

# **Measuring Learning Outcomes for Engineering Design Education**

Denny C. Davis, Washington State University  
Kenneth L. Gentili, Tacoma Community College  
Michael S. Trevisan, Washington State University  
Robert K. Christianson, Green River Community College  
Jeffrey F. McCauley, Green River Community College

## **Abstract**

Foundational to the assessment of engineering degree programs is the definition of learning outcomes for engineering design. This paper presents a framework within which engineering design learning outcomes can be defined and assessed. Learning outcomes related to the engineering design process, teamwork, and design communication are established over a range of performance levels. Tables of performance descriptions define engineering design performance along a continuum of proficiencies from the beginner to the practicing professional. Along this continuum, learning outcomes are proposed for graduating engineers and for engineering students mid-way through their programs of study. Assessment instruments and scoring scales are developed around these learning outcomes. These scoring definitions and assessments provide bases for benchmarking student performance, for developing and scoring assessments of design and for communicating graduates' capabilities to employers and other educators.

## **Full Text Reference**

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