

CIVE 352 – Reinforced Concrete Design
Term – Fall 2020 (202009)

Instructor	Office Hours
Dr. Kian Karimi	Days: Fridays
Phone:	Time: 1:30 – 2:30 pm
E-mail: kiankarimi@uvic.ca	Location: Online

List all prerequisites and co-requisites: CIVE 210, CIVE 285, CIVE 350, and CIVE 220 or MECH 220

LECTURE DATE(S)

Section: A /CRN 10562	Days: Fridays	Time: 10:30 am – 1:20 pm	Location: Online
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TUTORIAL SECTIONS

Section: B/	Days: Tuesdays	Time: 2:30 pm - 5:20 pm	Location: Online
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LAB SECTIONS

Section: B (Multiple)	Days:	Time:	Location:
Insert additional rows if required	(or leave blank and state how/when labs will be scheduled)		
Lab #1:	No labs scheduled for this course.		
Lab #2:			
Lab #3:			
Lab #4			

Lab times and locations are also available from the [timetable](#) through Sign in to UVic, My Page.

TA Name	E-mail	Office
Kamran Tayyebi	ktayyebi@uvic.ca	
Perla Rodulfo	rodulfop@uvic.ca	
Rafael Sousa	rafaelwildson@hotmail.com	

Required Text	Optional Text
Title: Reinforced Concrete Design: A Practical Approach	
Author: Brzev and Pao	
Publisher/Year: : Pearson 2017 (3rd edition)	
Reference Materials: National Building Code 2015, B.C. Building Code 2018, Concrete Design Handbook (CAC), CSA A23.1, A23.2, A23.3	

COURSE OBJECTIVES: Verbose description of the material being covered in the course. How does the course build/relate to other courses in the program?

Learn behaviour of various reinforced concrete structural members including flexural members, columns, foundations and walls. Understand the design philosophy and procedure for concrete structures and relate it to the design mythology for structural members made of other construction material such as steel and timber.

LEARNING OUTCOMES: At the end of this course, students will be able to:
(refer Bloom's Taxonomy SharePoint Site for suggested verbs)

- Develop an understanding of various load types and limit states design philosophy
- Describe mechanical properties of materials used for reinforced concrete
- Develop an understanding of behavior of flexural members: beams and one-way slabs
- Design flexural members: beams and one-way slabs
- Develop and understanding of serviceability criteria for beams and one-way slabs
- Design reinforced concrete columns
- Develop an understanding of development length and anchorage requirements in RC members
- Design basic foundation systems in reinforced concrete
- Design of reinforced concrete walls

Weight & Date(s) of Assessments:	Weight	Date
Assignments:	%25	Due one week after posted
Term Test 1	%20	October 16
Term Test 2	%15	November 13
Final Exam	%40	Date: TBA

ASSIGNMENTS (Include Assignment Schedule) (Description & Method of Delivery) (remove example text)

Assignments will be distributed over the course of the term via the CIVE 352 Course Space site. **Assignments are to be completed individually. Assignments are due one week after been posted.**
Assignment online submissions are to be made to the CIVE 352 assignment dropbox on CourseSpace .

NOTE:

1. There would be no makeup tests. If you miss a test you will receive zero marks.
2. The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

COURSE LECTURE NOTES

Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.

There will be no supplemental examination for this course.

Syllabus statement

A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

Counselling Services - *Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students.* <https://www.uvic.ca/services/counselling/>

Health Services - *University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives.* <http://www.uvic.ca/services/health/>

Centre for Accessible Learning - *The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations* <https://www.uvic.ca/services/cal/>. *The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.*

Elders' Voices - *The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.* <https://www.uvic.ca/services/indigenous/students/programming/elders/index.php>

GENERAL INFORMATION

Note to Students:

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email.

Attendance

Students are expected to attend all classes in which they are enrolled. An academic unit may require a student to withdraw from a course if the student is registered in another course that occurs at the same time....

Students who are absent, late or cannot attend an entire class because of illness, an accident or family affliction should report to their instructors as soon as possible.

An instructor may refuse a student admission to a lecture, laboratory, online course discussion or learning activity, tutorial or other learning activity set out in the course outline because of lateness, misconduct, inattention or failure to meet the responsibilities of the course set out in the course outline. Students who neglect their academic work may be assigned a final grade of N or debarred from final examinations.

Students who do not attend classes must not assume that they have been dropped from a course by an academic unit or an instructor. Courses that are not formally dropped will be given a failing grade, students may be required to withdraw and will be required to pay the tuition fee for the course. UVic Calendar (2019-2020) <http://web.uvic.ca/calendar/undergrad/info/regulations/attendance.html>.

Accommodation of Religious Observance

The University recognizes its obligation to make reasonable accommodation for students whose observance of holy days might conflict with the academic requirements of a course or program.

Students are permitted to absent themselves from classes, seminars or workshops for the purposes of religious or spiritual observance.

In the case of compulsory classes or course events, students will normally be required to provide reasonable notice to their instructors of their intended absence from the class or event for reasons of religious or spiritual observance. In consultation with the student, the instructor will determine an appropriate means of accommodation. The instructor may choose to reschedule classes or provide individual assistance.

Where a student's participation in a class event is subject to grading, every reasonable effort will be made to allow the student to make up for the missed class through alternative assignments or in subsequent classes. Students who require a rescheduled examination must give reasonable notice to their instructors. If a final exam cannot be rescheduled within the regular exam period, students may request an academic concession.

To avoid scheduling conflicts, instructors are encouraged to consider the timing of holy days when scheduling class events.

For further information, including a list of days of religious observances, please contact the Equity and Human Rights Office or visit their website: www.uvic.ca/equity.

Discrimination and Harassment Policy (GV0205) <http://web.uvic.ca/calendar/general/policies.html>

Standards for Professional Behaviour

"It is the responsibility of all members of the Faculty of Engineering, students, staff and faculty, to adhere to and promote standards of professional behaviour that support an effective learning environment that prepares graduates for careers as professionals...."

You are advised to read the Faculty of Engineering Document [Standards for Professional Behaviour](https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf) which contains important information regarding conduct in courses, labs, and in the general use of facilities. <https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf>

Policy on Academic Integrity

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the Undergraduate Calendar <http://web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html> for the UVic policy on academic integrity.

Equality

This course aims to provide equal opportunities and access for all students to enjoy the benefits and privileges of the class and its curriculum and to meet the syllabus requirements. Reasonable and appropriate accommodation will be made available to students with documented disabilities (physical, mental, learning) in order to give them the opportunity to successfully meet the essential requirements of the course. The accommodation will not alter academic standards or learning outcomes, although the student may be allowed to demonstrate knowledge and skills in a different way. It is not necessary for you to reveal your disability and/or confidential medical information to the course instructor. If you believe that you may require accommodation, the course instructor can provide you with information about confidential resources on campus that can assist you in arranging for appropriate accommodation. Alternatively, you may want to contact the Centre for Accessible Learning located in the Campus Services Building.

The University of Victoria is committed to promoting, providing, and protecting a positive, and supportive and safe learning and working environment for all its members.

Course Schedule

Week	Topic	Dates
1	<i>Introduction, Design Process and Load Types</i>	Sep 11
2	<i>Concrete Basics</i>	Sep 18
3	<i>Flexure Behaviour of Beams and One-Way Slabs</i>	Sep 25
4	<i>Serviceability</i>	Oct 02
5	<i>Flexure Design of Beams and One-Way Slabs</i>	Oct 09
6	<i><u>Term Test 1</u> (No Lecture)</i>	Oct 16
7	<i>Shear Design of Beams and One-Way Slabs</i>	Oct 23
8	<i>Columns</i>	Oct 30
9	<i>Bond and Anchorage of Reinforcement</i>	Nov 06
10	<i><u>Term Test 2</u> (No Lecture)</i>	Nov 13
11	<i>Foundations</i>	Nov 20
12	<i>Walls</i>	Nov 27
13	<i>Review / Guest Lecture</i>	Dec 04
	<i>Exam Period</i>	Dec 07 – Dec 21 <i>Final Exam Date TBA</i>