

COURSE SYLLABUS

Implementation of Digital Technologies and the Construction Industry, 7.5 credits

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Course Code: TIDR23	Education Cycle: Second-cycle level
Confirmed: Nov 07, 2024	Disciplinary domain: Technology
Valid From: Jan 18, 2027	Subject group: Other Subjects within Technology
	Specialised in: A1N Second cycle, has only first-cycle course/s as entry requirements
	Main field of study: Built Environment

Intended Learning Outcomes (ILO)

On completion of the course the student shall:

Knowledge and understanding

- show familiarity with the major approaches to socio-technical systems and technology-related organizational change processes.

Skills and abilities

- demonstrate the ability to analyze and explain the basic foundations of major approaches to technology-related organizational change processes
- demonstrate the ability to analyze and explain the blurred boundaries between the technology and the social aspects when designing and implementing digital technologies
- demonstrate the ability to analyze how the characteristics of the built environment sector shapes implementation of digital technologies.

Judgement and approach

- demonstrate the ability to identify barriers and drivers in a technology-related organizational change processes
- demonstrate the ability to evaluate the implications for implementation strategies.

Content

Digital technologies have come to play an increasing role among organizations in the built environment sector, but technology-related organizational change and development processes are seldom as straight forward as described by advocates for new technologies.

In order to gain an enhanced understanding of implementation of digital technologies and the Built Environment the course includes the following elements:

- Socio-technical research in new technology and information systems in built environment
- Introduction to alternative approaches to understand socio-technical systems, such as; technological determinism, innovation studies, multi-level perspective, institution theory, social constructivism, actor-network theory, critical and political perspectives
- Analysis of structures shaping the built environment sector
- Analysis of underlying structures shaping the built environment sector Industry analysis and analysis of underlying structures shaping the built environment sector

Type of instruction

Lectures, exercises, and assignments and project work.

Language of instruction is English.

Entry requirements

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, Civil Engineering, Built Environment, Architecture Engineering, Product Development (with relevant courses in lighting design) or equivalent. The bachelor's degree should comprise a minimum of 15 credits in mathematics and 7,5 credits in BIM or CAD 3D, or equivalent. Proof of English proficiency is required.

Examination and grades

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

Some course components, such as lectures, labs, or seminars, may be mandatory due to their unique and non-repeatable nature.

Registration of examination:

Name of the Test	Value	Grading
Examination ¹	4 credits	5/4/3/U
Assignments/Project work	3.5 credits	G/U

¹Determines the final grade of the course, which is issued only when all course units have been passed.

Course literature

Please note that changes may be made to the reading list up until eight weeks before the start of the course.

The literature will be based on scientific articles.