Course Description for Thesis Project (DT7001 & DT7002)

1. Introduction

The MSc thesis project is conducted as a 30-credit course and corresponds to 20 weeks of full-time work. This document contains information and guidelines for how the course is implemented at the School of Information Technology (ITE).

The course includes the following mandatory elements:
- Recognition of prior knowledge – to start the MSc thesis requires at least 60 credits at Advanced Level, that is, at most two courses within the program may be not completed
- Submission of project idea before a specified date
- Oral presentation at three seminars: start, half-time and final
- Training in source search (reference handling) and report writing
- Delivery of a written final report for examination according to the timeline
- Individual oral presentation of the project and the results
- Registration of the final report in DiVA

1.1 Objectives of the thesis (see also the syllabus for the thesis project)

The thesis shall prepare the student for future professional activities (the thesis is often an entrance to the first employment as engineer or researcher or continued studies after graduation) and shall demonstrate that the student has attained the level of knowledge, skills and understanding needed to successfully do and report an satisfactory thesis in the study direction. The project group's ability to work effectively as a team is an important part of the thesis project.

In the thesis report it is important to show work that is relevant from both engineering and research perspectives, and that the results demonstrate application of both technical and interpersonal skills. Further that the student is anchored in "reality" and can combine theory, practice and methods in a results-oriented and holistic way, and also can get things done within a limited time.

In other words, it is critical to understand that the thesis goes beyond solving a problem – the solution is used to demonstrate student's capabilities and skills, not the end goal in itself.

The thesis subject must be selected so that it is relevant for the education program as well as can show the students skills in using the knowledge for analysis and solution of a thesis task within direction of the program. The examiner does not accept theses that do not meet these criteria. **At the same time, most thesis topics are proposed in quite open-ended fashion – it is student's task to formalise and narrow down the scope appropriately, considering the expectations above.**

A typical thesis is an analysis or synthesis investigation, generally proposing a method to solve a **problem**. More rarely the thesis may also consist of a survey investigation. An important part of thesis work is to **define a problem and the state of knowledge in relation to this problem**. Authors must then analyse and examine **different models, approaches and/or methods** to solve the problem. The final choice of the solution must be **well-motivated**. Final results must be **evaluated in a rigorous manner**, appropriate for the problem domain.

1.2 Prerequisites

To be accepted to the course requires at least **60 credits** of advanced level courses (courses in progress may be counted partially if the progress is satisfactory). This means that **at most two courses may remain unfinished**. It is the responsibility of the project team to show the examiner that all the project members fulfil these prerequisites, through an excerpt from LADOK. If the requirements are not fulfilled, a plan must be given showing how the student will reach them, or they will not be allowed to start the project and must wait for the next course.

1.3 Supervision and tutoring

Each project shall have a teacher or a researcher at the University as the main supervisor, and possibly additional ones as co-supervisors. If the project is done at a company, the company shall appoint a mentor. The project team and the supervisors specify the task jointly and have regular meetings to monitor the progress. It is important that the thesis is well specified from the start, in particular in terms of the expected evaluation measures and success criteria. The supervisor at the university has a number of hours for supervision of the thesis. Approximately half of this time can be used for meetings with the supervisor. The rest must be reserved for the report reading, etc.

1.4 Group size

Ideally, the group will consist of two students. Depending on the project, the number of students may vary between one and three (if more it is necessary to divide the work into sub-projects and separated thesis reports). The proposal sent to the examiner shall include a justification for the group size. If the project consists of students from various programs, the project must be designed so that it is suitable for both programs.

1.5 Work environment, premises and equipment needs

If all the necessary equipment is in the company premises and thus it is difficult to perform the work elsewhere or if it is a wish of the company, then the work must be done there. If the required equipment is available at the university, the work can be carried out at the university.

1.6 Costs

Supervision, school equipment and project facilities are available for free. Material costs, purchase of standards, equipment (missing at the school), and travel costs caused by the work, are paid for by the company. Any payment for travels between company and university becomes a matter between the company and the project team.

1.7 Privacy

If you or the company desires, a confidentiality agreement can be written between the company and the people who receive insight into, e.g. products or ideas. Authorship rights, etc. should be agreed on in a contract before the work starts. No contracts can be written between companies and University.

1.8 Right of invention

Copyright and other Intellectual Property (IP) rights are governed by Swedish law. Agreements on copyright distribution should be written. Basically, the student has the copyright of the material produced.

1.9 Schedule

The different steps in the course (including the expectations at each of them) are described at University's web page: topic selection, start report & seminar, half-time report & seminar, and final report & seminar. These occasions are mandatory, and they are evaluated – influencing your final grade. If you miss any of them, you will need to re-do the task at the next available opportunity, which is likely to delay you finishing the studies.

The detailed schedule for those events, once decided, will be published on Student's Projects page.