
Course Programme:

ETSF30

Requirements Engineering

Kravhantering – metoder och tekniker, 7,5 hp.

Version 1.0 HT19

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<http://cs.lth.se/etsf30>

1. Introduction

This document gives the practical details regarding the course “Requirements Engineering – Methods & Techniques”. The main objective of the course is to help students gain a deeper understanding of requirements engineering and also practical skills in eliciting, documenting, validating, and prioritising requirements.

The course is connected to the course “Projekt Åk3”. The students will work within the same project connected to these two courses. The deliverable according to the requirements engineering course is a requirement specification. All students are also required to take active part in the tutorial sessions.

This project is a major facilitator for illustrating the complexity of requirements engineering and the different techniques available to help coping with this complexity.

2. Learning objectives

Aim

The objective of the course is to give basic and advanced knowledge and skills within requirements engineering for large-scale development of systems completely or partly based on software. The course gives practical skills in methods and techniques for requirements engineering.

Knowledge and Understanding

For a passing grade the student must:

- be able to define basic concepts and principles within requirements engineering
- give an account of several different types of requirements
- be able to describe and value several different methods and techniques for requirements engineering
- be able to describe and relate different sub-processes within requirements engineering
- be able to describe the relation between the requirements engineering process and other processes in the product lifecycle

Skills and Abilities

For a passing grade the student must:

- be able to choose suitable requirements techniques for a given context
- be able to apply several different techniques for requirements elicitation
- be able to apply several different techniques for requirements specification
- be able to apply several different techniques for requirements validation
- be able to apply several different techniques for requirements prioritisation

Values and Attitudes

For a passing grade the student must:

- be able to consciously select a process depending on the nature of the requirements
- show a systematic and long-term approach to processes
- be able to consciously see the problem in the relation between the quality of requirements and the quality of the resulting implementation
- be able to adequately involve users in the requirements engineering process

3. Contents

The course includes the following resources:

- **Text book:** Soren Lauesen, "Software Requirements - Styles and Techniques", Addison-Wesley, ISBN 0-201-74570-4.
- **Lectures:** The lectures provide an overview of the literature. They do not cover every detail, but give a high-level structure of RE theory and thereby aid self-studies of the literature. Discussions are promoted. Additional lectures are given on some issues not covered by the book.
- **Exercises:** The main objective of the mandatory exercises is to connect theory to practice to be used in the project.
- **Lab session:** Approved individually preparation hand-in is mandatory for participating in the lab session. The mandatory lab session assignment is assessed during the lab session in pairs. In the lab session, the students get hands-on experience with a computer tool.
- **Project:** The project is a realistic requirements engineering mission for a complex system, which gives practical experience in the challenges of requirements engineering. The results from the requirement part of the project.
- **Tutorial sessions:** During the tutorial sessions the requirement engineering work in the project is discussed and the project groups are able to get guidance. Presence and specific hand-ins are mandatory.

4. Personnel

Christin Lindholm (CL), christin.lindholm@cs.lth.se, 042-35 67 46, room C632 Campus HBG, Coordinator, Lectures, Project, Exercises, Lab session, Tutorial sessions, Examination

Birger Swahn, birger.swahn@cs.lth.se, 046-222 80 42 Datavetenskap, LTH Lund, Course Administrator

5. Schedule

W	Date	Time	Place	Contents	Chapter	
36	Fri 6/9	10-12	C621	L1: Introduction	1	CL
37	Mo 9/9	13-15	C126	L2: Life-cycle req's, Elicitation	7.1-7.7, 8	CL
	Thu 12/9	10-12	C574	L3: Quality requirements	6	CL
	Thu 12/9	13-15	C422	Exc 1: Requirement specification Group 1	1 (11-15)	CL
	Thu 12/9	15-17	C422	Exc 1: Requirement specification Group 2	1 (11-15)	CL
38	Mo 16/9	13-15	C126	L4: Functional requirements	3(2,4,5)	CL
	We 18/9	10-12	C422	Exc 2: Eliciting Requirements Group 1	8, 10.2	CL
	We 18/9	13-15	C422	Exc 2: Eliciting Requirements Group 2	8, 10.2	CL
	Thu 19/9	10-12	C422	Exc 3: Quality Requirements Group 1	6	CL
	Thu 19/9	13-15	C422	Exc 3: Quality Requirements Group 2	6	CL
39	Mo 23/9	15-17	C547	L5: Validation	9 (10)	CL
	Tue 24/9	09-11	C422	Exc 4: Functional requirements Group 1	3	CL
	Thu 26/9	13-15	C422	Exc 4: Functional requirements Group 2	3	CL
40	Mo 30/9	15-17	C547	L6: Prioritisation		CL

	We 2/10	10-12	C422	Exc 5: Prioritisation and validation Group 1	9	CL
	We 2/10	13-15	C422	Exc 5: Prioritisation and validation Group 2	9	CL
41	Fri 11/10	10-12	C452	Lab: Focal Point Group 1		CL
	Fri 11/10	13-15	C452	Lab: Focal Point Group 2		CL
42	Thu 17/10	10-12 13-14 14-17	E421 U202 E230	Ing 3 och exjobbbs kick-off		CL
44	Mo 28/10	14-19	C548	Tentamen		CL
45	Mo 4/11	(10-17)	C631	Tutorial sessions (Exact time will be announced later) Submission to tutorial sessions 1/11 hr. 8.00 at the latest		CL
51	Tue 17/12	(09-15)	C631	Tutorial sessions (Exact time will be announced later) Submission to tutorial sessions 13/12 hr. 12.00 at the latest		CL
51	Fri 20/12			Final submission 20/12 hr. 12.00 at the latest		CL

6. Assessment

- The requirement part of the project is graded fail/3/4/5 based on project requirement deliverables and the discussions and the hand-ins at tutorial sessions.
- Approved lab session preparation and assignment are mandatory and required for passing the course. The lab preparation is made individually and the lab (Focal Point) is made in pairs. The grading is pass/fail.
- The written exam is graded fail/3/4/5, where 50% of the points are required not to fail.
- The final course grade fail/3/4/5 is to 40% based on the project grade and to 60% on the written exam grade.