



COURSE OUTLINE: CON310 - CONTRACTS AND DOCS.

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Course Code: Title	CON310: CONSTRUCTION CONTRACTS AND DOCUMENTS
Program Number: Name	4077: CNST. PROJECT MGMT.
Department:	CIVIL/CONSTRUCTION
Academic Year:	2022-2023
Course Description:	<p>This course will develop the student's understanding of the importance of construction contracts and documents as they relate to the industry. As a construction project manager, understanding contracts will play a pivotal role in the student's ability to execute projects successfully on time and on budget. Students will explore CCDC Documents as they are relied on as familiar industry standards for their fairness and balance for all parties involved in a construction project. Contract specifications such as NMS and OPS will also be covered to further the students understanding of the engineered drawing and specifications package.</p> <p>Students will also develop an understanding of the Tendering and Procurement process, including how to obtain and prepare the required submittals.</p>
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: Please refer to program web page for a complete listing of program outcomes where applicable.	4077 - CNST. PROJECT MGMT. VLO 1 Develop and use strategies to promote continuous professional learning in the construction1.industry VLO 3 Assess construction project operations for compliance with contractual obligations, applicable laws, standards, bylaws, codes and ethical practices in construction methodology. VLO 4 Analyze and monitor construction processes to ensure that sustainability practices are implemented in accordance with contract documents, industry standards and environmental legislative requirements. VLO 5 Establish and manage relationships among diverse project stakeholders to achieve construction project goals. VLO 6 Manage the production, storage, retrieval and communication of project-related digital documents6.according to best practices, to meet construction project deadlines and goals. VLO 7 Perform a feasibility study to inform decisions in the planning phase of a construction project. VLO 8 Schedule, manage and evaluate the progression of construction projects by applying the principles, practices and tools of construction project management to complete



	<p>projects on time and within budget.</p> <p>VLO 9 Prepare estimates and manage procurement processes to control costs in accordance with best practices in construction project management.</p> <p>VLO 10 Develop and oversee quality assurance and control processes involved in the completion of construction projects to meet project specifications and industry quality standards.</p> <p>VLO 11 Analyze and manage project risks to mitigate their impact throughout the construction project lifecycle.</p> <p>VLO 12 formulate human resource management strategies to optimize personnel requirements for construction project completion.</p> <p>VLO 13 Build and lead multidisciplinary teams throughout the construction project lifecycle to accomplish construction project goals.</p> <p>VLO 15 Manage a construction site including job site layout, documents, materials, tools, and equipment and the coordination of labourers and sub-contractors to ensure the successful completion of projects.</p>
Essential Employability Skills (EES) addressed in this course:	<p>EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.</p> <p>EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.</p> <p>EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.</p> <p>EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.</p> <p>EES 10 Manage the use of time and other resources to complete projects.</p> <p>EES 11 Take responsibility for ones own actions, decisions, and consequences.</p>
Course Evaluation:	<p>Passing Grade: 50%, D</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>
Other Course Evaluation & Assessment Requirements:	<p>Definition Grade Point Equivalent</p> <p>A+ 90 - 100% 4.00</p> <p>A 80 - 89%</p> <p>B 70 - 79% 3.00</p> <p>C 60 - 69% 2.00</p> <p>D 50 - 59% 1.00</p> <p>F 49% and below 0.00 (Fail)</p> <p>CR (Credit) Credit for diploma requirements has been awarded.</p> <p>S Satisfactory achievement in field /clinical placement or non-graded subject area.</p> <p>U Unsatisfactory achievement in field/clinical placement or non-graded subject area.</p>



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.

Attendance

Students are only allowed to miss three classes without a documented explanation. One mark will be deducted from your overall grade for each undocumented explanation. The maximum deduction in overall grade is not to exceed 15%. Valid documented explanation include:

- Medical reason
- Family emergency
- Childcare issue
- Transportation problems
- And any other reasonable explanation

The documented explanation must be sent to the course professor by e-mail no later than three days from a missed class. A Doctor note, etc., is to be attached as a PDF file to your e-mail.

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Develop and use strategies to promote continuous professional learning in the construction industry.	1.1 Keep abreast of changes in the construction industry in general and in the construction project management* field in particular 1.2 Seek out and act upon constructive feedback to enhance work performance 1.3 Identify the roles and benefits of professional organizations and certification e.g., Canadian Construction Association (CCA) Gold Seal Certification 1.4 Develop a plan to keep pace with and adapt to changing workforce demands and trends, as well as technological advances in the construction project management* field
Course Outcome 2	Learning Objectives for Course Outcome 2
3. Assess construction project* operations for compliance with contractual obligations, applicable laws, standards, bylaws, codes and ethical practices in construction methodology.	3.1 Determine relevant legislation and bylaws that apply to specific construction projects* 3.2 Identify and apply legal principles affecting the review and administration of contracts 3.3 Assess and interpret a range of contracts, contract offers and acceptances 3.4 Read and interpret relevant building drawings, specifications and codes, i.e., National and Ontario Building Codes 3.5 Determine required building permits and licenses and monitor construction projects* through required approval processes 3.6 Monitor that all inspections are performed and reported as required 3.7 Apply the most current information regarding codes and standards 3.8 Apply current legislation, standards, codes and regulations, occupational health and safety



	<p>and labour laws to construction projects*</p> <p>3.9 Monitor and ensure that equipment, materials and practices adhere to current relevant law, legislation, standards, codes and bylaws</p> <p>3.10 Identify codes of ethics of the applicable provincial associations, societies or workplaces</p> <p>3.11 Apply ethical reasoning to social and contractual issues that evolve when overseeing a construction project*</p>
Course Outcome 3	Learning Objectives for Course Outcome 3
<p>4. Analyze and monitor construction processes to ensure that sustainability practices* are implemented in accordance with contract documents, industry standards and environmental legislative requirements</p>	<p>4.1 Identify legislative requirements for environmental compliance</p> <p>4.2 Analyze impact studies and assessments and report the results to project stakeholders*</p> <p>4.3 Identify and attempt, where possible, to reduce the negative economic, social and environmental impacts of construction projects*</p> <p>4.4 Monitor environmental site assessments and document identified remediation strategies implemented</p> <p>4.5 Apply the principles of sustainable development, combining environmental stewardship and economic performance in project work</p> <p>4.6 Promote sustainability practices* across the building lifecycle and rehabilitation/renewal practices</p> <p>4.7 Recommend the use of sustainable construction materials, methods and systems to reduce impact on the environment</p> <p>4.8 Direct subcontractors to conform to the environmental protection laws and regulations</p> <p>4.9 Review and submit relevant documentation for green certification</p>
Course Outcome 4	Learning Objectives for Course Outcome 4
<p>5. Establish and manage relationships among diverse project stakeholders* to achieve construction project* goals.</p>	<p>5.1 Obtain contracts with architects, vendors, contractors and other workers</p> <p>5.2 Use conflict/dispute resolution strategies to resolve conflicts arising during the implementation of construction projects*</p>
Course Outcome 5	Learning Objectives for Course Outcome 5
<p>6. Manage the production, storage, retrieval and communication of project-related digital documents according to best practices, to meet construction project* deadlines and goals.</p>	<p>6.1 Apply principles of records management to hard copy and digital project records</p> <p>6.2 Retrieve and review a range of construction drawings such as architectural, structural, plumbing, electrical and HVAC drawings</p> <p>6.3 Develop project records including equipment and material inventories, time sheets, projected-related and actual-costs records and quality assurance and control* records</p>

	<p>6.4 Manage the distribution, storage and retrieval of hard copy and digital project documents</p> <p>6.5 Ensure accurate, clear and timely project-evaluation records</p> <p>6.6 Establish criteria, organize, coordinate and prepare documents according to industry standards e.g., Canadian Construction Documents Committee (CCDC)</p> <p>6.7 Prepare and present formal technical reports, budget forecasts and project estimates</p> <p>6.8 Use and share project data in accordance with relevant privacy legislation, guidelines and data sharing agreements</p>
Course Outcome 6	Learning Objectives for Course Outcome 6
7. Perform a feasibility study to inform decisions in the planning phase of a construction project*.	<p>7.1 Consult with project stakeholders* and regulatory authorities to determine scope of construction project*</p> <p>7.2 Perform appraisals of project goals, deliverables, approaches and finances to determine project feasibility</p> <p>7.3 Assess requirements for business planning and management based on project stakeholders* needs</p> <p>7.4 Evaluate historical, geographical and environmental site information for use in planning construction projects*</p> <p>7.5 Align project goals with preliminary drawings and specifications</p> <p>7.6 Assess the need for construction equipment considering equipment capabilities and/or production rates</p>
Course Outcome 7	Learning Objectives for Course Outcome 7
8. Schedule, manage and evaluate the progression of construction projects* by applying the principles, practices and tools of construction project management* to complete projects on time and within budget.	<p>8.1 Evaluate financial resources, human resources and time-lines of construction projects*</p> <p>8.2 Resolve problems that arise related to inclement weather, emergencies or unforeseen circumstances and adapt the schedule as necessary</p>
Course Outcome 8	Learning Objectives for Course Outcome 8
9. Prepare estimates and manage procurement processes to control costs in accordance with best practices in construction project management*.	<p>9.1 Review offers and quotes by subcontractors or vendors</p> <p>9.2 Select and use software for costing analysis, forecasting and budgeting</p> <p>9.3 Prepare and submit accurate preliminary and detailed budget estimates</p> <p>9.4 Calculate accurate updated cost estimates and actual costs</p>
Course Outcome 9	Learning Objectives for Course Outcome 9

10. Develop and oversee quality assurance and control* processes involved in the completion of construction projects* to meet project specifications and industry quality standards.	10.1 Ensure that project cost and timelines remain within desired limits 10.2 Create deficiency lists and recommend solutions 10.3 Monitor, report and correct deficiencies and non-compliance with project specifications 10.4 Resolve project quality and cost deviations 10.5 Meet relevant quality specifications and standards such as Canadian Standards Association (CSA), ASTM International Standards for Building Design and Construction
Course Outcome 10	Learning Objectives for Course Outcome 10
11. Analyze and manage project risks to mitigate their impact throughout the construction project lifecycle*.	11.1 Use data gathering techniques, e.g., brainstorming, SWOT analysis or interviewing, to identify project risks throughout the construction project life cycle* 11.2 Complete a risk analysis to determine risks associated with specific construction projects* e.g., socioeconomic factors, environmental requirements, organizational relationships or technological problems associated with the design, site or construction processes 11.3 Plan and implement strategies to eliminate or mitigate identified projects risks
Course Outcome 11	Learning Objectives for Course Outcome 11
13. Build and lead multidisciplinary teams throughout the construction project lifecycle* to accomplish construction project* goals.	13.1 Use conflict resolution skills to resolve workplace discord 13.2 Develop and implement strategies to effectively manage changes in project scope, time and budget
Course Outcome 12	Learning Objectives for Course Outcome 12
15. Provide knowledge necessary to manage a construction site including job site layout, manage documents, materials, tools, and equipment as well as coordinate labour and sub-contracts.	15.1 Plan construction site layout. 15.2 Manage site labour and sub-contractors 15.3 Identify concepts related to quality 15.4 Establish Monitoring Programs 15.5 Project Closeout procedures.
Course Outcome 13	Learning Objectives for Course Outcome 13
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Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	20%
Final Exam	25%
Midterm Exam	25%



	Participation	15%
	Quizzes	15%

Date: January 9, 2023

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