



COURSE OUTLINE: OEL874 - GREEN BUILDING

Prepared: Vaughan Smith

Approved: Lori Crosson, Director, E-Learning and Continuing Education

Course Code: Title	OEL874: GREEN BUILDING CONTSTRUCTION PRACTICES	
Program Number: Name	4089: COM CONSTRUCT MGMNT	
Department:	DISTANCE EDUCATION	
Semesters/Terms:	20S, 20F, 21W	
Course Description:	<p>Students explore many facets of green building in the construction industry from a contractor's (builder's) perspective. Students will gain knowledge to assist in the bid, procurement, build and close out phases of green building projects. Renewable and non-renewable energy sources, project delivery methods, Canada Green Building Council (CaGBC) and various ratings systems such as LEED, Green Globes, Net Zero Energy etc. with emphasis on new construction are addressed.</p> <p>In this online course, students participate in readings, quizzes, research, reports and discussions.</p>	
Total Credits:	3	
Hours/Week:	3	
Total Hours:	42	
Prerequisites:	There are no pre-requisites for this course.	
Corequisites:	There are no co-requisites for this course.	
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 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:	Passing Grade: 50%,	
Course Outcomes and Learning Objectives:	Course Outcome 1	Learning Objectives for Course Outcome 1
	Differentiate between sustainable construction and green building.	<p>Discuss the importance of sustainability as it relates to the construction industry as well as the environment.</p> <p>Explain how green building relates to sustainability when referring to a green construction project.</p>
		Summarize necessary key concepts to become a green



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	contractor. Demonstrate an understanding of greenhouse gas effect as it affect global warming.
Course Outcome 2	Learning Objectives for Course Outcome 2
Analyze the value of conservation of materials and resources against the consequences of natural resource depletion.	<p>Explain the effective of waste from construction site as it relaes to greenhouse gas effect.</p> <p>Discuss the importance of measurable green criteria as it relates to the designer of a green project</p> <p>Outline two common material conservation strategies when considering green construction</p> <p>Apply the 5 R's of construction waste management on a green building project site</p>
Course Outcome 3	Learning Objectives for Course Outcome 3
Articulate the application of renewable resources when building green for residential or commercial projects.	<p>Discuss the environmental impact of the various non-renewable energy sources.</p> <p>Evaluate the application of the various renewable energy sources when building green.</p> <p>Demonstrate the effectiveness off the various renewable energy sources when they are employed in a building green project.</p> <p>Outline the future change/demand in outlook for energy.</p>
Course Outcome 4	Learning Objectives for Course Outcome 4
Explore building green performance rating systems such as LEED, BREEAM, Green Globe, and Net Zero Energy	<p>Explain what a green building rating system is.</p> <p>Demonstrate the application of the six categories used in the LEED rating system.</p> <p>Outline four dimensions of the BREEAM used to assess the energy and environmental performance of a commercial building.</p> <p>Asses Green Globe rating system in comparison to LEED or BREEAM.</p> <p>Discuss the Net-Zero Energy Building as it relates to a rating system.</p>
Course Outcome 5	Learning Objectives for Course Outcome 5
Examine the risks imposed when implementing green construction.	<p>Discuss the 4 risk management methods a general contract may experience on a green project.</p> <p>Explain how a contractor's risks differs in a green project under a Design Bid Build and Design Build arrangement.</p> <p>List the risk of contracting to subcontractors as it relates to a green project.</p>
Course Outcome 6	Learning Objectives for Course Outcome 6



	Discuss the product life cycle process in the selection and procurement of green building materials	<p>Discuss why the product life cycle analysis (LCA) is best suited for green construction.</p> <p>Explain how building deconstruction differs from demolition.</p> <p>Outline how Descriptive, Prescriptive, and Performance specifications differ.</p> <p>Discuss the 5 main characteristics associated with a green building product.</p> <p>Explain the steps when assembling a green RFQ for a specialty trade.</p>
	Course Outcome 7	Learning Objectives for Course Outcome 7
	Outline considerations required when implementing green procurement strategy	<p>List 3 needs to consider when employing of a green workforce.</p> <p>Outline two common material conservation strategies when considering green construction.</p> <p>Prepare a strategy to create an environmentally friendly job site beyond those requirements mandated in contract documents.</p>
	Course Outcome 8	Learning Objectives for Course Outcome 8
	Outline site layout considerations to optimize green principles for a proposed construction project from a general contractor's (builder's) perspective	<p>Discuss the importance of a construction waste management initiative.</p> <p>Apply the 5 R's of construction waste management to a green building construction site.</p> <p>Prepare a strategy to create an environmentally friendly job site beyond those requirements mandated in contract documents.</p> <p>List 3 green document submittals for a typical green project.</p>
	Course Outcome 9	Learning Objectives for Course Outcome 9
	Identify key factors when commissioning a green building project	<p>Explain the function of Building Commissioning for a green building.</p> <p>Describe any 4 benefits of Building Commissioning to an owner.</p> <p>Present the 5 headings of a typical building commissioning process.</p> <p>List 6 of the typical commissioning authority responsibilities common to a green building strategy.</p>

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignment Five:Research Building Green Topic	15%
Assignment Four: Construction Gren Site Set-up	15%
Assignment One: Alternate Engergy Source	15%
Assignment Three: Green Procurement	15%
Assignment Two: Green Building Project	10%

	Discussions 3	12%
	Quizzes 6	18%
Date:	March 9, 2020	
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.	