

Course Student Learning Outcome Data - Summary

Course Student Learning Outcome Comparison:	Fall 2013	Spring 2014	Summer 2014	Fall 2014	Spring 2015	Summer 2015
AET 101s Architectural Drawing Semester Averages			Not Offered			Not Offered
1 The student knows how to letter.	3.29	2.63			3.30	
2 The student understands the concepts used in line value, orthographic projections, sections, isometric drawings and oblique drawings.	3.21	3.88			3.70	
3 The student knows how to dimension architectural working drawings.	3.42	3.06			3.30	
4 The student understands the concepts and techniques needed to draw freehand technical sketches.	3.33	3.88			3.60	
5 The student understands how to lay out and draw schedules for finish, windows, and doors.	3.13	N/A			3.57	
6 The student knows how to lay out and draw a floor plan.	3.25	3.06			3.29	
7 The student knows how to draw elevations.	3.29	3.19			3.29	
8 The student knows how to lay out and draw architectural details in a variety of scales	3.13	N/A			3.29	
AET 103 Working Drawings	Not Offered		Not Offered	Not Offered		Not Offered
1 Layout and Draw a plot Plan		4.00			3.00	
2 Layout and Draw a Foundation Plan		4.00			3.00	
3 Layout and Draw floor plans, elevations and details		4.00			4.00	
4 Write a set of Specifications		4.00			3.00	
AET 110 Basic Architectural CAD		Not Offered		Not Offered		Not Offered
1 The student can use layers to organize the drawings.	3.80		4.00		4.00	
2 The student can plot drawings including multiple viewports.	3.40		4.00		4.00	
3 The student can draw a floor plan.	4.00		3.63		3.88	
4 The student can draw an elevation.	3.70		3.63		4.00	
5 The student can draw detail.	3.80		3.38		4.00	
6 The student can create schedules.	4.00		4.00		4.00	
AET 182A Special Topics in Architectural Desktop	Not Offered	Not Offered		Not Offered	Not Offered	
1 The student will be able to create detail views using Autodesk Architecture software.			3.83			4.00
2 The student will be able to create 3d architectural models using Autodesk Architecture software.			4.00			4.00
3 The student will be able to create 2d working drawings from a 3d model.			4.00			4.00
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.		4.00			3.44	
2 The student knows how to design structural building components with concrete.		3.50			3.33	
3 The student knows how to design structural building components with steel.		3.70			3.28	
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, designed, and terminology.		3.70			3.46	
2 The student has an understanding of code requirements, such as fire protection of structural systems, construction classifications, egress design, fire testing procedures and fire rated opening protection.		3.70			3.23	
3 The student can practically apply building code requirements to typical examples of building planning practices		3.70			3.54	
4 The student is familiar with zoning terms and their application.		3.70			3.23	
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.	3.36	3.75				
2 The student will be able to create 3d architectural models using BIM software.	3.36	4.00				
3 The student will be able to create 2d working drawings from a 3d BIM model.	3.36	3.75				
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. Test #2	3.13			3.07		
2 Find pin reactions using the Method of Members and calculate support reactions.	3.31			3.00		
3 Determine the centroid and moment of inertia of a composite shape beam.	3.44			3.57		
4 Draw a load, shear, and moment diagram for a loaded beam.	3.25			3.71		
5 Determine the bending stress and shear stress for a loaded beam.	3.06			3.29		
CMT 101s Construction Materials and Methods			Not Offered			Not Offered
1 The student understands the total building process for a construction project from the site investigation stage to the finish stage.	3.70	3.42		3.10	3.25	3.33
2 The student is knowledgeable about the various materials used in each stage of construction.	3.70	3.38		3.10	3.50	3.00
3 The student understands the techniques and methods used with the different materials commonly used in construction.	3.70	3.33		3.10	3.88	3.00
4 The student knows the sizes of basic building components.	3.70	3.42		3.00	3.25	3.33
5 The student has the ability to specify materials with essential characteristics, costs and performance in mind.	3.70	3.33		3.10	2.75	3.00

CMT 114 10 hr OSHA Construction Safety				Not Offered	Not Offered	Not Offered	Not Offered
1	The student is familiar with OSHA's construction standards and related safety practices.	3.20	4.00				
2	The student is able to use the OSHA manual.	3.20	4.00				
CMT 120 Construction Problem Solving				Not Offered			
1	The student knows how to create a spreadsheet in Microsoft Excel.	3.00	3.85		3.39	3.58	4.00
2	The student knows how to work right triangle trig problems and can use the Law of Sine, Law of Cosine in site layout.	3.22	3.85		3.11	3.42	3.67
3	The student can use a construction calculator to find lengths, areas, volumes, board feet, rafter lengths, stair layout, and other construction problems.	3.11	3.85		3.17	3.42	3.67
CMT 140 Concrete Testing			Not Offered	Not Offered		Not Offered	Not Offered
1	The student will understand how concrete develops strength through hydration	3.40			3.84		
2	The student will understand how strength is affected by composition	3.60			3.38		
3	The student will understand how strength is affected by curing conditions	3.50			3.88		
CMT 161 Introduction to Sustainable Construction				Not Offered	Not Offered		
1	The student is familiar with sustainable construction practices and related efficiency standards.	3.40	4.00			3.71	3.67
2	The student is knowledgeable about the building science behind green construction.	3.40	4.00			3.29	3.33
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.		3.64			3.55	
2	The student understands the construction management topics of submittals, project start-up, field questions, and progress payments.		3.57			3.45	
3	The student understands the construction management topics of safety plans, change orders, disputes, and project close-out.		3.50			3.23	
4	The student can perform value engineering calculations and analyze an earned value curve.		3.07			3.55	
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.		3.71			3.00	
2	The student can make quantity surveys from working drawings and specifications.		3.71			2.83	
3	The student can develop unit costs for specific segments of a building project.		3.71			2.75	
4	The student understands how to include subcontractor costs in the overall project estimate.		3.71			3.17	
5	The student understands the major considerations involved in the total pricing of a construction project.		3.71			3.17	
CMT 209 Electrical and Mechanical Equipment in Buildings			Not Offered	Not Offered		Not Offered	Not Offered
1	The student will design elements of plumbing systems	3.50			3.59		
2	The student will design elements of electrical systems	3.08			3.14		
3	The student will design elements of HVAC systems	3.42			3.73		
4	The student will be knowledgeable of hardware comprising the plumbing, HVAC and electrical systems	3.35			3.32		
CMT 217 Software Applications in Construction			Not Offered	Not Offered		Not Offered	Not Offered
1	The student can use the critical path method to create a schedule.	4.00			4.00		
2	The student can revise a critical path schedule.	3.61			3.50		
3	The student can use a critical path schedule to determine labor and financial requirements of a project.	3.39			3.59		
4	The student will create typical financial forms used in the operation of a business.	3.67			4.00		
5	The student will generate financial reports needed for financial management.	3.56			4.00		