

# COURSE SYLLABUS



COURSE TITLE:	AET 450 - Ergonomics
CLASS SECTION:	X01
TERM:	Winter 2022
COURSE CREDITS:	3 credits
DELIVERY METHOD(S):	Lecture and 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>.

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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:	Jamie Johnson <i>MSc. Rehab Science, CAT(C)</i>
EMAIL:	<a href="mailto:johnsonja@camosun.bc.ca">johnsonja@camosun.bc.ca</a>
OFFICE:	PISE 212A
HOURS:	By appointment (250) 370-4725 or email

*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.*

## CALENDAR DESCRIPTION

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The capabilities and limitations of human performance in home, office and industrial settings including the design of work, the workplace environment and work methods to prevent injuries and fatigue. Focus is on physical demands of work, legal and regulatory issues and the impact on work, human-system interaction and human errors. Open to Athletic & Exercise Therapy students only

PREREQUISITE(S):	All of C in AET 440 and in PHYS 160
COREQUISTE(s):	AET 481

## COURSE LEARNING OUTCOMES / OBJECTIVES

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- Apply basic ergonomic principles to prevent occupational injuries
- Identify the physical and mental demands of a variety of occupations
- Explain the material handling principles for a variety of occupations
- Discuss the effect of working hours and lifestyle behaviors on the worker and the workplace
- Explain environment ergonomic considerations such as lighting, ventilation, noise, and their effect on the worker and the workplace

- Discuss any cultural, ethnic, gender, age, and functional ability differences and considerations across occupations and work-related environments
- Discuss the unintended effects that ergonomics interventions might have
- Administer a functional capacity evaluation
- Demonstrate the ability to complete a physical demands analysis
- Design and/or re-design ergonomically correct workstations in a variety of settings

#### REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

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Required:

Bridger, R.S. 2018. Introduction to Ergonomics (4th Ed). CRC Press. Taylor and Francis Group, Boca Raton FL. ISBN: 978-1498795944

Referenced:

Jacobs, K. 2017. Ergonomics for Therapists. Mosby Elsevier, St. Louis, MO. ISBN 978-0323048538

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

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Lectures:

Wednesdays: 2:30pm – 3:50pm PISE 330

Fridays: 10:30am – 11:50am CBA 211

Lab

Alternating Mondays: 12:00pm-1:50pm LACC 107

ODD WEEKS ONLY

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

Tentative Schedule		
Week	Lectures	Lab
1	<b>January 12<sup>th</sup></b> Course Introduction Chapter 1: Introduction to Human Factors and Ergonomics Ergonomics and Athletic Therapy	January 10 <sup>th</sup> Office Ergonomics “How to Make your Computer Station Fit You” <b>CBA 214</b>
	<b>January 14<sup>th</sup></b> Chapter 2: The Body as a Mechanical System	
2	<b>January 19<sup>th</sup></b> Chapter 3: Anthropometry, Workstation, and Facilities Design	<b>No Lab</b>
	<b>January 21<sup>st</sup></b> Chapter 3: Anthropometry, Workstation, and Facilities Design	
3	<b>January 26<sup>th</sup></b> Chapter 4: Standing and Sitting at Work	January 24 <sup>th</sup> Functional Anthropometry Work Assessment
	<b>January 28<sup>th</sup></b>	

	Chapter 5: Repetitive Tasks: Risk Assessment and Task Design	
4	<b>February 2<sup>nd</sup></b> Chapter 5: Repetitive Tasks: Risk Assessment and Task Design	<b>No Lab</b>
	<b>February 4<sup>th</sup></b> Chapter 6: Design of Manual Handling and Load Carriage Tasks	
5	<b>February 9<sup>th</sup></b> Chapter 6: Design of Manual Handling and Load Carriage Tasks	February 7 <sup>th</sup> Functional Capacity Evaluation (FCE) Physical Demands Analysis (PDA)
	<b>February 11<sup>th</sup></b> Chapter 7: Work Capacity, Stress, Fatigue, and Recovery <b>ERGONOMIC ASSESSMENT ASSIGNMENT DUE DATE 15%</b>	
6	<b>February 16<sup>th</sup></b> Chapter 7: Work Capacity, Stress, Fatigue, and Recovery	<b>No Lab</b>
	<b>February 18<sup>th</sup></b> Chapter 8: Job Demands, Health, and Well-Being for a Changing Population	
7	February 23 <sup>rd</sup> <b>COLLEGE CLOSED – Reading Week</b>	February 21 <sup>st</sup> <b>No Lab</b> <b>COLLEGE CLOSED – Family Day</b>
	February 25 <sup>th</sup> <b>COLLEGE CLOSED – Reading Week</b>	
8	March 2 <sup>nd</sup> <b>MIDTERM WEEK</b>	<b>No Lab</b> <b>MIDTERM WEEK</b>
	March 4 <sup>th</sup> <b>MIDTERM WEEK</b>	
9	<b>March 9<sup>th</sup></b> Chapter 8: Job Demands, Health, and Well-Being for a Changing Population	March 7 <sup>th</sup> The Industrial Workplace <b>Camosun Trades TBD</b>
	<b>March 11<sup>th</sup></b> Chapter 9: Working in Hot and Cold Climates	
10	<b>March 16<sup>th</sup></b> Chapter 10: The Visual Environment: Measurement and Design	<b>No Lab</b>
	<b>March 18<sup>th</sup></b> Chapter 11: Hearing, Sound, Noise, and Vibration <b>Must sign up sport/occupation for Ergonomics Presentation</b>	
11	<b>March 23<sup>rd</sup></b> Chapter 12: The Mind at Work: Intention, Action, and Interpretation	March 21 <sup>st</sup> Observing and Coaching Occupational athletes
	<b>March 25<sup>th</sup></b>	

	Chapter 13: Displays and Controls <b>PDA &amp; FCE ASSIGNMENT DUE DATE 15%</b>	
12	<b>March 30<sup>th</sup></b> Chapter 14: Interactive Devices	<b>No Lab</b>
	<b>April 1<sup>st</sup></b> Chapter 15: HFE in Accident Investigation and Safety Management	
13	<b>April 6<sup>th</sup></b> Athletic Therapy scope of practice and our role in Ergonomics Common Ergonomic jobs available today <b>Ergonomics Presentation Due 15%</b>	April 4 <sup>th</sup> Athletic Therapy & Ergonomics MSI Prevention Process
	<b>April 8<sup>th</sup></b> Ergonomics Presentation	
14	<b>April 13<sup>th</sup></b> Ergonomics Presentation	<b>No Lab</b>
	<b>April 15<sup>th</sup></b> <b>COLLEGE CLOSED – Good Friday</b>	
15	<b>FINALS</b> <b>April 19<sup>th</sup> – April 27<sup>th</sup></b>	

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 scan 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
Ergonomic Assessment Assignment <b>Due Feb 11<sup>th</sup> @ 11:59pm</b>	15%
Physical Demands Analysis & Functional Capacity Evaluation Assignment <b>Due March 25<sup>th</sup> @ 11:59pm</b>	20%
Ergonomics Presentation <b>Due April 6<sup>th</sup> @ 11:59pm</b>	15%
Written Midterm <b>Week 8</b>	25%
Written Final <b>Week 15</b>	25%
<b>TOTAL</b>	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

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**Due Dates:** There will be a zero-tolerance in effect for missing due dates. All due dates are clearly listed in the schedule above. Students who might miss a deadline for legitimate reasons are to contact the instructor immediately and in advance of the due date.

## SCHOOL OR DEPARTMENTAL INFORMATION

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### Grading System

(If any changes are made to this part, then the Approved Course description must also be changed and sent through the approval process.)

(Mark with "X" in box below to show appropriate approved grading system – see last page of this template.)

Standard Grading System (GPA)

Competency Based Grading System

### Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

## 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>
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>

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

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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](http://camosun.ca/services/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.