

**Student Learning Outcomes (SLO) - Course Learning Outcomes (CLO)**  
**AY 2019-2020 Direct Assessment Results Scorecard**

6/22/2020

SLO	ACCE SLO Description	Course Number and Name	Course		Assessment Performance Criteria			Goal	
			CLO #	Course CLO Description	Tool	Stated *	Fall '19	Spring '20	Met
#1	Create written communications appropriate to the construction discipline.	CMGT 460, Legal Aspects	#1	Be able to prepare a written report/analysis of a construction project and/or dispute, addressing contract preparation, contractor performance, owner breach, and the contractor's damages.	Arbitration Brief Paper	85%/73%	98%/73%	97%/73%	Yes
#2	Create oral presentations appropriate to the construction discipline.	CMGT 332, Construction Methods Analysis	#1	Have created several oral presentations to demonstrate their knowledge of construction methods analysis.	Assignment #11	85%/73%	92%/73%	92%/73%	Yes
#3	Create a construction project safety plan.	CMGT 360, Construction Project Management	#8	Create a project specific safety plan, including site utilization, job hazard analysis, and tool box meetings.	Writing Assignment #2	85%/73%	96%/73%	N/A, goal met in Fall	Yes
#4	Create construction project cost estimates.	CMGT 450, Construction (Building) Estimating	#7	Create a preliminary estimate consisting of direct costs, indirect costs and margin.	Labs 1-7	85%/73%	74%/73%	74%/73%	No
#4	Create construction project cost estimates.	CMGT 458, Heavy Construction Estimating	#11	Be able to create an Earthwork Cost Estimate.	Labs 1-6, 8, 10, 11	85%/73%	85%/73%	86%/73%	Yes
#5	Create construction project schedules.	CMGT 457, Project Control and Scheduling	#1	1. Create a construction project schedule which meets project milestone dates using the critical path method	Lab 2, 3, 5, 6, 7, 8	85%/73%	84%/73%	92%/73%	Yes
#6	Analyze professional decisions based on ethical principles.	CMGT 450, Construction (Building) Estimating	#6	Analyze various ethical dilemmas and potential options to reach an ethical decision as it applies to construction estimating.	Activity 8	85%/73%	98%/73%	97%/73%	Yes
#6	Analyze professional decisions based on ethical principles.	CMGT 462, Construction Contracts	#2	Analyze ethical situations and defend a decision or action based on that evaluation	Exam 1	85%/73%	89%/75%	62%/73%	No

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#7	Analyze construction documents for planning and management of construction processes.	CMGT 457, Project Control and Scheduling	#2	Separate, diagram, and sequence unique scopes of work which are detailed in a project's construction documents	Lab 1 & 4	85%/73%	73%/73%	87%/73%	Yes
#8	Analyze methods, materials, and equipment used to construct projects.	CMGT 335, Construction Equipment	#2	Be able to balance a load and haul operation using the correct number of haul units and calculate the production rate.	Exam #2, Part 1	85%/73%	91%/73%	N/A, goal met in Fall	Yes
#8	Analyze methods, materials, and equipment used to construct projects.	CMGT 332, Construction Methods Analysis	#2	Have analyzed construction documents and project models to plan and determine the means and methods to manage a construction project.	Quiz 2	85%/73%	63%/73%	67%/73%	No
#9	Apply construction management skills as an effective member of a multi-disciplinary team.	CMGT 332, Construction Methods Analysis	#3	Have participated on a multi-disciplinary team to apply construction method analysis principles and concepts to a construction project.	Quiz 12	85%/73%	92%/73%	92%/73%	Yes
#10	Apply electronic-based technology to manage the construction process.	CMGT 457, Project Control and Scheduling	#3	Use software to track construction progress, forecast when future activities need to occur, and create documents commonly used in construction management	Lab 8	85%/73%	100%/73%	83%/73%	No

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#11	Apply basic surveying techniques for construction layout and control.	CMGT 330, Principles of Soil Mechanics and Foundations	#3	Using conventional equipment, perform simple operations to illustrate the principles of horizontal and vertical control.	Lab 1-4, Quiz 9, Final Exam	85%/73%	70%/73%	Fall Faculty	No
#11	Apply basic surveying techniques for construction layout and control.	CMGT 330, Principles of Soil Mechanics and Foundations	#3	Have applied basic surveying techniques for construction layout and control	Assignment #7	85%/73%	Spring Faculty	86%/73%	Yes
#12	Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process	CMGT 360, Construction Project Management	#6	Be familiar with contract pricing methods to include Negotiated, Sole Source, Lump Sum, Unit Price, Cost Plus, Guarantee Maximum Price, and have an understanding of contract procurement management for all delivery systems.	Exam #1, Part 2	85%/73%	88%/73%	N/A, goal met in Fall	Yes
#13	Understand construction risk management.	CMGT 460, Legal Aspects	#3	Be able to recognize, in the construction management field, risks and understand the options available to manage these risks.	Final Exam	85%/73%	74%/73%	68%/73%	No
#13	Understand construction risk management.	CMGT 462, Construction Contracts	#3 & #6	#3 - Understand taxtics used to mitigate risk in construction contracting #6 - Understand the risks imposed on the construction industry by regulator agencies	Exam 1 & 2	85%/73%	66%/73%	60%/73%	No
#14	Understand construction accounting and cost control.	CMGT 455, Construction Cost Management	#4	Understand simple construction accounting operations and the basic elements of cost control.	Activity 2	85%/73%	25%/73%	77%/73%	No

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#15	Understand construction quality assurance and control.	CMGT 455, Construction Cost Management	#6	Understand how Quality Assurance and Quality Control are linked to the overall health of a construction project and how they are different. Reinforce the relationship between good quality and project performance.	QA/QC/TQM Written Assignment	85%/73%	91%/73%	80%/73%	Yes
#16	Understand construction project control processes.	CMGT 455, Construction Cost Management	#2	Incorporate cost control elements into functioning control systems, illustrating their benefit to the successful management of construction projects.	Activity 4	85%/73%	94%/73%	91%/73%	Yes
#17	Understand the legal implications of contract, common, and regulatory law to manage a construction project.	CMGT 460, Legal Aspects	#4	Understand the legal implications of contract, common, and regulatory law to manage a construction project	Final Exam	85%/73%	74%/73%	68%/73%	No
#17	Understand the legal implications of contract, common, and regulatory law to manage a construction project.	CMGT 462, Construction Contracts	#4	Comprehend the legal implications of contract language related to the responsibilities of the various parties to a construction contract	Exams 1, 2, 3	85%/73%	53%/73%	35%/73%	No
#18	Understand the basic principles of sustainable construction.	CMGT 235, Electrical and Mechanical Systems	#1	Understand sustainable options for plumbing systems	Quiz 12	85%/73%	100%/73%	74%/73%	No

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#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#3	Demonstrate the ability to construct shear force and bending moment diagrams for transversely loaded elements.	Final Exam, Question 1	85%/73%	86%/73%	N/A, goal met in Fall	Yes
#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#4	Demonstrate the ability to analyze and design steel and timber beams for shear and moment and to check beam deflections under given loading.	Final Exam, Question 2	85%/73%	96%/73%	N/A, goal met in Fall	Yes
#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#6	Demonstrate the ability to analyze steel and timber columns	Final Exam, Question 5	85%/73%	88%/73%	N/A, goal met in Fall	Yes
#20	Understand the basic principles of mechanical, electrical and plumbing systems.	CMGT 235, Electrical and Mechanical Systems	#2	Understand components using correct terminology and nomenclature for mechanical, electrical, and plumbing systems.	Final Exam (F) / Skill Reviews (S)	85%/73%	83%/73%	80%/73%	No
<p>* The first percentage represents the percentage of students scoring above the minimum score.                      The second percentage represents the minimum score.                      Therefore, the stated performance criteria is defined that X% of students shall score X%, or greater, on a given assessment.</p>									