

Designing a Hybrid Course for Undergraduate Engineering Education

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Abstract

In times of global crisis and continually changing market landscape, developing the engineering student skills to navigate world shifts is now needed more than ever. Therefore, strengthening engineering education systems is crucial. Besides, as a result of school closure due to the Covid-19 pandemic, education is challenged to assure continuity while maintaining quality in learning. Thus, to better prepare for post-lockdown and adapt to emergencies, educational institutions need to envision new models of learning and consider alternatives to traditional classroom-based structures. Hence, Emphasis should be placed on designing effective education delivery patterns. In this regard, this work aims to design a hybrid course model for undergraduate engineering education. The course design seeks to blend, efficiently, remote and face-to-face learning activities. This is ensured using constructive alignment principles to align both delivery modes with sought learning objectives using appropriate assessment methods. The proposed course model is considered toward facilitating continuity and effectiveness of education delivery, in today's changing environments, to build a skilled engineering workforce.

Keywords

Covid-19, Engineering education, Design, Hybrid course, Constructive Alignment

Biographies

Imane Aboutajedyne holds a Masters' degree in Mechanical Engineering from the Faculty of Science and Technology of Fez-Morocco (FSTF). At present, she is a PhD Researcher in the mechanical department of the FSTF. Her research focuses on the development of innovation competency-based approaches in education.

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