

CAMOSUN COLLEGE School of Trades and Technology Department of Civil Engineering Technology

> CIVE 282 Managing Construction Projects Summer - 2020

COURSE OUTLINE

Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1 Instructor Information

Instructor:	Robin Ley
Office hours:	Thursdays 9:30 am – 11:30 am (see D2L for instructions)
Location:	Tec 273 (for VPN lab use)
Phone:	250-370-3866 (leave voice message)
E-mail:	LeyR@camosun.bc.ca
Website:	https://online.camosun.ca/d2l/home

2 Prerequisites and Corequisites

Prerequisite: 'C' in CIVE 181

3 Hours and Credits

Course Activity

- ☑ Lecture (Direct Instruction)
- Seminar (Direct Instruction)
- ☐ Lab /Collaborative Learning
- Supervised Field Practice
- Workplace Integrated Learning (Coop, Internship, etc.)
- Other*(please note):

Hours / Week	Instruction – No of Weeks
3	14
1	14

Credits = 3

4 Short Description

Students are introduced to aspects of civil and contract law, codes, regulations and bylaws as they apply to the contracting process. Topics covered include contract documents, tendering procedures and contract administration as they relate to a civil engineering construction project. Computer software will be used for critical path analysis, scheduling the construction process, cost control, quantity estimating and quality control procedures. Construction site safety and security are covered.

5 Intended Learning Outcomes

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

• Apply the legal principles of contract law, intellectual property law and tort liability to the engineering projects.

- Compare types of laws and the relationships between Federal, Provincial and local jurisdictions.
- Discuss and interpret the acts, regulations and code of ethics that govern professional engineers and technologists.
- Compare the various types of business relationships typically found in design and construction.
- Describe the preparation of a set of construction contract documents and the administration of the bidding process.
- Propose how to fulfill contract administration duties such as: site inspections; progress payments; change orders; extras; and record keeping.
- Prepare project schedules and manage resources using project management software.
- Perform a quantity take-off, apply unit prices, and overhead and profit amounts to develop a construction cost estimate or bid amount.
- Evaluate equipment for a job based on productivity requirements.
- Describe safety requirements on the jobsite and in the workplace including general requirements, Workplace Hazardous Materials Information System (WHMIS), transportation of dangerous goods, traffic control, confined space entry and fall arrest.

6 Course Content and Schedule

- a. Refer to the D2L for course content and updates to the schedule. This course consists of three hours of lecture and one hour lab per week.
- b. Lectures will be posted each week on D2L
- c. Labs will be posted each week on D2L, TEC273 is designated VPN connection

Week	Lecture Topic	Lab	
1	Course Introduction, Case Studies, Canadian Legal System	Introduction to MS Project	
2	Tort Law	MS Project, Construction Scheduling	
3	Contract Law	Water Project	
4	Engineering Law / Environmental Law / Employment Law	Construction Management	
5	IP Law / Employment Law / Review for Midterm	Construction Management	
6	Mid-Term Exam	No labs	
7	Introduction to Contract Documents and Construction Administration	Construction Scheduling	
8	Contract Documents and Construction Administration	Construction Scheduling	
9	Canada Day Holiday / Intro to Tender Document	No labs	
10	Tender and Contract Documents	Construction Cost Estimating	
11	Contract Administration / MMCD	Construction Cost Estimating	
12	Construction Cost Estimating / Overhead and Profit	Construction Cost Estimating	
13	Excavation Estimation	Construction Cost Estimating	
14	Construction Safety	Review for Final	
15	Exam Week (Final exam)		

Component	Weighting %	Comments
Assignments	40	Assignments, submitted individually, unless otherwise noted. Four substantial assignments are anticipated. Due dates will be identified for each assignment
Labs	30	Lab assignments, submitted individually. Three lab assignments are anticipated. Due dates will be identified for each lab.
Mid-term exam	10	Online exam will be given in Week 8
Final exam	10	Online exam will be given during Exam Period
Discussion	10	Participation in weekly online discussions (more details provided in D2L)
TOTAL	100	

7 Basis of Student Assessment

8 Required Materials to Assist Students to Succeed Throughout the Course

- a) Texts there is no text for this course.
- b) Other
 - i. Broom Z., Fell P. CIVE282 Managing Construction Projects Course Notes, Camosun College, 2020 (handouts posted to D2L)
 - ii. Other references and handouts posted as needed

9 College Supports, Services and Policies



Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <u>http://camosun.ca/about/mental-health/emergency.html</u> or <u>http://camosun.ca/services/sexual-violence/get-support.html#urgent</u>

College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <u>http://camosun.ca/</u>

College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at http://camosun.ca/about/policies/. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment,

Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

10 Grading System

- Standard Grading System (GPA)
- □ Competency Based Grading System

See <u>Camosun Grading Policy E-1.5</u>

11 Class Policies

This is an online course where content is provided to students on a weekly basis through Camosun's D2L site. This content includes recorded lectures and lab sessions. Additionally, students will be required to complete course readings and online discussions. A midterm and final exam is scheduled and will be administered online through the D2L site. Although the course is currently scheduled to occur on Thursday mornings, students may decide when they complete the course content. However, students are advised that course content must be completed on a weekly basis. The instructor will be available on Thursday mornings to assist students with content, particularly supporting the lab materials.

Due to the nature of this course, significant emphasis is placed on assignments and labs reports. Students should anticipate that substantial effort is be required to complete assignments and plan accordingly. Unless otherwise indicated assignments and lab reports are to be completed individually. Assignments and labs should be professionally presented. The student code of conduct is in place and will be referred to as needed.

- Late assignments and labs will have 10% deducted per day the assignment is late (including weekends). Assignments and labs submitted after graded assignments and labs have been returned or solutions are posted are worth zero. Note, assignments and labs will be graded and returned quickly, so students submitting late assignments (without an approved extension) run the risk of reviewing a zero grade.
- You must complete all assignments and labs 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.
- 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