



COURSE OUTLINE: CIV205 - APPL MUNICIPAL SERV

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Approved: Martha Irwin - Dean

Course Code: Title	CIV205: APPLIED MUNICIPAL SERVICES
Program Number: Name	4080: CIVIL ENG TECHNICIAN
Department:	CIVIL/CONSTRUCTION
Academic Year:	2025-2026
Course Description:	Students will examine: water supply, water treatment plants, sewage disposal, garbage disposal, sewer design, government approval applications, subdivision design. Field trips to various municipal services installation works are included.
Total Credits:	4
Hours/Week:	4
Total Hours:	56
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course:	4080 - CIVIL ENG TECHNICIAN
Please refer to program web page for a complete listing of program outcomes where applicable.	VLO 1 develop and use strategies to enhance professional growth and ongoing learning in the civil engineering field.
	VLO 4 carry out sustainable practices in accordance with contract documents, industry standards and environmental legislative requirements.
	VLO 7 use industry-specific electronic and digital technologies to support civil engineering projects.
	VLO 8 participate in the design and modeling phase of civil engineering projects by applying engineering concepts, basic technical mathematics and principles of science to the review and production of project plans.
Essential Employability Skills (EES) addressed in this course:	EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 10 Manage the use of time and other resources to complete projects. EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation & Assessment Requirements:	Grade Definition Grade Point Equivalent



A+ 90 - 100% 4.00
 A 80 - 89%
 B 70 - 79% 3.00
 C 60 - 69% 2.00
 D 50 - 59% 1.00
 F (Fail) 49% and below 0.00

CR (Credit) Credit for diploma requirements has been awarded.
 S Satisfactory achievement in field /clinical placement or non-graded subject area.
 U Unsatisfactory achievement in field/clinical placement or non-graded subject area.
 X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
 NR Grade not reported to Registrar's office.
 W Student has withdrawn from the course without academic penalty.

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Demonstrate relevant mathematical, computer and technical problem solving skills as it relates to civil engineering / construction projects.	1.1 Apply Manning's equation to pipe and open channel flow designs. 1.2 Perform hydraulic and hydrologic calculations for sewer and storm systems. 1.3 Design storm and sanitary sewer systems using design flows and peak factors. 1.4 Use EPANET to model pressurized water distribution networks. 1.5 Analyze head loss, pipe material characteristics, and pump curve relationships. 1.6 Estimate flow demands and pipe sizing for watermain design. 1.7 Complete municipal service designs (storm/sanitary/water) based on Ontario Design Standards and F-6-1 procedure. 1.8 Use digital tools (e.g., Autodesk SSA, EPANET) for engineering design and analysis. 1.9 Calculate fire flow requirements for residential and commercial structures using FUS and OBC procedures.
Course Outcome 2	Learning Objectives for Course Outcome 2
2. Demonstrate an understanding of the working roles and inter-relationships required to adhere to the objectives of the project and work in accordance with labour-management principles and practices.	2.1 Differentiate responsibilities in municipal service design between consultants, contractors, and approval agencies. 2.2 Identify approval and permitting processes, including MECP Design Guidelines and EA processes. 2.3 Evaluate construction methods (e.g., open cut, trenchless, heat tracing) for service installation. 2.4 Explain the role of Official Plans and the Planning Act in civil infrastructure development. 2.5 Understand development processes including lot servicing and site planning.
Course Outcome 3	Learning Objectives for Course Outcome 3
3. Apply sound environmental practices and policies in civil engineering and construction projects.	3.1 Interpret and apply MECP sewage and drinking water design guidelines. 3.2 Analyze erosion, sediment control, and environmental assessment impacts.



3.3 Evaluate communal servicing strategies (e.g., low-pressure sewer systems).
 3.4 Discuss sustainable options for solid and hazardous waste disposal.
 3.5 Review implications of land planning, zoning, and stormwater management on natural systems.
 3.6 Explain the need for water quality preservation in water and wastewater design.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments & Projects	40%
Tests (3)	60%

Date:

July 31, 2025

Addendum:

Please refer to the course outline addendum on the Learning Management System for further information.

