



## COURSE SYLLABUS

# Software Engineering Project Methods, 7.5 credits

*Mjukvaruprojektmetoder, 7,5 högskolepoäng*

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<b>Course Code:</b> TMJN10	<b>Education Cycle:</b> First-cycle level
<b>Confirmed by:</b> Dean Jun 1, 2019	<b>Disciplinary domain:</b> Technology
<b>Valid From:</b> Aug 19, 2019	<b>Subject group:</b> DT1
<b>Version:</b> 1	<b>Specialised in:</b> G2F
	<b>Main field of study:</b> Computer Engineering

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### Intended Learning Outcomes (ILO)

After a successful course, the student shall:

Knowledge and understanding

- display knowledge of projects as a working method including leadership and cooperation
- display knowledge of Software Engineering history, terminology and methods
- display knowledge about some commonly used methods for software development, both non-agile and agile

Skills and abilities

- demonstrate the ability to apply a method and use various project tools within the area of project methodology
- demonstrate the ability to cope with changing requirements and conditions in a project
- demonstrate the ability to communicate engineering topics and issues successfully with internal (team members) and external stakeholders (customers)
- demonstrate the ability to choose suitable development tools and technical solutions in a software development project

Judgement and approach

- demonstrate an understanding of the significance of using different concepts and perspectives (gender, social sustainability, culture) in identifying and analysing problems within a software engineering project
- demonstrate the ability to perform retrospective analysis of software engineering projects, determining success and failure factors and the impact of methods followed

### Contents

The course conveys to students the type of knowledge in software engineering methods, project management, decision making, analysis, leadership, communication, etc. which is needed in order to work as a software engineer in software development projects in industry. The course also gives students the ability to apply the skills that they have gained from other courses in the program in order to develop a product or service.

The course includes the following elements:

- Evolution of Software Engineering: history, terminology and methods
- Software development methods: An overview
- Project methodology, project rolls and project models
- Project definition, including risk analysis, stakeholder-analysis and SWOT-analysis
- A minimalist approach to software documentation
- Software development models, e.g. SCRUM and V-Model
- Project retrospective

### Type of instruction

Tuition will consist of lectures and project work.

The teaching is conducted in English.

### Prerequisites

General entry requirements and 60 credits in the programme including Group Dynamics 3 credits and Object-Oriented Software Design 6 credits (or the equivalent).

### Examination and grades

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

The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

Name of the Test	Value	Grading
Examination	3 credits	U/G
Project <sup>1</sup>	4.5 credits	5/4/3/U

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

### Course literature

Literature

The literature list for the course will be provided one month before the course starts.

Title: Visualizing Project Management

Author: Keving Forsberg, Hal Mooz, Howard Cotterman

Publisher: Wiley

ISBN: 978-0-471-64848-2

Title: Adaptive Code, Agile coding with design patterns and SOLID principles

Author: Gary McLean Hall

Publisher: OTSI

ISBN: 978-1-5093-0258-1

Title: Applying UML and Patterns

Author: Craig Larman

Publisher: Prentice Hall PTR

ISBN: 0-13-092569-1