

Student Learning Outcomes Library

Office of Assessment & Accreditation

Indiana State University

B.S. in Architectural Engineering Technology

Fall 2019

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Outcome	Related Foundational Studies or Graduate Goal
1.1 Students will synthesize information and generate concepts and/or responses	
1.2 Students will demonstrate creative thinking and originality	
2.1 Students will produce competent contract documents	
2.2 Students will deliver presentations concerning project delivery	
2.3 Students will write technical business letters and reports	
2.4 Students will identify detail hierarchies, scale, and content	
3.1 Students will effectively apply the elements and principles of design to two-dimensional design solutions	
3.2 Students will effectively apply the elements and principles of design to three-dimensional design solutions	
3.3 Students will demonstrate layout and alignment control using surveying equipment	
3.4 Students will use surveying skills to organize and develop a site	
3.5 Students will analyze static forces in structures	
3.6 Students will apply soil mechanics to excavations and foundations	
4.1 Students will analyze heat flow through wall assemblies	
4.2 Students will solve problems using trigonometry as it relates to surveying	

5.1 Students will create quantity takeoffs for residential and commercial projects	
5.2 Students will identify and apply labor and equipment productivity factors	
5.3 Students will identify and estimate direct and indirect job costs	
5.4 Students will use estimating software applications to prepare and submit construction bids	
5.5 Students will explain capital equipment depreciation and how this is used by construction companies	
5.6 Students will estimate project cash flow and identify payment processes and the effects of time value of money	
6.1 Students will demonstrate typical fabrication and installation methods	
6.2 Students will demonstrate basic principles of BIM	
6.3 Students will apply the NEC for proper installations of electrical systems	
6.4 Students will demonstrate how the LEED rating system is applied to buildings	
6.5 Students will compare the composition and properties of building materials	
6.6 Students will understand terms, units of measurement, material grade stamps, sizes of materials, and define tolerances	
6.7 Students will apply conformance references established by testing laboratories to build construction practices	
6.8 Students will apply the IBC and IRC building code manuals and standards	
7.1 Students will apply appropriate federal, state/provincial, and local codes	
7.2 Students will apply appropriate standards and accessibility guidelines	
7.3 Students will explain why bid shopping is unethical	
7.4 Students will explain why frontend loading is unethical	