

## Guide for the Process of Research Internship

In accordance with the study and examination regulations, the student of masters' programs in "Elektrotechnik und Informationstechnik" (MSEI) and the international master's program in "Communications and Electronics Engineering" (MSCE) must complete a "research internship".

### **Purpose of the Internship:**

The research internship is intended to prepare students for their scientific activities in research and development by providing them with insight into current research topics during their master's studies. The research internship takes the form of project work. Each student in the master's program works on an individual project assigned by a professor/supervisor from the respective Chair (cf. Procedure) within the scope of the research internship. Upon successful completion of the internship students will be able to draw up (apply learned concepts) and plan a project with an engineering character, to define milestones, as well as to document the progress and results of the project and to present them to an audience.

### **Completion:**

The student together with his professor/supervisor draws up a work plan defining project objectives, methods and schedule of completion. Upon completion of the project, the student has to write a report and hold a presentation regarding the results of the project. The length and formal requirements of the report and presentation are not specified in the academic and examination regulations of the degree program (FPSO), but defined by the professor.

### **Completion at an External Institution:**

As with the thesis module, the research internship may be completed externally at a research institution or a research-oriented department of a company, provided the research character of the project work should be maintained. The professor has to agree to the supervision of external projects and draw up a work plan together with the student before starting the external research internship.

### **Recognition of a research internship *Before the Master's Program*:**

As a rule, work completed within the scope of a Bachelor's or the first degree program that is a prerequisite for admission to the master's program cannot be recognized toward the research internship.

Work or activities within the scope of a working-study job held during the master's program cannot be recognized toward the research internship.

In exceptional cases, periods of employment after the bachelor's degree and before commencement of the master's program may be recognized as research internship, as long as the employment encompassed research activities at a research-oriented institution.

Students seeking to have employment activities recognized toward fulfillment of the research internship should contact the master's examination board ([master@ei.tum.de](mailto:master@ei.tum.de)).

## Procedure:

The research internship contains 12 credits, corresponding to 9 weeks of full-time work.

Completion of the internship is demonstrated through written work and presentations, the parameters of which are to be defined by the professor.

The topic of the research internship will be assigned and supervised by an expert professor as set out in the FPSO. Expert professors include university teaching professors of the Department of Electrical and Computer Engineering, senior lecturers and faculty members of other TUM schools and departments who teach elective modules in the study program. The research internship will be registered by ASA of EI. The supervisor has to send the registration form via email [master@ei.tum.de](mailto:master@ei.tum.de) to the Academic and Student Affairs (ASA) which can be found at:

[https://www.cit.tum.de/fileadmin/w00byx/cit/Studium/Im\\_Studium/PP\\_ECE\\_Forms\\_and\\_Schedules/Anmeldung\\_der\\_Forschungspraxis.pdf](https://www.cit.tum.de/fileadmin/w00byx/cit/Studium/Im_Studium/PP_ECE_Forms_and_Schedules/Anmeldung_der_Forschungspraxis.pdf)

The procedure for the research internship is similar to that of the bachelor's or master's thesis, i.e. the supervising professor reports the successful completion of the internship ([https://www.cit.tum.de/fileadmin/w00byx/cit/Studium/Im\\_Studium/PP\\_ECE\\_Forms\\_and\\_Schedules/Bestaetigung\\_erfolgreich\\_abgeleistete\\_Forschungspraxis.pdf](https://www.cit.tum.de/fileadmin/w00byx/cit/Studium/Im_Studium/PP_ECE_Forms_and_Schedules/Bestaetigung_erfolgreich_abgeleistete_Forschungspraxis.pdf)).

The duration between registration and confirmation of the research internship has to be at least 9 weeks. The professor will send the form reporting the completion of the research internship directly to the ASA. Only this form will be kept by the office. Other documents concerning the research internship, such as written work, presentations or other proofs of work, remain with the professor.

Reports of completion are to be submitted as soon as possible after completion of the internship, as credits earned in the internship-module are relevant for students' academic progress check, taking place regularly at the end of each semester or, in some cases, relevant for completion of the program, as a whole.

The research internship is not an exam but mandatory for the studies in accordance with the regulations and is completed on a pass/fail basis without a grade. Failed or discontinuation of research internship should be reported to ASA as soon as possible. The research internship can be repeated many times until student earn the credits.

In the MSEI program, the research internship can be completed as a single unit (12 ECTS) or divided into two units of 6 credits each (equivalent to 4.5 weeks of full time work). The units can be supervised by two different professors and completed in different semesters. The period from registration to complete performance (including presentation and report) should not exceed six months.

**In the international program MSCE the research internship must be supervised by one examiner and completed within a period of half a year. However, the internship can be spread across several blocks of time within this period.**

In case the internship is divided into 2 blocks under the supervision by the same examiner/supervisor, it is sufficient to submit a confirmation of completion of the research internship in the amount of 12 ECTS at the end of the semester.

Due to purposes of progress checks, if the research internship of MSEI students completed in two different semesters, students may request a report of completion for each unit of the module as necessary, e.g. for timely submission for the relevant semester.