

# COURSE SYLLABUS



COURSE TITLE: CIVE 142 – SURVEY 2  
CLASS SECTION: X01/X02  
TERM: 2023S  
COURSE CREDITS: 3  
DELIVERY METHOD(S): Labs

Camosun College campuses are located on the traditional territories of the Ləkʷəŋən and WSÁNEĆ 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://camosun.ca/about/covid-19-updates>

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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: David Ley  
EMAIL: [leyd@camosun.ca](mailto:leyd@camosun.ca)  
OFFICE: TEC264  
HOURS: TBD, request by 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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Students traverse and survey a two to three hectare area of land using a total station with a data collector. Data is then uploaded to specialized software in order to create a digital surface and final topographic map. A survey layout is also conducted using a total station and data collector to enable construction of an engineering design.

PREREQUISITE(S): CIVE141  
PRE or CO-REQUISITE(S): As Above  
EXCLUSION(S): none

## COURSE LEARNING OUTCOMES / OBJECTIVES

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

- Determine the elevation of an inaccessible point by 'trigonometric leveling' using a Total Station.
- Determine the coordinates (N,E,Z) of an inaccessible point by 'triangulation' using a Total Station.
- Perform a closed traverse using a Total Station with a Data Logger.

- Survey a large rough land area: Retracement traverse and topographic data collection.
- Upload and Download survey data to and from a data logger.
  - Manage and edit raw survey data logger files.
- Convert raw data to a field book file; import files into a civil survey software (i.e. Civil 3D).
- Use civil software to create a contour plan with annotated contours then plot a scale drawing.

The student will be able to participate in a group survey project that results in a large area being surveyed for later use with other courses.

- The student will perform one of two closed control traverses that share a common leg. A minimum of one of the traverses will include two or more OIPs.
- Precision for the traverse will be calculated and the traverse points adjusted using the compass method.
- The student will perform closed benchmark circuits that will be used to carry over an NAD 83 referenced elevation from a nearby OCM.
- The traverses will be adjusted for elevation and to use UTM coordinates using civil software to translate, rotate and change elevations of the points in each traverse as needed.
- Student survey groups will use total stations to collect side shots
- A contour map created and annotated.
- Additional site information from local government will be x-referenced to the drawing.

#### REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

##### Survey Supplies:

Field Book	'Rite-in-Rain' : stapled (#351 - preferred) or spiral bound (#353)	Required
2 mm Lead Holder	Staedtler 780C 2mm lead holder	Required
2mm 2H leads	Staedtler 2mm 2H leads (in tube)	Required
Short ruler	6 inch ruler with both metric and inch	Required
White eraser	Staedtler white vinyl eraser	Required
Lead sharpener	Staedtler 502 2mm lead sharpener (note the model with the chrome tip has a built-in lead sharpener)	Required if you have the black tipped lead holder

#### REFERENCE MATERIAL

Text: Kavanagh 2015, Surveying with Construction Application, 8th ed. [or 7th ed.]

#### 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.

SECTION	LAB	TIME	LOCATION
X01	Thursday	8:30-12:20pm	TEC145
X02	Friday	8:30-12:20pm	TEC145

WEEK	WEEK BEGINNING	LAB #	LAB TITLE
1	May 1, 2023	1	<b>Lab:</b> Trigonometric Leveling
2	May 8, 2023	2	<b>Lab:</b> Triangulation
3	May 15, 2023	3	<b>Lab:</b> Introduction to Data Collectors
4	May 22, 2023	4	<b>Lab:</b> Layout of Road Curve
5	May 29, 2023	5	<b>Lab:</b> Multi-Set Angles and Traversing Using Data Collectors
6	June 5, 2023	6	<b>Lab:</b> Control Traverse Survey Using Data Collectors
7	June 12, 2023	6	<b>Lab:</b> Control Traverse Survey Using Data Collectors (continued)
8	June 19, 2023	7	<b>Lab:</b> Organization for Final Project
9	June 26, 2023	8	<b>Lab:</b> UTM and Big Field Control Traverses
10	July 3, 2023	8	<b>Lab:</b> UTM and Big Field Control Traverses (continued)
11	July 10, 2023	9	<b>Lab:</b> Topographic Survey Data Collection
12	July 17, 2023	9	<b>Lab:</b> Topographic Survey Data Collection (continued)
13	July 24, 2023	10	<b>Lab:</b> Surface Modeling in Civil3D
14	July 31, 2023		

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

COMPONENTS	WEIGHT	COMMENTS
Labs	90%	Lab work broken out as follows:
Field Book		Formal field book entry for each lab (33%)
Lab work		Accuracy, calculations, etc. (37%)
Final Project		Topographic Map of Surveyed Site (20%)
Instructor Assessment	5%	Attendance, Punctuality
Participation	5%	Group Participation Assessment
Exams		No Exams
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 policy for more information.

<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

## COURSE GUIDELINES &amp; EXPECTATIONS

- All lab work & assignments must be completed and submitted.
  - Late assignments submitted before marked assignments have been returned to class will have 10% deducted.
    - Late assignments submitted after marked assignments have been returned to class will be checked and count as submitted but will receive no mark.
- Full attendance at the lab sessions is mandatory unless prior approval is granted by the instructor.
  - Students must speak directly to the instructor, and will be granted approval to miss a lab only under extreme circumstances.
    - In case of illness or other unscheduled cause for absence, the student must notify the instructor at least 30 minutes before class by email or by telephone.
    - 2% will be deducted from the final mark for each absence from a lab without the instructor's prior permission or a doctor's certificate.
- Late arrivals greater than 20 minutes will be considered an absence.

## 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.

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 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.

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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.