



# AF273V 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 AF273V 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

120 credits in the built environment, constructional engineering and architecture. Of these, at least 7.5 credits in the built environment, 15 credits in constructional engineering, 5 credits in architecture and 3 credits in CAD, or a Bachelor of Science in constructional engineering and design, or a Master of Science in the built environment, or an equivalent degree, as

well as Swedish B/Swedish 3 and English A/English 6. In addition, courses AF1730 Building Information Modeling 7.5 credits, AF272V BIM2 Design, Installation and Integrated Planning 7.5 credits, HS1006 the Building Process 7.5 credits, and AF1740 Economics and organization 7.5 credits or equivalent.

## 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 behind Building Information Modelling (BIM)
2. Utilize modelling information and databases in BIM applications
3. Understand potential for cost estimation associated with computer models
4. Understand the various scheduling tools associated with 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 4D scheduling 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 estimation. 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

To be announced at course start.

## 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.

Assignments PRO1:

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

Assignment PRO2:

Coordinated project including an analytical report. Detailed information about PRO2 will be provided later.

TEN1:

A passing grade on the written examination.

## 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.