AI1802 Project Management and BIM in the Built Environment 7.5 credits

Projektledning och BIM inom samhällsbyggandet

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

Establishment

Course syllabus for AI1802 valid from Spring 2017

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

AI1527, AI1128, AI1525

Language of instruction

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

Intended learning outcomes

The course introduces and develops managerial-, leadership-, organizational- and information related issues in project-based organizations in architecture, city development, design, construction and facility management. The overall the aim of the course is that the student should, on completion of the course, be able to analyze, manage, organize, plan, control, follow up and participate in different types of projects within the built environment. It can include construction-, city- or infrastructure projects, pre studies, design projects, project deliveries or industrial building methods. It can also be that from the ownerÂ´s perspective, or any other actorÂ´s perspective, manage the project in all the phases from idea to delivered project. The student should be able to apply project management and information management support such CAD and BIM on minor projects and also understand single projects in a broader context.

This implies that the student, on completion of the course, can:

- Describe and explain the â€˜projectificationâ€™ of society in general and the development of the project based built environment in special..

- Describe and explain the basic concepts of project management, including common methods and tools.

- Describe and explain the basic tasks that a project manager and project participants has from idea to delivered project.

- Make a project plan (including stakeholder analysis, present state analysis, risk analysis, budget, organizational plan, time plan and communication plan).

- Understand the relation between short and long-term objectives and reflect on necessary priorities between time, budget and function on short and long basis.

- Describe and explain how the context influences the project work and how more sustainable buildings, cities and societies can be developed.

- Describe and explain the central project actors and project roles, what responsibility they have and what importance they have for the project work and project outcome.

- Describe and explain the role of information and information technology (IT) for initiating, planning, implementing and following up sustainable projects within the built environment.

- Describe and explain CAD and BIM and their role for decision-making in projects within the built environment.

- Describe and explain drawing designations.

- Draw objects in 3D, establish plans and intersections and drawings with designations.

- Collect and process information from digital models e g for the analysis of quantities and energy values.

Course contents

Lectures that introduce and deepen the knowledge in project management including planning, organizing, management, control and follow up of the whole process from idea to delivered results. It includes project management concepts, methods, tools and models, the basis in situational leadership and the creation of calculations, plans, sections and detail drawings. Furthermore, it includes the role of information technology on management and implementation of projects in the built environment and the analysis of project-, context- and object specific information (e g conflicts between different actors' needs and conflicts between different objectives, resource dependencies, quantity takeoff from the model and the connection to other software for analysis).

Course literature

Reading list is posted in connection with the start of the course

Examination

- PRO1 - Project Assignment, 2.5 credits, grading scale: P, F
- TEN1 - Exam, 5.0 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.