



## External Master's Theses: Guidelines and Information

### At the beginning:

Once a company from the field of automotive/embedded systems has provided you with a thesis topic, you can contact us per email attaching the following. Note that **regardless of the duration, we do not sign any non-disclosure agreements (NDAs)**.

- A detailed **task description**
- Your **transcript of grades** and a **short CV**
- Information about the supervising company. Information about internal processes/structure are not required.

The topic of the thesis should fit our field of work and be from the domain of embedded and automotive systems. Kindly be concise in your application and **do not use ChatGPT or similar** to write the email. Those emails will not be answered.

### After acceptance:

You can start working directly and there is nothing required from your side for now. The next step will be the concept presentation, which you will be asked to give after 2 to 4 months after the start of your work.

#### 1. Concept Presentation

The concept presentation should be given around 2 to 4 months after starting your thesis work. This 20min long talk allows you to practice presenting and provides you with feedback from our side. It should contain the following points:

- Introduction: Short story leading to the topic; Motivation: Why are you doing this, for example, mention problems of existing approaches
- Related work (optional at this point): What do others do? What is the state of the art? This is used for further justification of your work
- Concept: Abstract theory on how you are planning to solve problems/challenges
- Gantt chart showing a timeline on how you plan to continue your work.

The concept presentation can be done via skype or through TU Chemnitz conferencing tool **BigBlueButton**. Please contact us for an appointment and also inform us whether any other persons from the company will join. It is not necessary for the supervisor to join the concept presentation (over skype or BigBlueButton). However, if they wish to attend, they are most welcome.

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## 2. Registration

After the concept presentation, you have to officially register your thesis at the examination office (Prüfungsamt) by filling the following form sheet:

[https://www.tu-chemnitz.de/studentenservice/zpa/formulare/allgemeineformulare/abschlussarbeit\\_anmeldung.pdf](https://www.tu-chemnitz.de/studentenservice/zpa/formulare/allgemeineformulare/abschlussarbeit_anmeldung.pdf)

You can bring the form sheet to our office in room 1/014 or send it to us via post or scanned copy as a PDF file. The start of registration (Ausgabedatum) must be dated at the time of concept presentation. For example, if you have started working in April and gave your concept presentation in June, the registration starting date has to be in June. Once the form is also signed and stamped from our end, we will send it to the examination office. They will register the thesis to your name and send you a confirmation through post mentioning the last date for submitting your thesis copies.

## 3. Thesis report

Once the company supervisor has agreed to your report you can go ahead with the submission. The examination office requires two hard copies of your report along with the soft copies of your report (either in CDs or in USB sticks). Also, please ensure that this form is the last page in your reports (both hard and soft copies).

[https://www.tu-chemnitz.de/studentenservice/zpa/formulare/allgemeineformulare/abschlussarbeit\\_selbststaendigkeitserklaerung.pdf](https://www.tu-chemnitz.de/studentenservice/zpa/formulare/allgemeineformulare/abschlussarbeit_selbststaendigkeitserklaerung.pdf)

The thesis report has to be submitted at the examination office (Prüfungsamt) before the deadline passes (typically 23 weeks after registration, however, make sure to check times in the official student regulations provided by TU Chemnitz). There are no formal requirements for the thesis, meaning you can create your own layout and use either Microsoft Word or Latex for writing. **Please note that the soft copy of your report (submitted with the CDs or USB sticks) would be checked for plagiarism with Docoloc tool. Therefore, it is extremely important that you provide citations for your text, tables, and figures. If there are sentences directly copied from a source, ensure that they are presented within quotes (“ ... ”) and cited.** If there are no citations and your work is reported for plagiarism, then, your master thesis grade could be 5,0 (not passed).

With respect to the thesis report, as of now, there is no official template from us. However, the report should contain the following points:

- Introduction & Motivation
- Related work: What is the state of the art and what do you improve with your solution? Cite at least 10 conference/journal papers.
- Concept: Abstract concept/ideas about how you are solving your problems/challenges
- Implementation: How the concept is being implemented with hardware/software



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- Evaluation: Testing your solution and rate its performance. Mention what problems/challenges could be solved and which not.
  - Conclusion: Max 1.5 pages summary with short outlook

#### 4. Thesis defense

After notifying us about the submission of your thesis report, the examination office will send us the same. Once we receive them, we will make an appointment for your thesis defense. This date should be within 7 to 28 days after submitting your report. This last talk will formally finish your master thesis and provide you with a grade.

Again, there are no formal rules on how your presentation slides have to look like. However, we provide a template, which you can use and modify. As for the content, use the same structure as for your thesis (described in 3.) Note that the defense has to be given personally at TU Chemnitz. However, due to the ongoing Covid-19 pandemic all defenses happen online. Your external supervisor can participate, however, if he/she cannot, then do let us know as we need an evaluation from him/her.

#### Miscellaneous:

- Since this is an external thesis, we only provide support for university related topics/questions, such as, deadlines, formalities, etc. All content related questions have to be handled by your company's supervisor.
- Do some research and do not forget to pay attention to the related work part of your thesis! There should be at least 2 pages and 10 references dedicated to the current state of the art of research.
- Please ensure that you cite the appropriate references for text, tables and figures.
- The printed thesis report should contain your name on the spine

#### Contact:

Please contact us via mail at [cas-contact@cs.tu-chemnitz.de](mailto:cas-contact@cs.tu-chemnitz.de)

Please note that we cannot make personal appointments for thesis inquiries. Further, any queries through email, the answers to which can be readily obtained from reading this document will not be answered.