LABORATORY OF ENERGY SCIENCE AND ENGINEERING

D MAVT

Master Thesis Guide

Dear new group member, Welcome aboard!

We are pleased to have you working with us. We are looking forward to seeing you grow and develop into an outstanding group member. We hope that you will find your work to be rewarding, challenging, and meaningful.

To ease your start into the thesis, we compiled this guide. It provides you with resources on how to get off to a good start. In case you cannot find the answer you were looking for, feel free to ask any group member. We will gladly assist you and it will help us to complement this guide. Again, we are looking forward to working with you.

Sincerely,
LESE

Important Deliverables During Your Project

Thesis Proposal

A proposal should be handed into your supervisor within the first two weeks. This will set your milestones, and a rough timeline. Try to aim for SMART goals – Specific, Measurable, Achievable, Relevant/Realistic, Timely (https://www.mindtools.com/pages/article/smart-goals.htm).

Status updates/meetings

Weekly or biweekly status updates will be held where the student gives a short summary of what has been and what will be done in the following weeks. This can be either in the form of a short PowerPoint presentation (preferred) or a written 1–2-page summary. This guarantees to keep track of the results obtained and to plan the next steps ahead.

Mid Term Presentation

A mid-term presentation is not compulsory but is very useful as you can receive feedback. You can present your findings during one of the group meetings.

Final Presentation

A final presentation date will need to be set between you, your supervisor, and Professor Müller

Final Report

A final report, preferably written in Latex or Word. The report will be written in the style of a paper, i.e., concise, and clear. In general, this includes an abstract, introduction, experimental section, results and discussion, summary and conclusion, and outlook. See also *Whiteside's Group: Writing a Paper.*

Master Thesis Grading Template

Credit Points: 30

Grading Scheme

6.0 – Excellent. Work resulted in a journal publication or equivalent

5.5 - Very Good. Above average, minor flaws

5.0 - Good, well within average

4.5 - Satisfactory, below average

4.0 - barely satisfactory, well below average. Just met the minimum requirements

3.0 - Serious flaws, well below average

Final Grade Breakdown

Description details requirements required to attain a 6.0

- **Content: 25%**

  High quality content which can be published in a well ranked Journal paper. The content is also clearly organised and is easily transferable.

- **Systematics/Initiative: 20%**

  Very **structured and methodological** scientific approach**. Good literature review** to avoid unnecessary work. Milestones and deadlines achieved systematically. Steps are taken to ensure and prove the accuracy of results. Follows ETH scientific guidelines.

- **Independence: 20%**

  Candidate **developed original ideas** and interwove them with the existing know how of the group

- **Report: 25%**

  Report is **structured, concise, grammatically correct, and attractive** to the reader. It is supported with **clear figures and tables**. Contains an informative summary. The report becomes an important reference material for future work within the Chair. Supporting material is also appended and clearly referenced

- **Presentation: 10%**

  Presentation is **structured, entertaining, and informative** to the audience. It is supported with clear figures and tables. The presentation should be simple, and yet cover the important findings in the Thesis. All questions should be answered well.

Getting Started

Access to the building (if applicable)

Key – Email your supervisor to request a key

Get an admission PIN-code - for building access outside regular office hours: Go to www.adressen.ethz.ch under “Change admission PIN-Code” you can enter your preferred PIN-code.

Useful programs

Data evaluation and plotting

OriginPro (needed for making better figures, provided by the ITshop)

Matlab (can be used alternatively)

Reference management tools

EndNote (provided by the ITshop)

Zotero (free and open-source alternative)

Useful Links

Research paper search engines

https://www.webofscience.com/wos/woscc/basic-search

https://scholar.google.com/

Alloy Phase Diagrams

https://dl.asminternational.org/handbooks/edited-volume/36/Alloy-Phase-Diagrams

ICSD crystal structure database

https://icsd.fiz-karlsruhe.de/search/basic.xhtml

Zitier-Knigge

https://ethz.ch/content/dam/ethz/main/education/rechtliches-abschluesse/leistungskontrollen/plagiat-zitierknigge.pdf

Report

Latex/Word

Style - *Whiteside’s Group: Writing a Paper* gives a good explanation