

KIN 410 COURSE OUTLINE



COURSE TITLE: **KIN 410 Advanced Exercise Physiology**

CLASS SECTION: **001 (KIN cohort)**

TERM: **Winter 2025**

COURSE CREDITS: **3** DELIVERY: **in person, lecture and seminar**

Camosun College campuses are located on the traditional territories of the Ləkʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.
Learn more about Camosun's [Territorial Acknowledgement](#).

The Kinesiology department requires mandatory attendance for the first class meeting of each KIN 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: Tony Webster, Ph.D.

EMAIL: webstert@camosun.ca

OFFICE: PISE 212C

HOURS: Mon & Thurs 10.30-11.30am or by appointment

As your course instructor, I endeavour to provide a fair and inclusive learning environment. If you experience barriers to learning in this course, do not hesitate to discuss them with me. I also endeavour to create a class environment that is conducive to respectful engagement and critical enquiry in the pursuit of knowledge. All ideas and viewpoints relevant to the subject area are welcome and subject to scrutiny and discussion.

CALENDAR DESCRIPTION

Students will develop advanced knowledge of exercise physiology. Key topics explored include the effects of exercise on cellular metabolism and major body systems, exercise pharmacology, exercise genomics and environmental stressors. Students will take an active role in the course by reading and critically analyzing recent, peer-reviewed papers in exercise physiology and leading discussions on a variety of topics.

PREREQUISITE(S): *One of:*

- C in ENGL 151
- C in ENGL 161
- C in ENGL 163
- C in ENGL 164

And all of:

- C in KIN 210
- C in KIN 310

COURSE LEARNING OUTCOMES / OBJECTIVES

Upon successful completion of this course a student will be able to:

- Analyze and explain the effects of acute and chronic exercise on the major body systems and the relationship to an individual's performance, health and/or longevity.
- Apply advanced knowledge in exercise physiology through in-depth examination of current research
- Research and report on advanced topics of interest in a sport performance-related or health-related area of exercise physiology
- Demonstrate the ability to critically review current literature in exercise physiology and connect findings to topics.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

(a) **Required Textbook:** Ehrman, J.K., Kerrigan, D.J. & Keteyian, S.J. (2018). *Advanced Exercise Physiology: Essential Concepts and Applications*. Champaign, IL. Human Kinetics Publishers.

(b) Numerous other readings/journal club articles/etc. assigned or posted on D2L throughout the course.

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

	<u>SECTION</u>	<u>DAY/TIME</u>	<u>LOCATION</u>
Lectures:	001A/B	Mon 3.30-4.50pm Wed 10.00-11.20am	CHW 340 CHW 340
Seminars:	001A	Tues 8.30-9.20am	CBA 120
	001B	Thurs 4.30-5.20pm	CBA 120

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

WEEK	WEEK OF:	LECTURE TOPICS/CHAPTERS	SEM TOPIC/THEME
1	Jan 6	Course outline/introduction & Exercise Metabolism [Ch 1]	Reading Research articles 101 + Example journal club presentation
2	Jan 13	Exercise metabolism [Ch 1]	Journal paper presentations
3	Jan 20	Neuromuscular and gastrointestinal physiology [Ch 2]	Journal paper presentations
4	Jan 27	Neuromuscular and gastrointestinal physiology [Ch 2]	Journal paper presentations
5	Feb 3	CV system function and control [Ch 3]	Journal paper presentations
6	Feb 10	Pulmonary exercise physiology [Ch 4]	Journal paper presentations
7	Feb 17	<i>NO CLASSES (READING BREAK)</i>	<i>NO SEMS (READING BREAK)</i>
8	Feb 24	Immune & endocrine system [Ch 5]	Research topic presentations
9	Mar 3	Testing and training aerobic power [Ch 6]	Research topic presentations

WEEK	WEEK OF:	LECTURE TOPICS/CHAPTERS	SEM TOPIC/THEME
10	Mar 10	Testing and training anaerobic strength, power, ROM [Ch 7]	Research topic presentations
11	Mar 17	Body composition and weight management [Ch 8]	Research topic presentations
12	Mar 24	Environmental stressors: genetics, nutrition & ergogenic aids [Ch 9]	Research topic presentations
13	Mar 31	Physical activity and exercise for health and fitness [Ch 10]	Research topic presentations
14	Apr 7	Exercise pharmacology & exercise genomics [Ch 11]	Research topic presentations

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 notice 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
Journal club paper – SEM presentation (weeks 2-6)	10%
Individual research topic – SEM presentation (weeks 8-14)	15%
Individual research topic – written paper	20%
Text chapter quizzes (11 x 2% each)	22%
Midterm exam/quiz (D2L)	13%
Final exam/quiz (D2L)	20%
	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

Seminar format:

In the first half of the semester, the seminars will provide students with an opportunity to present to the class on original scientific research related to an assigned topic for that week (journal paper). Students will have an opportunity at the start of term to sign up for their journal paper presentation slots. Students will be required to make a short ~10 min presentation to the class on their journal article and topic area.

In the second half of term the seminar sessions will be the venue for students to present on their self-selected research topic. Opportunities to sign up for these presentation slots will be provided around the mid-term period.

Missed exams:

Exams must be written at the time/date scheduled. If a student is unable to write an exam through no fault of their own for medical or other reasons, valid documentation must be provided and discussed with the instructor. If a student who is absent has not made arrangements with the instructor in advance, he or she will receive a zero. Final exams may be scheduled at any time during the final exam block; therefore, students should avoid making travel plans, professional or personal commitments for the duration of the exam period. Students must write the final exam to pass the course.

Late assignments:

The assignments in this class are pre-scheduled by the instructor and are due on specific dates/times (see assignment guidelines, schedule below and D2L). Note that the assignment dropbox for the written paper will remain open for ONE WEEK after the due date. However, for **each day** that your assignment is late, you will receive a deduction as described in the relevant marking rubric.

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

Support Service	Website
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.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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

The Kinesiology Department 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.