



Guidelines

for internships as a part of the curriculum
in the Master's degree program
Systems Engineering and Quantum Engineering

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1. Purpose and structure of internships in Master's degree program

The Examination Regulations governing the Master's degree program *Systems Engineering* at Saarland University require students to demonstrate that they have completed an internship as approved by the Internship Office [Praktikantenamt] at the Faculty of Natural Sciences and Technology, for students of the study program Master Quantum Engineering (in the following abbreviated as QE) a professional practical activity can be completed within the scope of the general elective duty. The objectives of the internship are: to enable students to become better acquainted with current industrial and professional engineering practices; to improve student understanding of topics covered in the curriculum; to motivate students in their academic studies and to facilitate transitioning to the working world. In contrast to the basic practical training that students undertake in their Bachelor's degree programmes, the internship in a Master's program provides an opportunity for students to apply the knowledge and skills acquired during their studies.

2. Internship activities

Internship should cover technical, subject-related activities in the fields of Systems Engineering, respectively QE (depending on the course of study). Examples of such activities include: concept development design, construction, manufacturing, assembly, characterization, commissioning, application and maintenance. Activities that will not be recognized for the purposes of the internship are: administrative activities, domestic installation work, the repair of domestic appliances or radio and television equipment, programming courses and pure software coding activities without direct relevance to Systems Engineering or QE.

The student shall propose a topic and the content of the internship. Students are encouraged to seek early advice from an examiner (according to the respective Examination Regulations [Prüfungsordnung]) regarding the suitability of the proposed advanced engineering practice activity. The examiner must provide a positive assessment of the proposed topic and activities and must confirm this in writing as a precondition to account the internship as a part of the curriculum.

3. Duration of the internship

The term of the internship shall be at least eight weeks in total for students in the master degree program Systems Engineering, for students in the master degree program QE, a shorter term of the internship is possible. Credit Points (CP) are awarded according to the workload. A maximum of 9 CP can be awarded. The internship should be undertaken in the third semester and must be completed by the time the student registers for the Master's thesis.

The term of the internship shall be at least two consecutive weeks in one company. Days missed must be made up.

4. Host companies

The knowledge and skills that students should learn during the internship can be primarily acquired in large and medium-sized industrial companies. Companies that operate large electrical engineering and mechanical engineering departments may also be suitable.

In order for the internship to be recognized, the host company must be one that is suitable for demonstrating and communicating industrially relevant professional work experience. On-campus or near-campus research institutes associated with a university or independent research institutions are generally not suitable as host organizations for internship in the Master's program Systems Engineering, admitted for QE on the other hand.

Although the Department Systems Engineering does not directly provide work placements, internships or practical training positions, it does advise students about the suitability of such positions. Students may also obtain verified information on internships from the Business and Industry Liaison Office [Koordinationsstelle Studium und Praxis], the appropriate Chamber of Industry and Commerce or the Careers Advisory Service at the Federal Employment Agency.

5. Accreditation of prior work experience and special rules

Students who have been previously employed at a suitable company during a semester vacation period or as a student employee or who have other relevant professional experience may have such activities recognized insofar as they meet the provisions of these Guidelines and a report has been drawn up in accordance with section 6.

Applications for recognition of periods of military service or alternative civilian service that were undertaken in technical workshops or technical units will be decided upon request.

6. Student reports

The intern shall keep a written record covering the entire period of internship. Weekly reports or even more comprehensive reports covering each particular area of practical activity are acceptable. Weekly reports should be one to two A4 pages in length (including drawings). As the reports serve to assist the student in learning, presenting and the mediation of technical subject matter, they must be written by the students themselves. The report should describe work processes and operations, facilities, equipment and tools, etc. and should contain notes about the activities performed and experience gained.

A report should be as comprehensive as possible while also being compiled in a concise and clearly structured way. It should be apparent from the written text that the work described was carried out by the author. Sketches, workshop drawings, circuit diagrams, etc. can often be used in place of a

lengthy text. Brochures or photocopies of material produced by others should not be included. The report should also include a list briefly specifying the activities performed each day and the time spent on them.

Reports must be initialled by the student's company supervisor.

Reports must be submitted to the examiner within six months of the start of the program or, if the internship is later, upon completion of the professional internship.

7. Certifying the period of internship

In addition to the report, to facilitate recognition of the period of internship, the host company shall issue relevant certification. This certification shall include:

- the name of the company, department and location at which the internship was undertaken
- personal information concerning the student /intern
- the type and duration of activities performed
- periods of absence and holidays, even when there were none.

After completing their period of internship, students shall attend a colloquium where they report to at least one examiner (as defined in Section 7 of the Examination Regulations) on the content, activities performed and results achieved during their internship. If possible, a representative of the company in which the internship was conducted should also attend the colloquium. Based on the presentation at the colloquium, the examiner shall assess the quality of the internship in terms of the content previously agreed.

8. Internship abroad

Students are expressly encouraged to undertake internship abroad. Therefore, an internship in a research institution will be recognized if undertaken in a country where the student will be communicating in a foreign language. In such cases, the reports shall be written either in German, English or French. If the certification regarding the internship is issued in a language other than one of those specified above, an officially certified translation shall be included.

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These Guidelines were issued by the Faculty of Natural Sciences and Technology at Saarland University.