grading Scale

As approved by the University of Victoria Senate effective May 1, 2014, a percentage grade will be assigned for the overall course grade. The university policy regarding grading can be reviewed at: <https://web.uvic.ca/calendar2018-09/undergrad/info/regulations/grading.html#> and includes the grading scale:

A+	90-100
A	85 - 89
A-	80 - 84
B+	77 – 79
B	73 – 76
B-	70 - 72
C+	65 – 69
C	60 - 64
D	50 – 59
F	0 - 49

Academic Integrity

Academic integrity is intellectual honesty and responsibility for academic work that you submit individual or group work. It involves commitment to the values of honesty, trust, and responsibility. It is expected that students will respect these ethical values in all activities related to learning, teaching, research, and service. Therefore, plagiarism and other acts against academic integrity are serious academic offences.

The responsibility of the institution

Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects.

The responsibility of the student

Plagiarism sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations or for referencing your sources, ask your instructor. Depending on the severity of the case, penalties include a warning, a failing grade, a record on the student's transcript, or a suspension. It is your responsibility to understand the University's policy on academic integrity:

<https://web.uvic.ca/calendar2018-09/undergrad/info/regulations/academic-integrity.html#>

Diversity Policy

Our Faculty of Education embraces an inclusive learning community that respects and recognizes that we are enriched and strengthened by diversity including, but not limited to, ethnicity and national origins, language, gender and gender identity, sexuality, ability, age, socioeconomic status, and spirituality. We are committed to increasing the participation of people who have been historically and systemically excluded from higher education and welcome all who share this aspiration. We are committed to answering the Calls to Action from the Truth and Reconciliation Commission of Canada. We are a campus that educates for and encourages respect, acceptance of others, inclusion and diversity, with one principal limit: acts that incite hatred, espouse or encourage bigotry, either implied or explicit, will not be tolerated. Please also consult the UVic equity policy: <https://www.uvic.ca/equity/index.php>

Support for Students

- **Centre for Academic Communication (CAC).**

The CAC provides face-to-face and online assistance in reading, writing, speaking, and academic expectations. To find out more and/or to book an appointment, please follow this link <http://www.uvic.ca/learningandteaching/cac/index.php>

- **UVic Counselling Services.**

Counselling Services can help you make the most of your university experience. We offer free professional, confidential, inclusive support to currently registered UVic students. To find out more and/or to book an appointment, please follow this link <http://www.uvic.ca/services/counselling/>

- **Indigenous Student Community**

UVic and the Indigenous Faculty, Staff and students continue to work towards creating programming that is inclusive and representative of Indigenous peoples heritage and concerns. If you wish to connect with this community, please consult <http://www.uvic.ca/services/indigenous/index.php/students/supports/students/supports/students/students/index.php>

- **Centre for Accessible Learning (CAL) (formerly the Resource Centre for Students with Disabilities (RCSD))**

The Centre for Accessible Learning (CAL) offers information and support for UVic students with a permanent disability. Students who need classroom accommodations such as alternate text formats, or other on-campus support should contact CAL as soon as confirmation of enrollment is received. If you wish to explore options for accommodation, please consult with CAL which is located in the Campus Services Building. The webpage for this centre is <http://www.uvic.ca/services/cal/>

- **Support for International Students**

Please follow this link for programs to support international students. <http://www.uvic.ca/international/>

- **Policy on Academic Integrity**

<https://web.uvic.ca/calendar2018-09/undergrad/info/regulations/academic-integrity.html#>
<https://web.uvic.ca/calendar2018-09/grad/academic-regulations/academic-integrity.html#>