

## THESIS WORK – INFORMATION TO CORPORATIONS AND COLLABORATORS

*The thesis is a fantastic opportunity for the student to demonstrate knowledge and the ability required for independent work. The need for proposals from industry is large.*

### THESIS WORK - AIM, SCOPE:

The aim of the thesis is for the student to develop in-depth knowledge, understanding, ability and approaches within the area of the education. The thesis shall be conducted towards the end of the education and lead to a deepening and synthesis of previously acquired knowledge.

The thesis work at Bachelor of Science level is 15 higher education credits equivalent to fulltime during half a term or half time one term.

The thesis work at Master's of Science is 30 higher education credits – fulltime one term. In some cases the thesis work may be 60 credits – fulltime during two terms.

### INVOLVED STAKEHOLDERS - COMMITMENT

**Examiner:** An examiner shall be appointed by Chalmers for every thesis. Responsible for the scientific and quality-related aspects of the thesis, as well as for compliance with the learning objectives. The examiner sets the grade for the thesis.

**Internal supervisor:** The Chalmers appointed supervisor provides scientific/technical/artistic support for the student and assists the student/s with the practical processes during the thesis work.

**External supervisor:** Appointed by the company/organisation offering the thesis position.

- \* The supervisor creates a common understanding with the student regarding conditions for the thesis: availability, resources eg.
- \* Ensures access to premises, tools and equipment.
- \* Clarifies scope and limitations of the project.
- \* Follows-up progress continuously throughout the project.

The external supervisor is more than welcome to participate at the presentation of the project at Chalmers.

*Hint!*  
The thesis work is usually conducted during the spring term. If you wish to announce thesis work at your organisation, you need to do so already in early autumn.

### WORKFLOW – from proposal to examination

#### **Initiation of thesis proposals:**

=> The student contacts a company or a department with a thesis proposal. The student contacts at the same time an examiner at Chalmers or the person responsible for theses at the department.

=> A company contacts Chalmers and suggests a thesis topic.

=> A department suggests a thesis.

=> An ongoing collaboration between a company and the department suggest a thesis topic.

#### **Before starting:**

\* *The student* shall autonomously produce a written thesis proposal. The description shall include background, aim, objectives and possible method.

\* *The examiner* shall assess and approve that implementation of the proposed thesis leads to the student/s developing the knowledge, abilities and approach included in the learning objectives for the thesis.

\* *The Director of Master's Programmes (MPA)* shall assess and approve that the proposal is within the main area of the Master's Programme.

#### **Implementation:**

\* The student send in the registration document and get registered if the general and specific requirements are fulfilled.

\* The student/s shall produce a written planning report which includes background, preliminary aim, objectives, demarcations, method and timetable for production of the thesis.

\* During the process of production of the thesis, the student/s has the right to supervision from both the internal and external supervisor.

#### **Examination:**

\* The examiner approves and sets the grade.

\* To pass: approved planning report, approved presentation and defence, approved opposition to another thesis, attendance at two other presentations, approved essay.

The student shall have worked actively and autonomously and contributed to an extent corresponding to 15/30/60 credits.

## **PUBLIC ACCESS – CONFIDENTIALITY - COPYRIGHT**

Theses shall be presented both in writing and orally. *The written composition shall be public in its entirety and shall constitute a sufficient basis for the examiner to set a grade.*

The student/s hold the copyright to the thesis. The author can choose by contract to wholly or partly transfer the financial rights to other parties, or to allow others to have the right of use of these.

Any deviations from the standard workflow should be clarified early on in the process.

## **COMPENSATION**

The thesis is part of the student's training and there is no requirement for compensation. It's customary that the company/organization accounts for expenses associated with the thesis, e.g. travel cost. Some external parties choose to compensate the student after the thesis is finished.

*Hint!*  
Announce your thesis work for free at:  
[www.chalmers.se/collaboration](http://www.chalmers.se/collaboration)

### **Learning objectives Degree project – Bachelor of Science:**

1. Acquire and apply advanced knowledge within the field of the engineering program, including deeper insight into current development.
2. With a comprehensive view, independently and creatively, formulate and handle issues and analyze and evaluate different technical solutions.
3. Plan and use appropriate methods to perform tasks within given constraints.
4. Critically and systematically use knowledge to model, simulate, predict and evaluate events on the basis of relevant information.
5. Within the framework of the project be able to identify issues regarding the role of technology in society, such as environmental and ethical aspects.
6. Orally and in writing explain and discuss information, problems and solutions.

=> The overall goal of the Degree project is that the student shall demonstrate the knowledge and ability that is required to work independently as an engineer.

### **Learning objectives Master's thesis – Master of Science:**

1. Apply significantly specialised knowledge in the main area/specialisation of the programme in his or her project and relate this to current research and development work in a scientifically correct way,
2. Choose and justify the choice of method in the project, within the main area/specialisation of the programme,
3. Contribute to research and development work, and be able to relate his or her work to the relevant scientific and technical/industrially/architectonic contexts,
4. With a holistic approach, to identify, formulate and deal with complex issues critically, autonomously and creatively,
5. To plan and perform highly qualified tasks using adequate methods within given parameters, and to be capable of critically evaluating this work,
6. Create, analyse and critically evaluate different technical/architectonic solutions,
7. Integrate knowledge critically and systematically,
8. Present clearly and discuss his or her solutions in English, as well as the knowledge and the arguments on which these are based,
9. Identify, within the parameters of the specific project, the questions that need to be answered in order for the relevant societal, ethical and ecological aspects to be taken into consideration, and
10. Take into account and discuss ethical aspects of research and development work, both as regards *how* the work is to be performed, as well as *what* is to be investigated/developed.
11. Identify and discuss the need for additional clarification of various aspects of the project prior to decision and implementation, where relevant