

Handout for the realization of external Theses (Bachelor and Master Theses) Information for students and companies

1 Preliminary note

This document serves as an orientation for students and companies in the preparation and execution of final theses. The recommendations and hints given here are closely based on the resolutions of the Fakultätentag Elektrotechnik und Informationstechnik (FTEI) [1] and the recommendations of the German University Association [2].

The technical-scientific cooperation between industry and the chairs/institutes of the Department of Electrical Engineering and Computer Science (ETI) at the University of Siegen is important for successful practice-oriented research, the education of students and the transfer of knowledge. As a rule, final theses are carried out at the university, but can also take place, e.g. within the framework of cooperation projects, with or at companies, e.g. if access to special infrastructure is necessary.

In connection with the implementation of external student research projects and theses, however, certain conditions and procedures must be observed. In particular, it is generally not expedient if the choice of a topic or other agreements are made between companies and students in the expectation that professors will agree to supervise them. Therefore, some principles are formulated here in order to bring external theses in the industrial environment in line with the sovereign tasks of university teaching.

In principle, this guideline also applies to dual students, whereby some parts of this document are automatically fulfilled here due to the cooperation agreement between the university, the company and the student. However, special attention must be paid to the formulation of the topic of the thesis, taking into account the formal requirements with regard to the scientific nature of the thesis.

2 Principles

2.1 Reference to the examination regulations

"Degree theses are examination achievements, the performance of which is regulated by the respective examination regulations" [1]. In the specific case, the following principles of the (framework) examination regulations in ETI apply in particular.

- Degree theses are assigned by the university professors, the reviewers of a degree thesis are appointed by the chairman of the examination board.
- Students have no formal right to supervision of work offered to them by companies or other institutes outside their own university.
- There is no entitlement to supervision of a specific thesis or thesis topic.
- The assessment of the thesis is the responsibility of the supervising professor and a second examiner appointed by the examination board. The second examiner is usually also a member of the university. In exceptional cases, e.g. in the case of long-term cooperations, the supervisor in the external company can also be appointed as a second examiner.
- Any confidentiality agreements concluded must allow sufficient access to relevant information and results for the supervising university lecturer and the second examiner, so that unhindered supervision and evaluation of the thesis is ensured and a public presentation of the thesis at the university is possible. In addition, there must be no restrictions with regard to ensuring good scientific practice of the thesis (e.g. restrictions in the use of anti-plagiarism software).

The execution of final theses are regulated in detail in (as of May 2023):

- §36 "Uniform Regulations for Examinations in the Courses of Study of the Department of Elec-

trical Engineering and Computer Science of the Faculty of Science and Technology of the University of Siegen".

- §14 "Framework Examination Regulations for the Bachelor's Program (or Master's Program) at the University of Siegen".
- §11 "Subject Examination Regulations for the Subject Electrical Engineering (or Computer Science) in the Bachelor's Program (or Master's Program) at the University of Siegen".

The current version of the examination regulations is available on the website of the Examination Office [Electrical Engineering](#) or [Computer Science](#).

2.2 Planning of the final thesis

"When planning the work, it must be ensured that it meets university standards in terms of demand and quality. Appropriate on-site supervision must be ensured; in particular, a contact person with scientific qualifications should be available." [1]

It is recommended that students first contact a university lecturer who will then define a suitable assignment in cooperation with the external company.

In addition, at a minimum, the following items should be clarified and agreed upon in writing, if necessary, prior to starting the work:

- The precise description of the task, especially with regard to the necessary scientific question that should be clarified within the framework of the work.
- The rhythm in which the university supervisor is informed about the status of the work, as well as the form of supervision, i.e. whether, for example, the exchange of concepts or the use of university resources should be included
- If necessary, a (confidentiality) agreement can be concluded, including specifications on how to deal with possible applications for industrial property rights and on the rights of use of all participants to the results of the work. This requires the involvement of the legal department of the University of Siegen.
Without a separate agreement, all rights of use and exploitation stay with the student. Any blocking periods on parts of the final thesis should not exceed 12 months.
- Determination of on-site caregiver(s).

The student must also agree to this agreement. In addition, it must be ensured that the necessary insurance coverage of the students (especially accident and liability insurance) is guaranteed.

2.3 Other principles

- Student theses are an integral part of the course of study and do not constitute work for the company. Any financial compensation for students should therefore not exceed the scope of an expense allowance (e.g. for double housekeeping, travel expenses, ...).
- "A personal financial compensation of the university lecturer for the supervision of the work is excluded. If additional costs that can be clearly allocated arise from the supervision of students working externally, e.g. travel costs to the student's place of work, their assumption should be clarified in advance with the company." [1]
- "If the student's final thesis is in the special interest of the company over and above the completion of this examination work, any additional expense incurred by the university may be charged to the company. Additional expenses may also result, for example, from the use of laboratories by the student during his work in the interest of the company. In any case, an agreement on this should also be concluded between the company and the university before the work begins." [1]
In any case, the requirements of third-party funding law apply.

3 Bibliography

- [1] Fakultätentag Elektrotechnik und Informationstechnik, „Grundsätze zur Durchführung externer Studienabschlussarbeiten,“ 2021.
- [2] Deutscher Hochschulverband, „Der Umgang mit „externen“ Diplomarbeiten - Empfehlungen für Hochschullehrer,“
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