



KURSPLAN

Analyses, Simulations and Assessment systems, 7,5 högskolepoäng

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Kurskod:	TASR21	Utbildningsnivå:	Avancerad nivå
Fastställt av:	VD 2021-03-01	Utbildningsområde:	Tekniska området
Reviderad av:	Utbildningschef 2021-06-02	Ämnesgrupp:	BY1
Gäller fr.o.m.:	2021-08-01	Fördjupning:	A1N
Version:	2	Huvudområde:	Produktutveckling

Lärandemål

After a successful course, the student shall:

Kunskap och förståelse

- show familiarity with the concept of BIM in practice
- display knowledge of the most common systems and methods of assessing sustainability within the field of Built Environment
- demonstrate comprehension of the concept of multicriteria decision making

Färdighet och förmåga

- demonstrate skills to modify and develop BIM models for sustainability analyses and simulations
- demonstrate the ability to use BIM based tools and software to perform sustainability analyses and simulations

Värderingsförmåga och förhållningssätt

- demonstrate the ability to apply different BIM based sustainability assessment systems and tools for a sustainable built environment
- demonstrate the ability to identify, analyze, simulate, and evaluate vital building performance criteria from a sustainability aspect

Innehåll

The course focuses on the concept of BIM, sustainability assessment systems and creation of BIM models to perform analyses and simulations for buildings' sustainability and performance assessments.

The course includes the following elements:

- The concept of BIM
- Sustainability assessment systems
- BIM based sustainability assessment tools and software
- Design Authoring

Undervisningsformer

Instruction is conducted through lectures, exercises, and project work. A limited number of guest lectures in Swedish can occur.

Undervisningen bedrivs på engelska.

Förkunskapskrav

The applicant must hold the minimum of a bachelor's degree (i.e the equivalent of 180 ECTS credits at an accredited university) with at least 90 credits in construction engineering or civil engineering, or equivalent. The bachelor's degree should comprise a minimum of 15 credits in mathematics. Proof of English proficiency is required.

Examination och betyg

Kursen bedöms med betygen 5, 4, 3 eller Underkänd.

The final grade will only be issued after satisfactory completion of all assessments.

Poängregistrering av examinationen för kursen sker enligt följande system:

Examinationsmoment	Omfattning	Betyg
Projekt ¹	4,5 hp	5/4/3/U
Övningsuppgifter	3 hp	U/G

¹ Bestämmer kursens slutbetyg vilket utfärdas först när samtliga moment godkänts.

Kurslitteratur

The literature list for the course will be provided 8 weeks before the course starts.

The BIM-Manager: A Practical Guide for BIM Project Management, Mark Baldwin, by buildingSMART, 2019.

The book is available at the JU's library.

Climate Crisis and the Global Green New Deal - Bound, English, 2020. Author: Noam Chomsky

The book is available at the JU's library.

Internationalism or Extinction - Bound, English, 2019, Author: Noam Chomsky

The book is available at the JU's library.