AF1730 Building Information Modeling 7.5 credits

Building Information Modeling

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for AF1730 valid from Spring 2012

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology, The Built Environment

Specific prerequisites

Knowledge equivalent to HF1900 Engineering and Information Skills and HS1000 Engineering Project – Constructional Engineering and Design

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

Upon completion of this course, the student shall be able to:

· Draw and handle 3D objects

· Create and modify objects

· Dimension and display objects

· Create construction drawings

· Establish tables and lists based on models

· Manage views for presentation and use

· Export and import other formats

· Display knowledge of the theory behind Building Information Modeling (BIM)

· Manage model data and use databases in BIM design

· Show knowledge of sun studies and display of structure and materials

Course contents

The following topics will be covered in this course:

· Handling drawings in projects with external references, layers and layouts in CAD

· General discussion on Building Information Modeling (BIM) versus traditional CAD design.

· Introduction, interface and drawing procedure for Revit Architecture

· Handling intelligent objects in model building. Walls, floor and ceiling constructions

· Using parametric objects and design conditions[L1]

· Families and inserted objects

· Inserting parametric objects such as dimensions, doors and windows

· Representations, views and visibility rules.

· Sections, representation of materials, wall connections and CleanUp

· Elevation and story references

· Organisation of information and annotations

· Construction of roofs

· Connections to other CAD programs, SketchUp (SKP format) and AutoCAD (DWG format)

· Databases Door and Window list, Room and Area table, volume, quantity of material

· Documentation creation and layout for display and presentation of the construction model

Disposition

Course elements include theory, discussion, demonstration and an opportunity for practical exercises.

Course literature

Course compendium on BIM, Building Information Modeling

Examination

- PRO1 - Project, 3.5 credits, grading scale: P, F
- TEN1 - Examination, 4.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.