

COURSE SYLLABUS



COURSE TITLE: HYDROLOGY (CIVE276)

CLASS SECTION:XO1

TERM: FALL 2021

COURSE CREDITS:3

DELIVERY METHOD(S): On campus

Lecture, D2L

For COVID-19 information please visit <https://legacy.camosun.ca/covid19/index.html>.

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](#).

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: Robin Ley

EMAIL: LeyR@Camosun.bc.ca

OFFICE: TEC265

HOURS: Thursdays 12:00 -1:00 pm or by appointment (email instructor)

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 design appropriate piping and structures for handling rainwater. Students learn to predict storm flow rates by interpreting a contour map, evaluating a catchment, and applying historical rainfall data. The effects of land development on riparian systems are discussed and best practices for mitigating downstream effects are compared.

PREREQUISITE(S):

- C in Pre-calculus 12
- C in MATH 097
- C in MATH 107
- C in MATH 115

COURSE LEARNING OUTCOMES / OBJECTIVES

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

- Analyze historical rainfall and river flow data to predict extreme storm and flood events.
- Compare rainfall intensities, patterns, durations for differing regions and return periods.
- Interpret a contour map to determine catchment boundaries and overland flow paths.
- Apply commonly-used methods to calculate runoff rates for storm events.
- Construct hyetographs and hydrographs using commonly applied methods.
- Calculate pipe capacities for culverts and gravity mains and compare to predicted peak flows.
- Discuss the effects of land development on downstream riparian systems.
- Compare and apply best management practices for rainwater management.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

CIVE 276 Course Notes – 2012 (edited 2020) by Z. Broom and P. Fell, Camosun College Civil Engineering Dept. Students are advised to print out notes for use during class and exams. Notes will be supplemented in class. Power point slides will be used from time to time but may not made available after class. Students should make notes during class.

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.

Week	Week Starting (Monday)	Lecture 1 (Tuesdays 8:30 – 10:20)	Lecture 2 (Thursdays 8:30-10:20)	Assignments Due (duedate noted on D2L)
1	06-Sep	Introduction to Hydrology, Course Content, Water Cycle	Case Study	Quiz 1
2	13-Sep	Precipitation (ROT, Rainfall Type, Extreme Events)	Precipitation and Statistics	Assignment 1 Due
3	20-Sep	Time of Concentration, Catchbasins	Time of Concentration, Catchbasins, Velocities (Cont.)	Quiz 2
4	27-Sep	Intro to Rational Method	No Class due to National Day for Truth and Reconciliation	Assignment 2 Due
5	04-Oct	Rational Method & Pipe Sizing	Pipe Sizing	Quiz 3
6	11-Oct	Culvert Sizing	Culvert Sizing	Assignment 3 Due
7	18-Oct	Midterm Exam Review	Midterm	
8	25-Oct	SCS Method	SCS Method	
9	01-Nov	Cedar Hill Development Assignment	Cedar Hill Development Assignment	Assignment 4 Due
10	08Nov	Design for Detention	No Class Due to Remembrance Day	Quiz 4
11	15-Nov	Modern Stormwater Design, BMPs	Raingarden Design	Assignment 5 Due
12	22-Nov	BMP Design	Stream Restoration	Quiz 5
13	29-Nov	Watershed Management	Snowmelt	Assignment 6 Due
14	6-Dec	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 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
Assignments (6 assignments, 5% each)	30%
Midterm Exam (notes are allowed for exam, 1.5 hour)	20%
Quizzes (completed through D2L)	15%
Final Exam (notes are allowed for exam, 3 hour)	35%
	TOTAL
	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

- To get the most out of this course, students are expected to attend all classes and be on time. It is your responsibility to acquire all information given during a class missed, including notes, hand-outs, changed exam dates etc. Should you miss class due to illness or emergency, please contact the instructor via email.
- Due to the nature of this course, significant emphasis is placed on assignments and quizzes. Students should anticipate that substantial effort is required to complete assignments and plan accordingly. Unless otherwise indicated assignments are to be completed individually and submitted electronically through D2L. Assignments should be professionally presented (even in electronic format). Late assignments will have 10% deducted per day the assignment is late (including weekends). Assignments submitted after graded assignments have been returned or after solutions are posted are worth zero. Note, assignments will be graded and returned quickly, so students submitting late assignments run the risk of receiving a zero grade. Students will have a significant amount of time between assignment due dates and should plan accordingly. Assignments will take a substantial effort. Students attempting to complete assignments close to the due date are unlikely to be successful and extensions will not be given for technical issues or lack of planning or prioritizing.
- You must complete all assignments prior to the final exam in order to be permitted to write the final exam.
- You must achieve 50% on the final exam in order to pass the course. In addition, a weighted average of 50% on the mid-term and final exam must be achieved in order to pass the course.
- Exam Procedures All - exams 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 notifies the instructor in advance of the exam. If an exam is missed with an excused absence, it is up to the instructor's discretion as to how the mark will be made up. Be sure not to make travel plans for the end of semester until the final exam schedules are finalized and posted.

- 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 the instructor 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>

SCHOOL OR DEPARTMENTAL INFORMATION

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

Support Service	Website
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](#) (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.