



## COURSE SYLLABUS

# Advanced Building Information Modeling, 6 credits

*Advanced Building Information Modeling, 6 högskolepoäng*

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|----------------------|------------------|-----------------------------|---|
| <b>Course Code:</b>  | TABR28           | <b>Education Cycle:</b>     | Second-cycle level                        |
| <b>Confirmed by:</b> | Dean Feb 1, 2017 | <b>Disciplinary domain:</b> | Technology (95%) and social sciences (5%) |
| <b>Valid From:</b>   | Jan 1, 2018      | <b>Subject group:</b>       | BY1                                       |
| <b>Version:</b>      | 1                | <b>Specialised in:</b>      | A1F                                       |
| <b>Reg number:</b>   | 2017/2370-313    | <b>Main field of study:</b> | Product Development                       |

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## Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding

- show familiarity with the product development process using advanced BIM-models.

Skills and abilities

- demonstrate skills in using BIM-based Design Authoring tools for a technical subsystem.
- demonstrate skills in using BIM-based Analysis tools using a BIM-model containing technical subsystem.
- demonstrate the ability to produce information delivery for construction and digital fabrication.

Judgement and approach

- demonstrate an understanding of the use of BIM-strategies and advanced BIM-models in the product development.

## Contents

The course teaches elaborate handling of advanced BIM-models at different stages of the product development process. It also includes the creation of advanced production specifications for fabrications, e.g. specified in engineering drawings and files for numerical controlled production equipment.

The course includes the following elements:

- Design Authoring of advanced BIM-models containing technical subsystems
- BIM-based analysis using advanced BIM-models
- Information delivery for construction and digital fabrication

## Type of instruction

The course consists of lectures, exercises and seminars.

The teaching is conducted in English.

**Prerequisites**

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. The applicant must also have completed the course BIM - Requirements and Specifications, 6 credits. Proof of English proficiency is required.

**Examination and grades**

The course is graded 5,4,3 or Fail.

Registration of examination:

| Name of the Test | Value     | Grading |
|------------------|-----------|---------|
| Project          | 6 credits | 5/4/3/U |

**Course literature**

The literature list for the course will be provided one month before the course starts. Articles and course compendium are free of charge.