

Internship Regulations of the Faculty of Mechanical Engineering for the master's degree programmes in Mechanical Engineering, Industrial Engineering with a specialisation in Mechanical Engineering, Industrial Engineering with a specialisation in Electrical Engineering, and Chemical Engineering at Paderborn University

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1 Objectives of the internship

The internship, which is completed at a company, aims to provide the students with first-hand knowledge of the workings of company practice as well as to give them an insight into the organisation and working methods of industrial production.

An integral aspect of the internship is to give the students experience of the social environment of the company's day to day workings. The students must acquaint themselves with the social structures within the company, in particular the relationship between managers and employees and thereby expand their social competence.

The internship (hereafter referred to as the specialised internship) should be completed during the semester break of the master's programme. Before the student can register for the master's thesis, proof of the completed internship must be submitted and then the Internship Office must recognise the internship.

The contents of the internship must be different from the student work to be done in the master's programme (student research project, master's thesis). When submitting the internship report, the student must submit a signed declaration stating that there is no thematic overlap with the student research project or master's thesis.

The defining characteristic of the specialised internship is the integration of the intern into a work environment of engineers and other qualified professionals working predominantly in development, planning, or directing.

2 Timeframe of the specialised internship

The entire specialised internship for the master's degree programme comprises 10 weeks. One internship week corresponds to five working days with the regular, standard working hours of the company, but with a minimum of 35 hours. If more than 5 days are missed due to vacation, illness, or other reasons (e.g., public holidays, 'bridge' days, company vacations, exam dates, strikes, etc.), the working time must be made up accordingly. If necessary, the company should be asked for an extension of the internship so that the student can complete a section of the internship that has already begun.

University interns are not required to attend vocational school. In fact, voluntary participation in in-house classes is only possible if it does not impinge on the time spent at the workplace. Splitting the internship between different companies is possible. The prescribed 10 weeks of internship activity are to be considered as a minimum. It is recommended that further internship activities in relevant companies be carried out on a voluntary basis.

3 Subject-specific structure of the specialised internship

In order for it to be recognised as a specialised internship, internship activities have to fulfil the following conditions. Within the framework of these conditions, the division and chronological sequence of the internship activities can be freely arranged.

3.1 Contents of the specialised internship in the master's degree programmes

The contents of the specialised internship for the individual master's degree programmes can be found in Appendices A, B, C and D

4 Companies for the internship

The knowledge and experience to be gained in the specialised internship can be acquired primarily in medium-sized and large industrial companies as well as in companies that operate extensive technical facilities. To some degree, engineering firms, university-independent research institutions and comparable service companies are also eligible. What are not suitable and therefore not permitted are small trade business and workshops related to the maintenance and service sector as well as institutes at universities.

The general supervision of the internship activity must be provided by a person with engineering qualifications or a professionally equivalent university degree.

Supplementary binding regulations for the individual degree programmes are listed in Appendices A, B, C and D.

5 Reporting on internship activities

Activity reports must be kept for the entire duration of the internship activity and submitted to the Internship Office for application for recognition. The reports are to serve as practice in the presentation of technical facts and must therefore be self-written. Work processes, equipment, tools etc., may be described, and notes taken on experience gained during the activities carried out, provided that such information is not subject to the confidentiality regulations of the company concerned.

The reports must predominantly reflect the trainee's own activities, observations, and findings. General presentations without direct reference to the trainee's own activities (e.g., transcripts from technical knowledge books or other internship reports) will not be recognised. The student must aim for a concise and succinct writing style in keeping with the conventions of technical reporting. This is supported by pictorial representations in the form of the student's own sketches, workshop drawings, diagrams etc. The use of external material, brochures, etc. is not permitted.

In the specialised internship, comprehensive reports should be prepared on entire internship sections or on selected subtasks within an internship section, corresponding in length and scope to the number of weeks. An overview of the technical and temporal structure of the internship is to be included in an overall report that covers several weeks. This overall report must be preceded by an overview of the technical and temporal structure of the internship section and a brief description

of the company or the field of activity. An overall report, including pictures, must be at least two and no more than three A4 pages per week.

The share of pictures/illustrations must not exceed 50% of the total content. The reports must be formatted keeping in mind the following guidelines. They must have a font size of 12pt with single line spacing. This results in approximately 2500 to 5000 characters in the activity report per week.

All activity reports on the specialised internship must be signed off by the company representative in charge of supervision with the name, date and company stamp.

To apply for recognition of internship activities, the original of this activity report must be submitted to the Internship Office for inspection and a copy must be handed in upon request.

Together with the activity report, a signed declaration must be submitted stating that the report has been prepared independently and is not derived, even in part, from other non-referenced sources.

6 Certification of internship activities

To apply for recognition of internship activities, in addition to the reports, an original certificate from the company stating that the internship activity was carried out must be submitted for inspection and, if requested by the Internship Office, a copy must be handed in.

The certificate must contain the following information:

- training company, department if applicable, location, sector
- surname, first name, date of birth and place of birth of the trainee
- start and end dates of the internship
- breakdown of activities by field of activity or type of activity according to Section 3 and respective duration
- explicit indication of the number of days absent, even if there were no absent days.

The wording of the certificate must clearly indicate that it refers to an internship activity, e.g., by the inclusion of a heading *Internship Certificate* or *Certificate of Internship* or an explicit statement that the student worked as an intern. The certificate may also include an evaluation of the activity and report card.

7 Recognition of internship activities

The recognition of the internship is carried out by the faculty representative working for the Internship Office. The student must apply for recognition in person and on campus during the office hours of the Internship Office. Proof of completion of the internship is required for recognition. Proof is provided by submitting the original internship certificate(s) and activity reports.

For first-year students, the completed internship certificates must be submitted to the Internship Office of the faculty in accordance with the regulations detailed in this document. This must be done by the end of the 1st semester at the latest to ensure verifiability. The date of receipt will be taken into account. After this deadline, the internship is generally no longer eligible for recognition.

For students of higher semesters as well, the completed internship certificates must be submitted to the Internship Office in accordance with the regulations detailed in this document. This must be done no later than 6 months after the end of the internship period in order to ensure verifiability. The date of receipt will be taken into account. After this deadline, the internship is generally no longer eligible for recognition.

8 Internships abroad

The performance of internship activities abroad is expressly recommended. However, they must comply with the regulations set out in this document in all respects.

In the case of an internship abroad, the report and the internship certificate may also be written in English. If the internship certificate is not written in either German, English or another language previously agreed upon with the Internship Office, a certified original translation must be attached.

Regulation for foreign students

Foreign students who have already started their studies in Paderborn are not allowed to complete any outstanding parts of the internship in their home country.

9 Alternative activities and exceptions

9.1 Vocational training and professional employment

Relevant vocational training (apprenticeships) and practical professional activities are credited up to a duration of 10 weeks provided that they meet the requirements in these regulations. The particulars are determined by corresponding decisions of the Examination Boards for Mechanical Engineering, Industrial Engineering and Chemical Engineering. The relevant certificates and, if applicable, the training plan that has been completed are required.

In addition, individual decisions are possible in exceptional cases.

9.2 Gainful employment during the master's study programme (student jobs)

During the master's study programme, activities primarily aimed at earning a living for which the company does not explicitly certify that an internship activity has been carried out (see Section 7), but which are nevertheless conducive to training as set out in these regulations, may be credited, provided that they are carried out in accordance with the guidelines mentioned in this document regarding contents of the internship and suitable companies. 40 hours will be counted as one week of

internship. The students must obtain appropriate work certificates and activity reports as set out in this document, with a valid signature and stamp from the company.

9.3 Recognised internships at German universities

When students transfer from other German universities and have completed internship activities from their former university, this will be fully credited to the specialised internship if the following criteria are met. Students must be transferring from Mechanical Engineering, Industrial Engineering with a specialisation in Mechanical Engineering, Industrial Engineering with a specialisation in Electrical Engineering, or Chemical Engineering into the same course of study at Paderborn University. The internship activities must have been officially recognised by the Internship Office of their former university. The proof of recognition of the former university is required.

9.4 Other internships recognised at universities

Officially recognised internships in technical courses of study other than Mechanical Engineering, Industrial Engineering, and Chemical Engineering at German universities as well as in technical courses of study including Mechanical Engineering, Industrial Engineering, and Chemical Engineering at other German and foreign universities will be counted towards the specialised internship as long as they fully meet the requirements of the regulations set out in this document. In order for them to be accepted, the student must submit corresponding proofs of recognition, company certificates where applicable, information on the underlying internship regulations, and reports.

9.5 Exceptions

Students with disabilities can make special arrangements with the Internship Office (*Praktikantenamt*) or the Examination Board (*Prüfungsausschuss*).

10 Entry into force

These internship regulations will come into effect from the winter semester 2018/19 for all those students who study at the Faculty of Mechanical Engineering and who fall under the following examination regulations (*Prüfungsordnungen*): Mechanical Engineering V4 (Amtl. Mitteilungen 50.18 from 18.10.2018), Industrial Engineering V3 (Amtl. Mitteilungen 52.18 from 18.10.2018) and Chemical Engineering V2 (Amtl. Mitteilungen 51.18 from 18.10.2018).

These documents are issued based on the resolutions passed by the Faculty Councils of the Faculty of Mechanical Engineering on 01.08.2018, the Faculty of Electrical Engineering, Computer Science and Mathematics on 27.08.2018 and the Faculty of Economics on 14.09.2018.

Appendices:

Templates for the Internship Certificate

Appendix A (Applies only to Mechanical Engineering)

A3.1 Scope and structure of the internship in the study programme Mechanical Engineering

The specialised internship, which is a technical engineering internship, comprises a total of 10 weeks and serves to give the student practical experience with a predominant focus on mechanical engineering and/or process engineering.

The specialised internship is intended not only to provide operational experience in the manufacture of products and in the operation of plants in mechanical engineering and/or process engineering but also to provide experience in the tasks and activities of engineers in mechanical engineering and/or process engineering.

Typical areas of activity include:

Research, development, design, calculation, testing, project planning, production planning, production control, plant management, engineering services, participation in teams in which specialists from mechanical engineering and process engineering work together with others from different organisational units and task areas in an interdisciplinary manner on a concrete current task.

A.4 Companies for the internship in the study programme Mechanical Engineering

For the study programme Mechanical Engineering, there are no company requirements that deviate from those set out in section 4 of these internship regulations.

Appendix B (Applies only to Industrial Engineering with a specialisation in Electrical Engineering)

B.3.1 Scope and structure of the internship in the study programme Industrial Engineering with a specialisation in Electrical Engineering

The specialised internship, which is a technical engineering internship, comprises a total of 10 weeks and serves to give the student practical experience with a predominant focus on electrical engineering.

The specialised internship is intended not only to provide operational experience in the manufacture of products and in the operation of plants in electrical engineering but also to provide experience in the tasks and activities of engineers in electrical engineering.

Typical areas of activity include:

Research, development, design, calculation, testing, project planning, production planning, production control, plant management, quality assurance, maintenance and servicing of data processing equipment, networks and communication systems, purchasing/procurement, sales, accounting, human resources, design and implementation of software components, engineering services, participation in teams in which specialists from various organisational units and task areas work together in an interdisciplinary manner on a concrete current task.

B.4 Companies for the internship in the study programme Industrial Engineering with a specialisation in Electrical Engineering

Differing from section 4 of these internship regulations, internships in the work areas of purchasing/procurement, accounting, organisation and information technology, and human resources may also be completed in technical wholesale and service companies such as banks or insurance companies.

Appendix C (Applies only to Industrial Engineering with a specialisation in Mechanical Engineering)

C.3.1 Scope and structure of the internship in the study programme Industrial Engineering with a specialisation in Mechanical Engineering

The specialised internship, which is a technical engineering internship, comprises a total of 10 weeks and serves to give the student practical experience with a predominant focus on mechanical engineering.

The specialised internship is intended not only to provide operational experience in the manufacture of products and in the operation of plants in mechanical engineering but also to provide experience in the tasks and activities of engineers in mechanical engineering.

Typical areas of activity include:

Research, development, design, calculation, testing, project planning, production planning, production control, plant management, quality assurance, maintenance and repair, purchasing/procurement, sales, accounting, human resources, engineering services, participation in teams in which specialists from different organisational units and task areas work together in an interdisciplinary manner on a concrete current task.

C.4 Companies for the internship in the study programme Industrial Engineering with a specialisation in Mechanical Engineering

Differing from section 4 of these internship regulations, internships in the work areas of purchasing/procurement, accounting, organisation and information technology, and human resources may also be completed in technical wholesale and service companies such as banks or insurance companies.

Appendix D (applies only to Chemical Engineering)

D.3.1 Scope and structure of the internship in the study programme Chemical Engineering

The specialised internship, which is a technical engineering internship, comprises a total of 10 weeks and serves to give the student practical experience with a predominant focus on chemical engineering.

The specialised internship is intended not only to provide operational experience in the manufacture of products and in the operation of plants in chemical engineering but also to provide experience in the tasks and activities of engineers in chemical engineering.

Typical areas of activity include:

Research, development, design, calculation, testing, project planning, production planning, production control, plant management, quality assurance, maintenance and repair, material conversion, material analysis, manufacturing, process technology, participation in teams in which experts from different organisational units and task areas work together in an interdisciplinary manner on a concrete current task.

D.4 Companies for the internship in the study programme Chemical Engineering

In addition to Section 4 of these internship regulations, the knowledge and experience to be gained in the internship must be acquired in an industrial company operating in one of the following sectors: mechanical engineering, plant construction or the chemical industry.

Certificate of Internship

This certificate is for master's degree programmes in Mechanical Engineering, Industrial Engineering with a specialisation in Mechanical Engineering, Industrial Engineering with a specialisation in Electrical Engineering, and Chemical Engineering.

This is to certify that Ms/Mr, born on in has successfully participated in an internship from to

This includes days of absence.

*Days of absence include: holidays, sick days, public holidays, 'bridge' days, company vacations, exam dates, strikes, etc.

Training activities

(Company-specific terms should be avoided. Instead, please use generally understandable descriptions!

Example: Development, design, calculation, testing, project planning, production planning, production control, etc.

In the case of several activities, state the estimated percentage of the total scope of the internship.

Example: 30% development, 70% quality management)

Total number of weeks

The trainee's report booklet has been submitted, signed (with signature and company stamp) and returned in the original.

Company stamp/Date/Signature

Company:

Place:

Sector: