

# KIN 210 COURSE SYLLABUS



COURSE TITLE: **KIN 210 Exercise Physiology**

CLASS SECTIONS: **001A, 001B, 001C.**

TERM: **Fall 2022**

COURSE CREDITS: **3**

DELIVERY METHOD(S): **Standard**

For COVID-19 information please visit <https://camosun.ca/about/covid-19-updates>

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](#).

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*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

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NAME: Tony Webster, Ph.D.

EMAIL: [webstert@camosun.ca](mailto:webstert@camosun.ca)

OFFICE: PISE 212C (office phone: 250-370-4727)

OFFICE HOURS: Monday and Tuesdays 11.00am – 12.00pm

*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 relevant to the subject area are welcome and subject to scrutiny and discussion.*

## CALENDAR DESCRIPTION

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This course builds on the foundation of knowledge constructed through the Anatomy and Physiology courses, and students will be expected to be familiar with fundamental concepts previously introduced through these courses. You may find it useful to refer back to your introductory anatomy and physiology materials.

Calendar description: Students will study the physiological adjustments and adaptations to exercise with emphasis on the functional capacity of the cardiopulmonary, neuromuscular, skeletal and hormonal systems. Students will also examine anaerobic and aerobic metabolism in skeletal muscle, energy expenditure during exercise, fatigue and recovery, and environmental issues affecting exercise performance.

## PREREQUISITE(S):

*All of:*

- Minimum C in BIOL 143
- Minimum C in BIOL 144

*Or all of:*

- Minimum C in BIOL 150

- Minimum C in BIOL 151

Or all of:

- Minimum C in BIOL 152
- Minimum C in BIOL 153

## COURSE LEARNING OUTCOMES / OBJECTIVES

Upon successful completion of the course, students will be able to:

- Describe the acute physiological responses of the major body systems to different forms of exercise.
- Describe the chronic adaptations of the major body systems that occur with regular exercise training.
- Explain and critique various training methodologies designed to develop cardiopulmonary and musculoskeletal fitness.
- Explain the mechanisms underlying fatigue and recovery after various forms of exercise.
- Explain the calibration and operation of laboratory ergometers and other instrumentation used to evaluate physiological responses to exercise.
- Generate and interpret work, power output and energy expenditure data during exercise performance.
- Critically analyze how altered environmental conditions can influence exercise performance.
- Identify and evaluate current research to make effective and persuasive professional presentations on topics related to exercise physiology, fitness and health.

## REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

(a) Required text: Sharon A. Plowman & Denise L. Smith. (2017). *Exercise Physiology for Health, Fitness and Performance*. (5<sup>th</sup> Edition) Lippincott Williams and Wilkins Publishing.

(b) Required: KIN 210 Exercise Physiology Lab Manual Course Pack (available in bookstore)

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

|           | <u>SECTION</u>       | <u>DAY/TIME</u>   | <u>LOCATION</u>                  |
|-----------|----------------------|---|----------------------------------|
| Lectures: | 001A/B/C             | Mon 8.30 – 9.50am<br>Thurs 11.30am – 12.50pm                      | PISE 330<br>LACC 124             |
| Labs:     | 001A<br>001B<br>001C | Thurs 8.30 – 10.20am<br>Wed 12.30 – 2.20pm<br>Tues 8.30 – 10.20am | LACC 105<br>LACC 105<br>LACC 105 |

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

| WEEK | WEEK OF: | LECTURE TOPIC/CHAPTER   | LAB TOPIC/THEME  |
|------|----------|---|--|
| 1    | Sep 5    | Course outline & introduction to exercise physiology [Ch 1]       | Lab 1 - Ergometry  |
| 2    | Sep 12   | Energy production & anaerobic metabolism during exercise [Ch 2-3] | Lab 2 – Anaerobic power & capacity                       |
| 3    | Sep 19   | Aerobic metabolism during exercise. [Ch 2,4]                      | Lab 3 – Intermittent vs. continuous exercise and fatigue |
| 4    | Sep 26   | Aerobic metabolism (cont'd). Fatigue & recovery [Ch 18].          | Lab 4 – Energy expenditure & efficiency                  |

| WEEK | WEEK OF: | LECTURE TOPIC/CHAPTER   | LAB TOPIC/THEME   |
|------|----------|---|---|
|      |          | <b>**D2L QUIZ #1 this week**</b>  |   |
| 5    | Oct 3    | Measuring energy expenditure during exercise [Ch 2,4].                                      | Lab 5 – Anaerobic threshold                             |
| 6    | Oct 10   | The pulmonary system & exercise [Ch 9-10].  | Lab 6 – Physiological responses to incremental exercise |
| 7    | Oct 17   | The pulmonary system & exercise [Ch 9-10].  | Lab 7 – VO <sub>2</sub> max #1                          |
| 8    | Oct 24   | Cardiovascular system & exercise [Ch 11-13].  | MIDTERM EXAMS - NO LABS THIS WEEK                       |
| 9    | Oct 31   | Cardiovascular system & exercise [Ch 11-13].<br><b>**D2L QUIZ #2 this week**</b>            | Lab 8 – VO <sub>2</sub> max #2                          |
| 10   | Nov 7    | Thermoregulation [Ch 14]  | Lab 9 - Thermoregulation                                |
| 11   | Nov 14   | The neuromuscular system & exercise. [Ch 17-20]   | Lab 10 - Student lab presentations                      |
| 12   | Nov 21   | The neuromuscular system & exercise. [Ch 17-20]   | Lab 11 - Student lab presentations                      |
| 13   | Nov 28   | Neuro-endocrinological aspects of exercise [Ch 21, 22].<br><b>**D2L QUIZ #3 this week**</b> | Lab 12 - Student lab presentations                      |
| 14   | Dec 5    | The skeletal system & exercise [Ch 16]  | Final exam review                                       |

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   |
|---|-------------|
| D2L lecture material quizzes (3 x 5% each)  | 15%         |
| D2L Midterm exam  | 20%         |
| D2L Final Exam  | 35%         |
| Laboratory component <ul style="list-style-type: none"> <li>In lab presentation (14%)</li> <li>D2L pre-lab quizzes (8 x 2% each = 16%)</li> </ul> | 30%         |
| <b>TOTAL</b>  | <b>100%</b> |

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

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### ***D2L lecture (LEC) material quizzes:***

In addition to the weekly “pre-lab” quizzes, there are three longer lecture-based quizzes. These will be posted in the weeks outlined below (course schedule). These quizzes activate on D2L at the end of the Monday lecture and MUST be submitted online by the start of the lecture on the Wed of the same week. You will have two hours to complete the quiz once you start it. These quizzes are designed to reinforce the information presented in the lectures. It is strongly suggested that you complete these quizzes on your own so that your result is representative of your true knowledge level.

### ***Missed exams:***

Exams must be written during the time/date that is 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.

## STUDENT RESPONSIBILITY

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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

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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                   | <a href="http://camosun.ca/advising">http://camosun.ca/advising</a>                       |
| Accessible Learning                 | <a href="http://camosun.ca/accessible-learning">http://camosun.ca/accessible-learning</a> |
| Counselling                         | <a href="http://camosun.ca/counselling">http://camosun.ca/counselling</a>                 |
| Career Services                     | <a href="http://camosun.ca/coop">http://camosun.ca/coop</a>                               |
| Financial Aid and Awards            | <a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>               |
| Help Centres (Math/English/Science) | <a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>               |
| Indigenous Student Support          | <a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>                   |
| International Student Support       | <a href="http://camosun.ca/international/">http://camosun.ca/international/</a>           |
| Learning Skills                     | <a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>           |

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| Support Service           | Website   |
|---------------------------|---|
| Library                   | <a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a> |
| Office of Student Support | <a href="http://camosun.ca/oss">http://camosun.ca/oss</a>                             |
| Ombudsperson              | <a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>                       |
| Registration              | <a href="http://camosun.ca/registration">http://camosun.ca/registration</a>           |
| Technology Support        | <a href="http://camosun.ca/its">http://camosun.ca/its</a>                             |
| Writing Centre            | <a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</a>       |

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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.

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## COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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### 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](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto: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.