Mutual Workshops enhancing Curriculum Integration - DTU Orbit (06/11/2019)

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The BSc Eng programme in architectural engineering at DTU Civil Engineering is organized in accordance with CDIO principles. We have been working with CDIO principles for 2-3 years now, and in the following we present the process and adjustments that were made, with the third semester as a case. Every semester has a teaching team consisting of all the teachers for courses in that semester. Each semester also has its own theme and a multidisciplinary, joint project. So the most active members of the teaching team, of course, are those responsible for courses that address the theme and contribute to the joint project. The theme of the third semester is ‘structural design’. Structural design is defined as an integration of material science, statics and geometry in relation to an architectural project. Anticipating the implementation of CDIO and this theme, major changes were made to the curriculum. A course in material science was moved from the fourth to the first semester so that the project could be informed by material science. A new course in geometry was prepared and software that could facilitate an integrated design project was introduced (STAAD Pro). The ‘full package’ of the new third-semester project in structural design was realized for the first time in autumn 2009. This paper presents the lessons learned from this first round along with the changes they inspired. Amongst the biggest changes made was the introduction of a successful joint workshop between the geometry course and the design course. This realized the full potential of structural design and firmly highlighted the creative potential in geometry for hesitant students. The joint workshop also showed potential as a general tool that can enhance curriculum integration.

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