The Development of Blackboard-based Web-Applications for the Teaching and Learning of Second Order Steel Structure Analysis and Prestressed Concrete Design

Project Number: 6000115

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Grant Type: TDG

Abstract:

Referring to the curriculum of Bachelor of Engineering (Honours) in Building Engineering (Modern Structural Engineering), a large portion of the teaching time is allocated to the concepts and practices of fundamental analysis and design in order to form a solid background for graduates to pick up the life long learning on more advanced topics in structural analysis and design. As a result, the contact hours can be used for teaching more advanced topics, such as the second order analysis of steel structures, and the design of prestressed concrete structures, during lectures or tutorials are very limited. The same situation happens in all other universities offering civil and structural related programmes, such as PolyU, UST and HKU. With the newly adopted design code in HK, the knowledge in second order analysis of steel structures and design of prestressed concrete structures become extremely important, and is a "must" topic to be covered during employment interview. It is very clear that graduates with strong backgrounds in these areas will have a superior chance of being employed by consultant firms in HK. In view of this, it is proposed to develop self-learning web-applications to prove top-up training to CityU students in these two areas. The Blackboard system from EDO provides a perfect platform for hosting the proposed web-applications.