

Teaching Construction Management in the Virtual Classroom

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The use of technology in higher education and the advancement of virtual technologies are redefining the way in which education is viewed and delivered. Virtual classrooms are being used by colleges and universities all over the world with two key factors driving this phenomenon. First, there has been a significant shift in the average age of college students and, as a result, the work schedules and life responsibilities held by these non-traditional students. Second, research evidence supports learning effectiveness through various elements of online delivery where students taking courses online are performing better, on average, than students studying the same material in a traditional face-to-face environment. One challenge that must be met, central to this study, is finding a means for ensuring course rigor is not compromised with online delivery. The underpinning of this study focuses on the development of online construction management courses in a manner that ensures high online academic standards. This case study introduces an alignment and course development matrix for the delivery of online construction management courses. Six courses within an existing construction management program were identified for online delivery to serve engineering graduates and industry professionals who are currently working in a construction related industry as mid-career professionals. A vital component associated with converting traditional classroom courses to online modules calls for the enactment and strategic alignment of university student outcomes, program student outcomes, course student outcomes, and uniform grading as viewed from a single assessment platform. The course objectives in this study were aligned with the American Council of Construction Education (ACCE) matrix; however, the ACCE matrix does not specify how courses should be assessed leaving it open for interpretation by the teaching institutions. The university's division of Online and Professional Studies (OPS) offers various undergraduate and graduate degree programs supported by a well-documented course development process that is intended to preserve academic rigor. Researchers in this study framed an assessment matrix unique to the applied nature of the proposed construction management courses to be offered online. This case study can be viewed as ongoing in nature in providing students and working professionals with an alternative option to take applied construction management classes online, supported by an assessment and development matrix which includes university, student, and program outcomes, braced by a uniform grading platform in support of high academic rigor.

Keywords: Virtual Classroom, University Student Outcomes, Program Student Outcomes, Uniform Grading, and Academic Rigor.