Integrated Structural Design Education

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In Environmental Impact Assessment (EIA), the environment is broadly defined and includes not only quantifiable aspects, but also social conditions, scenic beauty, traffic, cultural heritage, and commercial development. A successful bridge design must comply with all of these demands according to EU legislation. And a successful engineering student must be prepared to work in the open-ended, multidisciplinary environment necessary to produce structures which comply with EIA demands. This paper describes an innovative course developed at the Technical University of Denmark which integrates landscaping and structural design. The integrated courses create a setting for learning about the design of large-scale structures and involve geometry, statics, computer simulation, graphical design and landscape architecture. Together, they educate engineers who can take part in the early design phases of a project, function well in design teams, and comply with EU EIA demands.

General information
State: Published
Organisations: Section for Building Design, Department of Civil Engineering, Section for Structural Engineering
Contributors: Bjerregaard Jensen, L., Almegaard, H.
Pages: 74-79
Publication date: 2011

Host publication information
Title of host publication: Proceedings of the 1th. International Workshop on Design in Civil and Environmental Engineering
Keywords: Structural Design, Architectural Engineering, Integrated Design, Curriculum Integration
Source: orbit
Source-ID: 284983
Research output: Research - peer-review → Article in proceedings – Annual report year: 2011