



## COURSE SYLLABUS

### Masterarbete i datavetenskap

#### Master's Thesis (120 credits) in Computer Science

#### 30 credits (30 högskolepoäng)

**Course code:** DV2572

**Main field of study:** Computer Science

**Disciplinary domain:** Technology

**Education level:** Second cycle

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

**Language of instruction:** English

**Applies from:** 2023-09-01

**Approved:** 2023-09-01

#### 1. Decision

This course is established by 2016-08-30. The course syllabus is approved by Dean 2023-09-01 and applies from 2023-09-01.

#### 2. Entry requirements

Admission to the course requires a minimum of 90 higher education credits in Computer Science, including at least 30 credits at the advanced level. In addition, students must have successfully completed a course in Research Methodology in Software Engineering and/or Computer Science for 7.5 credits.

#### 3. Objective and content

##### 3.1 Objective

The aim of the course is to enable students to practise their ability to define, plan, execute and report an independent research study. The students are expected to apply knowledge previously acquired on the programme in order to specialise in one or more specific areas within the main field of computer science. The goal of the student is to report the results of their research study in speech and writing and to critically review and publicly discuss the degree project of another student. The report is to satisfy the requirements and criteria of academic papers.

##### 3.2 Content

The course consists of four components:

1. Preliminary study and planning
2. Implementation of
  - a. research
  - b. supervision
  - c. written report
3. Oral presentation and defence
4. Critical review
  - a. written review
  - b. oral review

The preliminary study and planning involve drafting a project plan including a time plan for the project. During the implementation phase the student is to execute the project and provide documentation in the academic report in accordance with the time plan. During the oral presentation, the student is to defend their degree project. Each student is also to critically review another student's degree project.

#### 4. Learning outcomes

The following learning outcomes are examined in the course:

#### 5. Learning activities

The students are to work in pairs of at least two and are responsible for ensuring that the degree project is completed within predetermined time frames and the available resources for supervision, and is of a sufficiently high quality. Exemptions for individual projects are to be approved by the examiner.

Each thesis is to be supervised by an academic supervisor at the institute. In addition to the academic supervisor, the students can have an external supervisor from business and industry or another higher education institution.

There is a thesis idea pitch seminar before the course starts. The course starts with a set of introductory seminars. This is followed by independent work in the form of planning, execution and reporting of a degree project, and critical review of another student's degree project. Throughout the project work, the student is to maintain an e-portfolio on the learning platform of the course by regularly describing the status and development of the degree project.

The final, revised report is assessed by the examiner after the oral presentation. The examiner awards a grade on the academic report based on his or her own assessment and the results of a peer review. The assessment of the project plan is also to be made by the examiner with the support of peer review.

The requirements for the degree project to be presented and defended are (i) that the project plan has been approved, and (ii) that the academic supervisor has informed the examiner that the quality of the degree project is sufficient for it to be presented and defended. The assessment of the supervisor does not automatically entail that the academic report is awarded a Pass. The grading is made by the examiner after the presentation and critical review.

The project plan, the oral presentation and defence, the oral and written critical review, and the academic report are to comply with the instructions and templates provided in the Instructions for Degree Projects available at the Faculty of Computing.

The course is taught on campus, if nothing else is stated. The student is expected to be available for supervision. It is the responsibility of the student to make time-efficient use of the supervision. Supervision is only provided during semesters.

Students who fail to complete their degree projects during the current semester will receive further supervision to a limited extent only and for no longer than the start of the next course occasion. The examiner has the right to discontinue the supervision when all the time available for supervision has been used. However, students are always entitled to have their degree projects assessed at the next available examination opportunity. A student re-registering on the course is not automatically entitled to new hours for supervision.

## 6. Assessment and grading

Modes of examinations of the course

Code	Module	Credits	Grade
2405	Essay/Thesis[1]	26 credits	AF
2415	Defence	1 credits	GU
2425	Project Plan	2 credits	GU
2435	Public Discussion and Examination	1 credits	GU

[1] Determines the final grade for the course, which will only be issued when all components have been approved.

The course will be graded A Excellent, B Very good, C Good, D Satisfactory, E Sufficient, FX Fail, supplementation required, F Fail.

The grading is carried out by the examiner after taking into account the results of the peer review. The students are assessed individually, even when they write the thesis in pairs.

A student who by the end of the course has not submitted a project plan is given the grade U (Fail) for these assignments, since the student did not demonstrate adequate ability to perform tasks within specified timeframes.

A student, who has not submitted an academic report of sufficient quality to be presented and defended within 12 (16) months from the start of the course, can at most receive grade B (C), since the student did not demonstrate adequate ability to perform tasks within specified timeframes.

The oral presentation and defence of the thesis and oral opposition shall take place on campus, if nothing else is stated.

The number of times that a student may be examined to get a passing grade on each of the examination components of the course is limited to five.

The information before a course occasion states the assessment criteria and make explicit in which modes of examination that the learning outcomes are assessed.

An examiner can, after consulting the Disability Advisor at BTH, decide on a customized examination form for a student with a long-term disability to be provided with an examination equivalent to one given to a student who is not disabled.

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**7. Course evaluation**

The course evaluation should be carried out in line with BTH:s course evaluation template and process.

**8. Restrictions regarding degree**

The course can form part of a degree but not together with another course the content of which completely or partly corresponds with the contents of this course.

**9. Course literature and other materials of instruction**

Master's Thesis (120 credits) in Computer Science

Kurslitteratur Tillhandahålls av institutionen: Anvisningar för examensarbeten inom datavetenskap. Övrig kurslitteratur väljs individuellt av studenten i samråd med handledare. Referenslitteratur 1. Thesis Projects: A Guide for Students in Computer Science and Information Systems; 2nd Edition Författare: Mikael Berndtsson et al. Förlag: Springer Utgiven: 2007, Antal sidor: 162 ISBN-13: 978-1848000087 2. Experimentation in Software Engineering – An Introduction; 2nd Edition Författare: C. Wohlin, P. Runeson, M. Höst, M.C. Ohlsson, B. Regnell, A. Wesslén Förlag: Springer Verlag Utgiven: 2012, Antal sidor: 250 ISBN-13: 978-36422

Översättning/Translation