

COURSE SYLLABUS



COURSE TITLE: Cive 261 – Soils and Materials 1
CLASS SECTION: X01 A and X01 B
TERM: 2021 Fall
COURSE CREDITS: 4
DELIVERY METHOD(S): Lectures and Labs

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: Bao-Qin Bai
EMAIL: bai@camosun.bc.ca
OFFICE: Tech 114
HOURS:
Lecture: 1:30 - 3:20 Monday and Wednesday
Lab: 1:00 - 2:50 Thursday; X01A, the odd weeks; X01B, the even weeks

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

Students learn to identify soils and perform standard methods of measurement of soil properties. Applications such as geosynthetics, filter designs, seepage analysis and methods for dealing with geologic hazards and problem soils are presented. Soil properties and surface loading are used to calculate sub-surface soil stresses. The theory and application of soils consolidation is introduced.

PREREQUISITE(S): C in CIVE 192
CO-REQUISITE(S): CIVE 271
EXCLUSION(S): None

COURSE LEARNING OUTCOMES / OBJECTIVES

- Apply relevant safety regulations and best practices in the lab and in the field.
- Identify types and origins of rocks and soils, common geological hazards, and describe the common methods of subsurface explorations, sampling, field testing, geotechnical instrumentation, and borehole logging.
- Classify soils using the Unified Soil Classification system.
- Evaluate and perform calculations on soils’ three-phase mass-volume relationships.
- Conduct the following laboratory tests and analyze the test results: moisture content; grain size analysis; specific gravity; Atterberg limits; permeability; standard and modified proctor tests; nuclear densometer test.
- Describe drainage filter designs and applications of geosynthetics and other common erosion control methods.
- Calculate sub-surface soil stress, effective stress and stress increases due to loadings in soils.
- Perform simple calculations involving permeability, seepage and water pressure in soils.
- Relate vertical earth pressures to lateral earth pressures - lateral earth pressure coefficients.
- Complete site inspection reports for such inspections as: subgrade conditions, compaction, slopes, pile installations and identify site hazards.
- Describe methods used for dealing with problem soils.
- Describe the concept of soils primary consolidation.
- Describe the test data reduction method of soils one-dimensional consolidation test.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

- Lecture presentations and Lab Notes that are posted on D2L course site
- A pair of steel-toed boots that are needed for labs and field trips

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.

Lecture: 1:30 - 3:20 Monday Tec 181; Wednesday Tec 110
Lab: 1:00 - 2:50 Thursday Tec 127; X01A, the odd weeks; X01B, the even weeks

Week	Lecture Topic	Lab
1	*Soil concepts & sources; *Index properties & tests	Lab 1 - Spe gravity test; Sieve analysis
2	* Landslides; *Mass-volume relationship; Videos: Mass Wasting.	
3	* Soil composition & structure. , Videos: Minerals and Rocks	Lab 2 – Hydrometer test
4	Quiz 1 (Weeks 1 to 3); * USC; Video: Glaciers	
5	* Water in soil; Video: Weathering and Soils	
6	* Water in soil; *Stresses in soil: Overburden & effective stresses	Lab 3 – Atterberg limits test
7	Quiz 2 (Weeks 1 to 6); *Stresses in soil	
8	Stress caused by surface loading * Soil property improvement: Surface compaction;	Lab 4 – Permeability test
9	Deep compaction and soil stabilization; Geosynthetics;	

10	Quiz 3 (Weeks 1 to 9); Soil exploration	
11	* Geotechnical instrumentation; Video: Intro to drilling and sampling	Lab 5- Standard Proctor test
12	* Geotechnical report; * USC with dual symbols; * Video: Field Identification of Soils	
13	Quiz 4 (Weeks 1 to 12);	Lab 6-Nuclear densometer test
14	* Soil consolidation * Review	
15	* Exam Week	

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

Component	Option 1	Option 2	Comment
Quizzes	20%	48%	Written, open book
Labs	20%	47%	
Instructor's Assessment	5%	5%	Based on your cooperation and attendance, e.g. active participation in group work, etc.
Final Examination	55%	/	Written, open book
TOTAL	100%		

50% on the final examination for **Option 1**, or 50% average on all tests/examinations for **Option 2**, must be attained in order to pass this course. Mark deduction for late submission of any lab report is 10% of that lab report. If it is handed in after the lab reports of the other students are returned to class, no mark will be given, but all the required lab reports must be submitted to the satisfaction of the instructor in order to pass this course. If your lab report is required to redo and rehand in, you have one week to complete your work from the day of your receiving the notice, and your maximum mark for that report will be the minimum mark of the class minus 10%.

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

Attendance

Students are expected to attend all lectures and labs on time. It is your responsibility to catch up with the others of your class if you missed some classes. The 5% of Instructor's Assessment will be partly based on your attendance.

Due dates and Late Submissions

The due dates of your lab reports are to be given during classes. The purpose of the due dates is to help both you and I to get the work done so that we can have a relatively quick feedback and also your work can be assessed in a timely manner. Late submissions of any project or assignment will be subject to mark deductions.

Quizzes and Final Examination

All Quizzes and Final Examination must be written at the scheduled times with the exception of students requiring an accommodation by CAL. It is understood that emergency circumstances do occur (e.g.

severe illness or family emergency); for such circumstances, accommodation may be offered at the discretion of the instructor, provided the student:

- a) notifies the instructor in advance of the exam (not after), and
- b) provides documented evidence of the circumstance (e.g. medical certificate).

SCHOOL OR DEPARTMENTAL INFORMATION

Department: Civil Engineering Department.

- Chair is Zoe Broom, TEC 116.
- See the chair if you need:
 - program help such as working out a part-time schedule
 - help with transfer credits
 - info on services from other departments.
- See your instructor if you need help with the course.

School: School of Trades and Technology. Office TEC 169

- Dean is Eric Sehn, TEC 169
- Associate Dean is Ken Kosik, TEC 169
- Student issues are looked after by the Associate Dean. However, if you need anything, go to the department chair first.

Equity, diversity, and inclusion (EDI) are central to Camosun's culture and values. The Camosun community and the engineering community at large commit to pursuing equity in education regardless of race, heritage, religion, gender or gender identity, and ability. We learn best when we feel safe. Inappropriate, hateful or demeaning comments or actions will not be tolerated. Your suggestions on how to make your experience here better are encouraged and appreciated. Please let me or the department chair know ways to improve your experience at Camosun. If you wish to know more about Camosun's EDI policy, please see the EDI page on the college's website:

<http://camosun.ca/about/policies/equity-diversity-inclusion.html>

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.

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](http://camosun.ca/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.