Module Description

Geomatics Specialization Project 1

General Information

Module Code

GEO_Proj1

Module Category

Specialization

Lessons

Project work with individual supervisor meetings

ECTS

6

Module Language

English

Projects can be completed in German or English (defined at the start of the project in discussion with the project supervisor, inform profile responsible person by SV03 the latest)

Module Description

More than half of the MSE consists of project-based learning in the chosen topic fields. Students complete demanding applied research projects to apply and extend their theoretical and practical knowledge of a selected topic within the field of Geomatics.

The Geomatics Specialization Project 1 is the first study project (followed by the Geomatics Specialization Project 2 and the Master Thesis). The students are given a general description of the project's topic or problem area, including some pointers to relevant literature. The topics/problems are generally related to ongoing or future research projects at the Institute of Geomatics. Based on the topic description, the students review the state-of-the-art of the topic area and define their specific research questions. The literature review and research questions together with a description of the intended research methods as well as a project management plan is described in the research plan. The research plan is used to discuss the planned project work with the supervisors and, if the supervisor agrees, to work on and complete the project accordingly in the given time frame.

The timely definition of a research plan is a key part of all MSE projects. In the Geomatics Specialization Project 1 a focus lies on the research plan - its definition, implementation, and evaluation in the light of the research project results - to build a strong foundation for the following projects.

Learning Objectives, Contents, Methods

Learning Objectives and Acquired Competences

- The students complete a demanding applied research project individually. They review the state of the art, define suitable research questions and relevant methods, implement the research project, document the results, and evaluate their findings in the light of the research questions and the overall state of the art in the topic area. Each project aims at adding some new knowledge to the topic area concerned.
- The students implement suitable project management methods to complete and document the project in the given time frame.
- The students manage the communication of their project and stay in contact with their supervisors.

Module Contents

- The students analyse a topic area of an applied research question or problem and review the state of the art of the topic area.
- The students define their specific research questions based on the literature review and analysis of the topic area.
- The students evaluate the suitability of different approaches and solutions and define and implement selected methods to complete their applied research project and to find answers to their research questions.
- The students define and write up their research plan including state of the art review, research questions, methodology and project management plan – to be agreed upon by the supervisor
  Finalised and agreed upon research plan available by mid semester the latest (it is recommended to finalise the research plan by semester week 05 to have enough time for the actual project implementation as well as documentation)
- The students implement their research project based on the research plan in the available timeframe.
- The students evaluate their results regarding the defined research questions and the overall state of the art of the topic area. Where do the results add something (what) to the existing knowledge in the topic area?
- The students document their progress and the results suitably in a technical-scientific report.
- The students present their project to a professional audience.

Teaching and Learning Methods

Individual project work

Coaching by project supervisor (a minimum of two project meetings between supervisor and student is required)

Requirements

Module HABG_STAR successfully completed at the start of GEO_Proj1 or module HABG_STAR completed in the same semester as GEO_Proj1

Assessment

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- Minimum of two projects meetings with thesis supervisor
- Finalised research plan available by mid semester
- Suitable written technical-scientific report of the project submitted by given deadline.
- Use of personal server space (S:\HABG\E1311_MSE\E1311_GEO_StudentName) for project work, data storage, and revised project submission. Submit all relevant files of your work in a useful and documented folder structure on your personal storage space. This includes all original files of PDFs and reports, such as word or ppt files as well as the original graphic files as separate files.
- Attendance of all Geomatics Specialization Project (GEO_Projs 1 & 2) presentations of fellow students in the same semester

Final Module Assessment

According to Module Assessment Form, regarding content, form, and oral presentation of the project

Example statement of independent work

"I certify that I have completed this project independently and without using any sources or aids other than those listed in the bibliography. Any content that was created with the support by digital or human lectorate, code checking, or other forms of aid are suitable marked, and the aid declared, Passages taken verbatim or paraphrased from the sources and aids listed in the bibliography are identified in the work as citations and provided with a reference to the bibliography. I agree that my work can be checked electronically for plagiarism. This project (GEO_Proj1) has not been published, not made available to any other interested parties, nor submitted to any other examining authority."

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