



## COMPUTER SCIENCE AND ENGINEERING

### **DIT550 Master Thesis in Computer Science, 30 higher education credits**

Master Thesis in Computer Science, 30 högskolepoäng

*Second Cycle*

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#### **Confirmation**

This course syllabus was confirmed by The IT Faculty Board on 2008-02-08 and was last revised on 2015-10-01 by Department of Computer Science and Engineering to be valid from 2016-01-18, spring semester of 2016.

*Field of education:* Science 100%

*Department:* Computer Science and Engineering

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

This course, 30 higher education credits, is given as part of the Master's programme in Computer Science at the University of Gothenburg, and constitutes the final thesis work for that programme. Level for the course in relation to degree requirements is Master's degree, code A2E.

The course can be part of the following programme: 1) Computer Science, Master's Programme (N2COS)

*Main field of studies*

Computer Science

*Specialization*

A2E, Second cycle, contains degree project for Master of Arts/Master of Science (120 credits)

#### **Entry requirements**

To be eligible for this course, the equivalent of 75 hec is required, not counting credits from an earlier, first cycle (Bachelor) degree. At least 60 hec (or more) of these must come from courses on the advanced level, out of which 45 hec (or more) must come from courses within the Computer Science area. A first cycle Bachelor degree is required. The theses subject must have been approved by the Head of the Programme

and the thesis proposal must have been approved by the examiner. Furthermore, the examiner decides whether or not the student has the required prerequisites within the subject area to start the particular thesis project.

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

### **Learning outcomes**

#### *Knowledge and understanding*

After completing the course the student is expected to be able to:

- design solutions to problems in the area of computer science and computer systems, aimed at the realisation of new or modified systems of a more complex nature, with the intention of creating value in accordance with predefined requirements.
- systematically develop and use theories and models, with a critical attitude, and consciously choosing between alternative approaches.

#### *Skills and abilities*

After completing the course the student is expected to be able to:

- deal with the changeability of requirements through external circumstances or advancing insight.
- document and present in a satisfactory manner, both in terms of the new contribution, the design choices taken, the basis of the work, and related work.

#### *Judgement and approach*

After completing the course the student is expected to be able to:

- acquire new scientific knowledge through research, i.e., to develop new insights, of a more complex nature, in a purposeful and methodical way, while choosing the right level of abstraction.

### **Course content**

The course consists in a thesis work, performed individually or in pairs, under supervision of a teacher. The subject of thesis must lie within the area of Computer Science. Students will perform research, theoretical or applied, in parts in collaboration with supervision, and in parts independently. The degree of independence increases during the course. The main outcome, and main basis for the grading, is a report, written in English, describing the problem, assumptions, methods, choices, results, evaluation of the work, including the comparison to relevant work external to the thesis. The thesis is also presented in a talk, given in English.

**Form of teaching**

*Language of instruction:* English

**Assessment**

For passing the course, the following is required:

- An accepted report written in English.
- An accepted presentation and defense during the thesis presentation seminar held in English.
- Accepted opposition for another Master thesis.
- Attending two other Master thesis presentations.

**Grades**

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

Granting Pass with distinction requires approval of a second teacher (entitled to be thesis examiner).

**Course evaluation**

The course is evaluated through meetings both during and 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.