



Sessional Lecturer posting for CUPE 4163 (Component 3)
Department of Civil Engineering
Faculty of Engineering and Computer Science

CIVE Courses – Spring 2024 Opportunities

Term of Appointment: January 1 to April 30, 2024

The Department of Civil Engineering is seeking qualified individuals to teach the following courses for the Spring 2024 academic term. Courses marked with a double asterisk (**) require the instructor to be registered as a Professional Engineer. Instruction days/times are subject to change.

- 1) **CIVE 385 – Geotechnical Engineering
- 2) CIVE 400 - Cross-disciplinary Capstone Design Project
- 3) CIVE 470 - Case Studies in Construction Management (*Requirement for this posting is being determined. This posting may be cancelled.*)
- 4) CIVE 480A - Special Topics: Advanced Concrete Design
- 5) CIVE 480F - Special Topics: Building Systems
- 6) **CIVE 485 – Foundation Engineering
- 7) CIVE 512 - Industrial Symbiosis and Recycling Technologies (*co-teaching opportunity*)

****CIVE [385](#) – Geotechnical Engineering**

Units: 1.5 Hours lecture-lab-tutorial: 3-1.5*-1

Lectures: Wednesdays & Fridays 11:30am-12:50pm

Labs: Tuesdays 11:00am-1:50pm, Wednesdays 1:30-4:30pm

Tutorial: Thursday 1:30-2:20pm

Description

Composition, structure and physical properties of soil and rock; groundwater flow; stress in soil; compressibility behaviour, consolidation and settlement analysis; shear strength of soils; rock failure analysis, state of stress in earth's crust, stresses and deformations in rocks, including elastic, plastic, and time-dependent behaviour; impact of geologic discontinuities on rock strength. Site investigation, design, construction aspects of shallow foundations, calculation of settlements in soils, piled foundations, earth pressure calculations, earth retaining structures, slope stability analysis.

* Indicates a 3 hour laboratory taken by students on alternate weeks.

CIVE [400](#) - Cross-disciplinary Capstone Design Project

Units: 2.0 Hours lecture-lab-tutorial: 1-9-0

Lectures: Tuesdays 1:30-2:20pm

Labs: Mondays 3:00-5:50pm, Tuesdays 2:30-4:50pm, Fridays 2:30-5:20pm

Description

Team or individual design project. Key sustainability metrics; integration of fundamentals acquired in mathematics, science, engineering, and complementary studies. A project proposal, a progress report, an oral presentation, and a comprehensive final report are required.

CIVE [470](#) - Case Studies in Construction Management

Units: 1.5 Hours lecture-lab-tutorial: 3-0-0

Lectures: Wednesdays 2:30-5:20pm

Description

Current topics in the construction industry and management of projects presented through guest speakers from industry. Major project to study and active construction project, including: identification and evaluation of solutions for construction site operations; factors affecting productivity and safety; measurement of on-site performance.

CIVE [480A](#) - Special Topics: Advanced Concrete Design

Units: 1.5 Hours lecture-lab-tutorial: 3-0-0

Lectures: Tuesdays 10:00am-12:50pm

Description

Advanced analysis and design of concrete members for axial force and flexure. Beam shear analysis and design. Special topics may include two-way slab system, seismic design of concrete buildings, principles and methods of prestressed concrete structures, concrete bridge design fundamentals.

CIVE [480F](#) - Special Topics: Building Systems

Units: 1.5 Hours lecture-lab-tutorial: 3-0-0

Lectures: Thursdays 3:00-5:50pm

Description

This course utilizes a series of real-world case studies to reinforce building science fundamentals and better understand the actual performance and behavior of building enclosures in the built environment. Selected case study topics will cover discussions of: vapour diffusion; air leakage and airflow within buildings; water leaks; material durability and failure mechanisms; material incompatibility issues; glazing failures; behavior of rainscreen walls; roofing and waterproofing topics; building enclosure sensors and monitoring; building energy measurement; mass timber construction; passive house design; and embodied carbon for building enclosures. Each class presents the background to the case study, the challenges faced, and potential solutions are presented and discussed. As closure, the current topics of durable net zero energy and low carbon building enclosures are covered to reinforce the key lessons from the prior case studies.

****CIVE [485](#) – Foundation Engineering**

Units: 1.5 Hours lecture-lab-tutorial: 3-0-0

Lectures: Mondays Thursdays 1:00-2:20pm

Description

Soil Investigation Programs. Soil Classification Analyses. Failure modes and bearing capacity of shallow foundations. Vertical stress distribution below a shallow foundation. Primary consolidation settlement of shallow foundations on cohesive and non-cohesive soils. Pile foundations under vertical and lateral loads. Analytical techniques for shallow and deep foundation systems design, slope stability and retaining walls design.

CIVE [512](#) - Industrial Symbiosis and Recycling Technologies

Units: 1.5 Hours lecture: 2

Lectures: Tuesdays 2:30-4:20pm

Co-teaching opportunity

Description

Reducing costs, adding value and improving the environment through the sharing of services, utility and by-products between industries. The historical development and future prospects of industrial symbiosis at the eco-park, municipal and regional scales. Advances in waste management, recycling technologies and limits to the circular economy.

Required Qualification and Experience

- The successful individual will have a Ph.D. or a Master's degree or be enrolled in a graduate program and must have relevant knowledge and experience with the subject matter. An equivalent combination of education and experience may be considered.
- Preference will be given to applicants who are registered as professional engineers (P.Eng.) Positions marked with a double asterisk (**) require the instructor to be registered as a P.Eng.
- Prior teaching experience at a university level is an asset.

Salary is commensurate with the qualifications and follows the Sessional Lecturer Salary Grid in the [Collective Agreement](#) between the University of Victoria and CUPE Local 4163 (Component 3).

The availability of this position is subject to funding and enrollment criteria. The University of Victoria reserves the right to fill additional teaching assignments from the pool of applicants for this posting.

UVic is committed to upholding the values of equity, diversity, and inclusion in our living, learning and work environments. In pursuit of our values, we seek members who will work respectfully and constructively with differences and across levels of power. We actively encourage applications from members of [groups experiencing barriers to equity](#). Read our full equity statement here: www.uvic.ca/equitystatement

To apply: Please submit an expression of interest (e.g. cover letter) Attention: Dr. Thomas Froese, Department of Civil Engineering, together with a recent CV via email to civeadmin@uvic.ca by **August 15, 2023** (or until positions are filled).

If you are a graduate student your application must include a letter of support from your supervisor(s) indicating his/her/their agreement with you applying for a position. Per Faculty of Graduate Study policy, graduate students must be completed all coursework except the thesis to be eligible to be hired as a sessional lecturer.

The anticipated date by which employment decisions will be made is **September 15, 2023**.