AF273U BIM3, Design, Cost Estimation and Time Planning 7.5 credits

BIM3, projektering, kalkyl och tidplanering

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

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

Establishment

Course syllabus for AF273U valid from Spring 2013

Grading scale

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

Education cycle

Second cycle

Main field of study

Built Environment

Specific prerequisites

Completed upper secondary education and 120 credits within the fields of study of structural engineering/building services engineering/architecture /CAD, or a Bachelor och Science in Engineering in Constructional Engineering and Design, or a Master of Science in Engineering in Built Environment from KTH and AF1730 Building Information Modeling 7.5 credits

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and AF272V BIM2, Design, Installation and Integrated Planning 7.5 credits or equivalent knowledge.
As space allows, admission may also be extended to professional construction engineers or architects currently employed as quantity surveyor and/or in the field of construction management who hold knowledge corresponding to HS1006 The Building Process and AF1742 Business Economics and Quality Systems. Knowledge and relevant professional competence must be able to be verified by the employer. AF1730 Building Information Modeling 7.5 credits and AF272V BIM2, Design, Installation and Integrated Planning 7.5 credits, or equivalent knowledge.

Language of instruction

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

Intended learning outcomes

After completing the course the student should be able to:

1. understand the theory on which underlying Building Information Modelling (BIM)

2. utilize modelling information and data bases in BIM applications

3. understand potential for cost estimation associated with the computer models

4. understand the various scheduling tools associated with the computer models

5. make cost estimates for a construction project

6. update estimates during the production process

7. understand how quantity surveying is done using BIM

8. understand the range of tools available for estimating when managing the production process within BIM

Course contents

The course aims to provide a general orientation in 5D project management, cost estimating and 4Dscheduling methods used in BIM.

The overall approach is problem-oriented. The course is focused on a specific architectural project, for which the student will carry out simplified project management and cost estimating. The stages given below will be covered.

• The general definition of BIM
• Methods and applications of BIM in future estimating and building maintenance phases
• Review of time management planning for both traditional and BIM projects
• Review of traditional production scheduling
• Review of traditional cost estimating methods
• BIM 4D – potential for visualizing timing of the production process
• BIM 5D – potential for taking off quantities and cost estimation

Course literature

Details given at start of course.

Examination

- PRO1 - Project, 2.0 credits, grading scale: P, F
- PRO2 - Project Work, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Examination, 1.5 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.

Project PRO1:
Specific tasks associated with the practical exercises. Detailed information to be given out later on the relevant occasion.

Project PRO2:
Coordinated project including and analytical report. Detailed information about PRO2 given later.

TEN1:
Approved written exmination

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.