

Student Learning Outcomes (SLO)
Course Learning Outcomes (CLO)
Assessment Tools

SLO	ACCE SLO Description	Course Number and Name	Course CLO #	Course CLO Description	Assessment Tool
#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.	Written Paper
#2	Create oral presentations appropriate to the construction discipline.	CMG 332, Construction Methods Analysis	#1	Have created several oral presentations to demonstrate their knowledge of construction methods analysis.	Presentation
#3	Create a construction project safety plan.	CMGT 360, Construction Project Management	#2	Create a project specific safety plan detailing project specific hazards and remediation.	Safety Plan Assignment
#4	Create construction project cost estimates.	CMGT 450, Constrution (Building) Estimating	#6	Create a preliminary estimate consisting of direct costs, indirect costs and margin.	Lab 7
#4	Create construction project cost estimates.	CMGT 450, Constrution (Building) Estimating	#6	Create a preliminary estimate consisting of direct costs, indirect costs and margin.	Lab 8
#4	Create construction project cost estimates.	CMGT 458, Heavy Construction Estimating	#11	Be able to create an Earthwork Cost Estimate.	Activity 8
#5	Create construction project schedules.	CMGT 457, Project Control and Scheduling	#1	Analyze project control documents (including narratives) and know how they fit into the construction process.	Lab 6
#5	Create construction project schedules.	CMGT 457, Project Control and Scheduling	#1	Analyze project control documents (including narratives) and know how they fit into the construction process.	Final Exam

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SLO	ACCE SLO Description	Course Number and Name	Course CLO #	Course CLO Description	Assessment Tool
#6	Analyze professional decisions based on ethical principles.	CMGT 450, Constrution (Building) Estimating	#7	Analyze various ethical dilemmas and potential options to reach an ethical decision as it applies to construction estimating.	Written Paper
#6	Analyze professional decisions based on ethical principles.	CMGT 460, Legal Aspects	#2	Be able to analyze fact patterns, involving the construction profession, based upon ethical principles.	Quiz
#7	Analyze construction documents for planning and management of construction processes.	CMGT 360, Construction Project Management	#5	Write scopes of work, contracts, Notices to Proceed, Change Orders, Request for Information, Transmittals, develop Schedule of Values, and process Applications for Payment. Understand public/private procurement processes, documentation and public force accounts. Fully understand the concept of building commissioning.	Midterm Exam
#7	Analyze construction documents for planning and management of construction processes.	CMGT 457, Project Control and Scheduling	#2	Analyze project control documents (including narratives) and know how they fit into the construction process.	Lab 3
#7	Analyze construction documents for planning and management of construction processes.	CMGT 457, Project Control and Scheduling	#2	Analyze project control documents (including narratives) and know how they fit into the construction process.	Lab 7
#7	Analyze construction documents for planning and management of construction processes.	CMGT 457, Project Control and Scheduling	#6	Analyze how costs and schedules are related.	Quiz 2
#7	Analyze construction documents for planning and management of construction processes.	CMGT 457, Project Control and Scheduling	#6	Analyze how costs and schedules are related.	Midterm Exam

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#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.	Assignment
#8	Analyze methods, materials, and equipment used to construct projects.	CMGT 335, Construction Equipment	#2	Analyze equipment data and principles of soil mechanics to calculate the requirements of critical components of earthwork construction.	Quiz
#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.	Assignment
#10	Apply electronic-based technology to manage the construction process.	CMGT 110, Construction Graphics	#4	Demonstrate Skills in the basic Building and Manipulation of 3D Computer Models.	Activity 3
#10	Apply electronic-based technology to manage the construction process.	CMGT 110, Construction Graphics	#4	Demonstrate Skills in the basic Building and Manipulation of 3D Computer Models.	Activity 5
#10	Apply electronic-based technology to manage the construction process.	CMGT 110, Construction Graphics	#4	Demonstrate Skills in the basic Building and Manipulation of 3D Computer Models.	Activity 7
#10	Apply electronic-based technology to manage the construction process.	CMGT 210, Analysis of Pland and Specifications	#5	Apply the ability to successfully use OnScreen Takeoff (OST), PlanGrid, and Bluebeam Revu software	Activity 1
#10	Apply electronic-based technology to manage the construction process.	CMGT 210, Analysis of Pland and Specifications	#5	Apply the ability to successfully use OnScreen Takeoff (OST), PlanGrid, and Bluebeam Revu software	Activity 5

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#10	Apply electronic-based technology to manage the construction process.	CMGT 210, Analysis of Plans and Specifications	#5	Apply the ability to successfully use OnScreen Takeoff (OST), PlanGrid, and Bluebeam Revu software	Activity 8
#11	Apply basic surveying techniques for construction layout and control.	CMGT 330, Principles of Soil Mechanics and Foundations	#3	Have applied the basic surveying techniques for construction layout and control.	Quiz
#11	Apply basic surveying techniques for construction layout and control.	CMGT 335, Construction Equipment	#5	Analyze information on current GPS techniques, equipment, and software to determine best practices in project layout and control for mobile equipment.	Quiz
#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	#3	Understand when and where to use different methods for project delivery and the responsibilities of those involved in the design and construction process.	Midterm Exam
#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	#7	Analyze 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.	Midterm Exam
#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.	Exam
#14	Understand construction accounting and cost control.	CMGT 455, Construction Cost Management	#4	Understand simple construction accounting operations and define the basic elements of construction cost control.	Lab

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#15	Understand construction quality assurance and control.	CMGT 455, Construction Cost Management	#6	Understand how the defining tenants of Quality Assurance and Quality Control are linked to the overall health of a construction project. Reinforce the relationship between good quality and project performance.	Quiz
#16	Understand construction project control processes.	CMGT 455, Construction Cost Management	#2	Understand the basic elements of cost control and incorporate them into functioning control systems, illustrating their benefit to the successful management of construction projects.	Lab
#17	Understand the legal implications of contract, common, and regulatory law to manage a construction project.	CMGT 462, Construction Contracts	#4	Understand organization of and primary Federal and CA State Labor Laws.	Exam
#17	Understand the legal implications of contract, common, and regulatory law to manage a construction project.	CMGT 462, Construction Contracts	#6	Understand and Analyze Federal, California State, and Private entity Project Contracts, Subcontracts, and Purchase Orders.	Exam
#18	Understand the basic principles of sustainable construction.	CMGT 235, Electrical and Mechanical Systems	#1	Understand sustainable options for MEP scopes.	Skill Review #2
#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#2	Demonstrate the ability to construct shear force and bending moment diagrams for transversely loaded elements.	Quiz
#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#2	Demonstrate the ability to construct shear force and bending moment diagrams for transversely loaded elements.	Final Exam

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#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#3	Demonstrate the ability to analyze and design steel and timber beams for shear and moment and to check beam deflections under given loading.	Quiz
#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#3	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
#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#4	Demonstrate the ability to analyze steel and timber columns	Quiz
#19	Understand the basic principles of structural behavior.	CMGT 345, Mechanics of Materials	#4	Demonstrate the ability to analyze steel and timber columns	Final Exam
#20	Understand the basic principles of mechanical, electrical and plumbing systems.	CMGT 235, Electrical and Mechanical Systems	#3	Understand plumbing components using correct terminology and nomenclature.	Exam 1
#20	Understand the basic principles of mechanical, electrical and plumbing systems.	CMGT 235, Electrical and Mechanical Systems	#7	Understand HVAC components using correct terminology and nomenclature.	Exam 2
#20	Understand the basic principles of mechanical, electrical and plumbing systems.	CMGT 235, Electrical and Mechanical Systems	#9	Understand the fundamental units of electricity, such as resistance, current, voltage, power, and energy, and solve problems using them.	Exam 3