KURSPLAN

Analyses, Simulations and Assessment systems, 7,5 högskolepoäng

Analyses, Simulations and Assessment systems, 7.5 credits

Kurskod:	TASR22	**Utbildningsnivå:**	Avancerad nivå
Fastställd av:	VD 2022-03-01	**Utbildningsområde:**	Tekniska området
Reviderad av:	Utbildningschef 2024-11-07	**Ämnesgrupp:**	BY1
Gäller fr.o.m.:	2025-08-01	**Fördjupning:**	A1N
Version:	3	**Huvudområde:**	Bebyggd miljö

Lärandemål

After a successful course, the student shall:

Kunskap och förståelse
- show familiarity with the concept of BIM
- display knowledge of the most common systems and methods of assessing sustainability within the field of Construction Engineering
- 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
- Design Authoring

Undervisningsformer

Instruction is conducted through lectures, exercises, and project work. A limited number of guest lectures in Swedish might 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, Civil Engineering, Built Environment, Architecture Engineering, Product Development (with relevant courses in lighting design) or equivalent. The bachelor's degree should comprise a minimum of 15 credits in mathematics and 7,5 credits in BIM or CAD 3D, or equivalent. Proof of English proficiency is required.

Examination och betyg

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

Some course components, such as lectures, labs, or seminars, may be mandatory due to their unique and non-repeatable nature.

Poängregistrering av examinationen för kursen sker enligt följande system:

Examinationsmoment	Omfattning	Betyg
Projekt[I]	4,5 hp	5/4/3/U
Övningsuppgifter	3 hp	U/G

[I] 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.

Scientific papers and other course material will be available in Canvas, free of charge.