



## COMPUTER SCIENCE AND ENGINEERING

### **DIT045 Requirements and User Experience, 7.5 credits**

Kravhantering och användarupplevelse, 7,5 högskolepoäng

*First Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Department of Computer Science and Engineering on 2017-02-13 and was last revised on 2017-12-19 to be valid from 2018-08-19, autumn semester of 2018.

*Field of education:* Science 100%

*Department:* Computer Science and Engineering

#### **Position in the educational system**

The course is a compulsory course in the Software Engineering and Management Bachelor's Programme. The course is also a single subject course at the University of Gothenburg.

The course can be part of the following programmes: 1) Applied Data Science Master's Programme (N2ADS), 2) Software Engineering and Management Bachelor's Programme (N1SOF) and 3) Software Engineering and Management, Bachelor's Programme (N1SEM)

*Main field of studies*

Software Engineering

*Specialization*

G1F, First Cycle, has less than 60 credits in first-cycle course/s as entry requirements

#### **Entry requirements**

To be eligible for this course, students must have completed a 7.5 credits course in programming (e.g., DIT042 Object-oriented programming, or equivalent).

Applicants must prove knowledge of English: English 6/English B or the equivalent level of an internationally recognized test, for example TOEFL, IELTS.

## Learning outcomes

On successful completion of the course the student will be able to:

### *Knowledge and understanding*

- describe the process of requirements elicitation, evaluation and prioritization, documentation, validation and development of software requirements,
- state techniques to acquire and model user demands,
- explain key techniques to account for usability in software products,

### *Competence and skills*

- identify and specify requirements by means of, for instance, scenario-based techniques or goal-oriented techniques,
- apply techniques to identify personas, scenarios and user stories,
- design and implement graphical user interfaces according to usability principles,

### *Judgement and approach*

- choose an appropriate technique to evaluate the usability of a software product,
- choose and motivate appropriate methods for involving users in the design process.

## Course content

The course provides students with an introduction to the field of requirements engineering and user experience. It starts by providing a solid foundation by defining key concepts like goals, requirements and specifications. It also presents the process of identifying and documenting the requirements of a software product. Emphasis is also given to quality requirements.

The second part of the course focuses on usability aspects. The course will focus on integrating the requirements gathered in the first part with more design-oriented requirements gathered as part of a user-centric design process (for example, via interviews and the use of personas). The course also presents elements of visual design and information design, for instance, how to include aspects of user experience in the design of a software product. Further, the course touches upon methods of prototyping (for example, digital mockups) and presents some techniques to evaluate the usability of a software product (for instance, via user studies). Finally, the course will provide students with hands-on experience in designing graphical user interfaces (GUI).

### *Sub-courses*

1. **Written examination** (*Skriftlig tentamen*), 4.5 higher education credits  
Grading scale: Pass with Distinction (VG), Pass (G) and Fail (U)

2. **Assignments** (*Inlämningsuppgifter*), 3 higher education credits  
Grading scale: Pass (G) and Fail (U)

### **Form of teaching**

The teaching consists of lectures, group work, exercises, as well as supervision in connection to the exercises.

*Language of instruction:* English

### **Assessment**

The course is examined by an individual written exam carried out in an examination hall at the end of course and written assignments normally carried out in groups of 2–3 students. The assignments part is examined on the basis of solutions to compulsory problems handed in during the course and on the basis of individual contribution to the group work.

Students are required to complete written self- and peer-assessment forms during the course which will be part of the assessment of the student's individual contribution to the project.

Retake examinations of the assignments part consist of written individual assignments.

If a student, who has failed the same examined component twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and shall be granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In cases where a course has been discontinued or has undergone major changes, the student shall normally be guaranteed at least three examination occasions (including the ordinary examination) during a period of at least one year from the last time the course was given.

### **Grades**

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

A Pass grade (G) for the entire course requires at least a Pass grade for all sub-courses.

To be awarded Pass with Distinction (VG) for a full course, the student must, in addition, receive a VG on the sub-course Written examination.

### **Course evaluation**

The course is evaluated through a meeting after the course between teachers and student representatives. Further, an anonymous questionnaire is used to ensure written

information. The outcome of the evaluations serves to improve the course by indicating which parts could be added, improved, changed or removed.

**Additional information**

The course is a joint course together with Chalmers.

Course literature to be announced the latest 8 weeks prior to the start of the course.