

Course Student Learning Outcome Data - Summary

Course Student Learning Outcome Comparison:	Spring 2017	Summer 2017	Fall 2017	Spring 2018	Summer 2018	Fall 2018
CDT 205 Fundamentals of Surveying	Not Offered		Not Offered	Not Offered		Not Offered
1 The student is familiar with surveying instruments.		3.07			3.25	
2 The student proficiently operates surveying equipment.		3.27			3.19	
3 The student is knowledgeable of the correct manner for entering data in the field notebook		3.00			3.25	
4 The student understands the math of surveying necessary to solve taping, transit, traverse and elevation calculations.		3.00			3.38	
5 The student is able to layout a simple building using building dimensions and surveying notes.		3.00			3.31	
6 The student is able to work as a team in a survey party.		3.47			3.65	
CDT 225 Mechanics and Strengths of Structures	Not Offered	Not Offered		Not Offered	Not Offered	
1 Determine the forces acting through members of a truss by use of the Method of Joints and the Method of Sections.			3.03			2.78
2 Find pin reactions using the Method of Members and calculate support reactions.			3.00			3.06
3 Determine the centroid and moment of inertia of a composite shape beam.			3.41			3.06
4 Draw a load, shear, and moment diagram for a loaded beam.			3.09			3.28
5 Determine the bending stress and shear stress for a loaded beam.			3.06			3.25
CMT 101s Construction Materials and Methods		Not Offered				
1 The student understands the total building process for a construction project from the site investigation stage to the finish stage.	3.67		3.00	3.38	3.50	3.04
2 The student is knowledgeable about the various materials used in each stage of construction.	3.50		3.00	3.63	3.38	3.18
3 The student understands the techniques and methods used with the different materials commonly used in construction.	3.33		3.00	3.38	3.50	3.32
4 The student knows the sizes of basic building components.	3.00		3.03	3.75	3.38	3.18
5 The student has the ability to specify materials with essential characteristics in mind.	3.33		3.21	3.38	3.38	3.05
CMT 102 Construction Blueprint Reading	Not Offered		Not Offered	Not Offered		Not Offered
1 The student has acquired the ability to visualize the three basic views of the building from a pictorial view.		3.00			3.00	
2 The student can identify the various parts of the building and the location of its equipment from working drawings.		3.00			3.20	
3 The student can use the architect scale to find dimensions and distances on working drawings.		3.44			3.47	
4 The student has the ability to make mathematical calculations, such as, dimensions, areas, ect. Based on working drawings.		3.56			3.40	
5 The student understands the specification documents and their application to the actual construction process.		3.19			3.27	
CMT 114 10 hr OSHA Construction Safety	Not Offered	Not Offered		Not Offered	Not Offered	
1 Recognize basic safety hazards on a construction site and standard prevention measures.			4.00			4.00
CMT 120 Construction Problem Solving						
1 The student knows how to create a spreadsheet in Microsoft Excel.	3.50	3.75	3.00	3.08	3.63	3.30
2 The student knows how to work right triangle trig problems and can use the Law of Sine, Law of Cosine in site layout.	3.63	3.63	3.35	3.08	3.94	3.50
3 The student can use a construction calculator to find lengths, areas, volumes, board feet, rafter lengths, stair layout, and other construction problems.	3.25	3.75	3.35	3.00	3.88	3.30
CMT 140 Concrete Testing	Not Offered	Not Offered		Not Offered	Not Offered	
1 The student will understand how concrete develops strength through hydration			3.75			3.75
2 The student will understand how strength is affected by composition			3.57			3.36
3 The student will understand how strength is affected by curing conditions			3.57			3.36
CMT 156 Contracting and Construction Law		Not Offered	Not Offered		Not Offered	Not Offered
1 The student understands the basic principles of contracts and how they relate to the building process.	3.41			3.50		
2 The student understands the basic principles of business organization and how they relate to the building process.	3.24			3.40		
3 The student knows the major types of construction contracts and how they are formed.	3.29			3.40		
4 The student understands selected issues related to construction contract performance.	3.12			3.50		
5 The student understands the importance of Ethics related to construction contract performance.	3.41			3.40		
CMT 161 Introduction to Sustainable Construction						
1 The student is familiar with sustainable construction practices and related efficiency standards.	3.17	3.60	3.44	3.40	3.39	3.38
2 The student is knowledgeable about the building science behind green construction.	3.50	3.40	3.50	3.60	3.33	3.38
3 The student is able to communicate effectively through presentation of the semester research project to the class peers.	3.25	3.40	3.39	3.40	3.61	3.50
CMT 205s Construction Management		Not Offered	Not Offered		Not Offered	Not Offered

1	The student understands the construction management topics of project delivery methods, contract pricing methods, subcontracting, and material management.	3.50			3.60		
2	The student understands the construction management topics of submittals, project start-up, field questions, and progress payments.	3.83			3.60		
3	The student understands the construction management topics of safety plans, change orders, and project delivery.	3.67			3.50		
4	The student understands the different types of legal structure for a company. The student is able to analyze the pros and cons for such legal structures.	3.83			3.30		
5	The student understands equipment depreciation methods and is able to calculate equipment depreciation.	3.67			3.70		
CMT 206 Construction Estimating			Not Offered	Not Offered		Not Offered	Not Offered
1	The student understands the general methods and procedures that form the basis for an effective estimating system.	3.43			3.14		
2	The student can make quantity surveys from working drawings and specifications.	3.39			3.00		
3	The student can develop unit costs for specific segments of a building project.	3.46			3.50		
4	The student understands how to include subcontractor costs in the overall project estimate.	3.57			3.14		
5	The student understands the major considerations involved in the total pricing of a construction project.	3.71			3.07		
CMT 209 Electrical and Mechanical Equipment in Buildings		Not Offered	Not Offered		Not Offered	Not Offered	
1	The student will identify components of a plumbing systems			3.06			3.67
2	The student will identify components of a electrical systems			3.00			3.50
3	The student will identify components of a HVAC systems			3.25			3.67
4	The student will be knowledgeable of hardware comprising the plumbing, HVAC and electrical systems			3.31			3.53
5	The student will calculate the required load calculation to identify electrical demand for a typical house.			3.63			3.13
6	The student will calculate the required BTU calculation to identify HVAC demand for a typical house.			3.44			3.20
CMT 217 Software Applications in Construction		Not Offered	Not Offered		Not Offered	Not Offered	
1	The student understands the process of creating a construction project schedule.		All Fall 2017 outcomes at 3 or above.				3.17
2	The student understands the various activities and their functions involved.						3.08
3	The student is able to calculate start, finish, and floats for various activities.						3.08
4	The student can create a CPM schedule for a small typical construction project and calculate forward, backward, and activity floats.		Outcomes were revised and updated for Fall 2018.				3.00
5	The student is able to graphically demonstrate a basic project schedule with all the required activity calculations on the diagram..						3.08
6	The student can calculate progress payments and retention accounts.						3.00
AET 101s: Architectural Drawing			Not Offered			Not Offered	
1	The student knows how to letter.	3.58		3.83	3.40		3.71
2	The student understands the concepts used in line value, orthographic projections, sections, isometric drawings and oblique drawings.	3.92		4.00	3.80		3.86
3	The student knows how to dimension architectural working drawings.	3.42		3.75	3.40		3.23
4	The student understands the concepts and techniques needed to draw freehand technical sketches.	4.00		4.00	3.90		4.00
5	The student understands how to lay out and draw schedules for finish, windows, and doors.	4.00		3.33	3.50		3.36
6	The student knows how to lay out and draw a floor plan.	2.73		3.75	3.80		3.50
7	The student knows how to draw elevations.	2.73		3.75	3.80		3.50
8	The student knows how to lay out and draw architectural details in a variety of scales	2.91		3.33	3.50		3.36
AET 233 Structural Design of Buildings			Not Offered	Not Offered		Not Offered	Not Offered
1	The student knows how to design structural building components with wood.	3.50			3.06		
2	The student knows how to design structural building components with concrete.	3.67			3.15		
3	The student knows how to design structural building components with steel.	3.17			3.15		
AET 241 Building and Zoning Code			Not Offered	Not Offered		Not Offered	Not Offered
1	The student has an understanding of fire and life safety principles, design, and terminology.	3.15			3.43		
2	The student understands fire protection of structural systems, construction classifications, egress design, and fire rated opening protection.	3.46			3.14		
3	The student can practically apply building code requirements to typical examples of building planning practices	3.69			3.21		
4	The student is familiar with building codes and zoning terms and their application.	3.62			3.21		
AET 191 Basic Building Information Modeling			Not Offered			Not Offered	
1	The student will be knowledgeable about the basics of BIM software and how it can be used on the jobsite.	3.50		3.46	3.33		3.63
2	The student will be able to create 3d architectural models using BIM software.	3.25		3.33	3.39		3.33
3	The student will be able to create 2d working drawings from a 3d BIM model.	3.20		3.42	3.72		3.50