

**Notes on the practical internship for the Bachelor and Master Courses in  
Mechanical Engineering, Automotive Engineering, Business Engineering and  
International Project Engineering and Management at the University of Siegen  
based on the regulations for practical internship of October 01, 2010 and January 17, 2013**

- Purpose of the practical internship:** A practical internship is necessary in preparation for professional life. **The basic internship is not part of the study, the advanced internship is part of the study.**  
**In the 1. part of the internship (basic internship)** the students are to become familiar with different materials and basic manual techniques, should gain an overview of production equipment and manufacturing methods as well as learn about the social aspects of working processes.  
**In the 2. part of the internship (advanced internship)** the students are to complement and enhance their knowledge gained in the course of their academic studies by means of collaboration in different departments of one or more companies.
- Duration and procedure of the internship:** In connection with the Bachelor-Studies, at least 15 weeks of practical education are to be accomplished, which are divided into a basic internship with a duration of at least 8 weeks and an advanced internship with a duration of at least 7 weeks. The Master-Studies demand an additional advanced internship with a duration of at least 6 weeks.  
**Students have to complete 8 weeks of the basic internship before taking up academic studies. The completion of both the basic and advanced internships for the Bachelor-Studies has to be certified before signing up for a Bachelor Thesis.**  
**The completion of the advanced internship for the Master-Studies has to be certified before signing up for a Master Thesis.**  
 Times of absenteeism caused by illness, vacation or other circumstances which prevent working have to be compensated to the full extent. All national and international companies providing education according to these instructions may be considered for practical internships. A completed and appropriate apprenticeship will be acknowledged, missing aspects of education must be caught up.
- Training schedule for the Bachelor-Studies:**

| <b>3.1 Basic internship BSc (at least 8 weeks altogether)</b>   | <b>Duration in weeks</b> |
|---|--------------------------|
| <b>1. Basic manual work with materials</b><br>(e.g. marking-up, filing, sawing, drilling, reaming, counterboring, thread cutting, straightening, bending, riveting, resharpening, hand forging)   | <b>approx. 2 - 4</b>     |
| <b>2. Work with shaping machines</b><br>(e.g. cutting, turning, planing, milling, grinding, resharpening / honing, lapping, broaching, spark erosion, cold and warm forming, drawing, deep drawing, bending, rolling, pressing / pressworking, drop forging)  | <b>approx. 2 - 4</b>     |
| <b>3. Bonding technology: welding and assembly as well as heat treatment and surface treatment</b><br>(e.g. gas welding and hand arc welding, flame cutting and plasma cutting, start-up and maintenance of machinery, assembly department in single-piece and series production of machinery, vehicles, apparatus and equipment, riveting and screwing, hardening and tempering, galvanizing).<br><b>alternative:</b><br><b>Foundry (metal) or plastics processing as possible with model making and mould construction</b><br>(e.g. machine-moulding, hand moulding, core-making shop, polymer processing machines) | <b>approx. 1 - 2</b>     |

| <b>3.2 Advanced internship BSc (at least 7 weeks altogether)</b>  |
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| <b>1. Development and design</b><br>(e.g. test beds / test stands, experience in project, research, development and design departments etc.)  |
| <b>2. Quality assurance</b><br>(e.g. testing and monitoring activities, quality management, audits, performance of certifications etc.)   |
| <b>3. Production planning and control, work planning</b><br>(e.g. planning and control of material inventory and sequence of work, evaluating the efficiency of sequences of operation etc.)  |
| <b>4. Factory planning and manufacturing</b><br>(e.g. systematics in factory planning, factory layout planning, location planning, use of simulation technology, modular manufacturing, reorganization, approval management, safety engineering etc.) |
| <b>5. Material management, logistics, procurement</b><br>(e.g. in-time procurement of material and intermediate products, testing of quality and quantity, analysis of procurement market, supervision of material storage etc.)                      |
| <b>6. Organization / IT, personnel</b><br>(e.g. work in fields of economics and organization, use of IT in automation, personnel planning and administration, job analysis and job evaluation, social aspects etc.)                                   |
| <b>7. Cost accounting, financing, taxes</b><br>(e.g. experience in the supervision of finances and accounts (internal / external), activity in the fields of cost type, cost centre, and cost unit accounting)  |
| <b>8. Sales, distribution, marketing, market survey</b><br>(e.g. planning, organization and supervision of sales dept., preparing a sales schedule, dispatch / shipment, invoicing and reminders, work in marketing dept. and production dept.)       |

#### 4. Training schedule for the Master-Studies:

##### 4.1 Advanced internship MSc (at least 6 weeks altogether)

Students of the **Master Courses** *Mechanical Engineering, Business Engineering* and *International Project Engineering and Management* have to complete an **additional advanced internship of 6 weeks** – with the content listed in 3.2 above.

The advanced internship is part of the study and it can be completed in a suitable foreign company.

**Students of the Master Courses *International Project Engineering and Management (IPEM)* are highly recommended to complete the advanced internship in a foreign company.**

**The advanced internship for the Master Course *Automotive Engineering* shall take place in a company of the automotive industry or supplier.**

#### 5. Special regulations: Individual variations have to be well-founded and are only tolerable when **permitted in advance** by the "Praktikantenamt".

## ! Internship Information !

### Organisation

- We need two to three weeks to process your internship documents in the *Praktikantenamt*. You need to be aware of this period of time before you register for examinations or for your Bachelor or Diploma Thesis.
- The Internship Report is to be handed in to the *Praktikantenamt* **immediately** after the completion of the internship. The certification of the practical activities you have experienced is carried out by the *Praktikantenamt*.
- The Internship Report must be signed by the company in which you have completed your internship.

### Internship Certificate

- Internship Certificates must be presented to the *Praktikantenamt* together with the Internship Report. You must provide the originals of these certificates, which will be returned to you, as well as a copy for the *Praktikantenamt*.
- Interns are themselves responsible for assuring that the certificates which are provided by companies in which they have carried out their practical training are: in clear, printed form, and contain an appropriately structured assessment of the skills they have demonstrated. **Remember that these certificates are of value to you in your later job applications!**
- **The internet page of the *Praktikantenamt* contains a pre-prepared version of the Internship Certificate. Wherever possible, this version should be used. If a company wishes to use its own version of an Internship Certificate, this should contain the same information as the web-version.**

### Internship Report – Structure

- The Internship Report should be bound or presented in a folder.
- The first page, the title page, should contain the following information: Name, Matriculation Number, Course of Studies, Company Name, Dates of the Internship.
- After the title page, an index of contents should be included.
- All pages, which follow the title page, must be numbered.
- Your report should be presented in a structured form (e.g. 1.1, 1.2, 1.3...).
- Pictures, diagrams and tables must be numbered and each must have a title. In your text, you should refer to figures using these numbers.
- If you use sources such as pictures or other literature, these must be properly referenced, and these references must be listed in a references section at the end of the report.
- If you wish to use further drawings, tables or figures which cannot be included in the text, these may be attached in the form of an appendix.

### Internship Report – Contents

- Students are required to keep a diary of the experiences which they have made during their internships in the form of a DIN-A4 notebook. This diary, normally written in German, is intended to help you order your technical and commercial thoughts and ideas.
- If you carry out your **internship overseas**, it is acceptable to write your diary in the appropriate foreign language (e.g. English, French, Spanish etc.). **You must however include a summary written in German.**
- The internship diary is to be detailed and kept in an orderly manner. As is usual, we expect that you use a computer to produce your report. If you do not have a computer available, you can use the PC-Pool (CIP-Pool) of the department.
- You should begin your report with an introduction to the company and of the tasks which you have been given.
- **Your report should contain both** a passive-voice description of the training programme you have agreed with the company (“the filters are to be changed weekly...”), but also a personal description of your own activities and the skills you have developed; in this second category, it is appropriate to write in the first person (“I have commissioned a lathe...”). It is a good thing to sketch or otherwise represent tools, or pieces of work (products, software etc) that you have developed yourself. **It is not acceptable to simply quote large sections of the literature or to copy paragraphs from the company’s training materials.**
- Students who have completed a technical apprenticeship are also expected to present piece of work in the form of an engineering report. This piece of work is required before we can consider recognizing your apprenticeship as equivalent to the Basic or Advanced Internships. Simple descriptions of your activities in your apprenticeship workshop or a chronological listing of the content of your training are not admissible.
- The final element of your Internship Report should take the form of a personal statement (resumé, conclusion).
- You must sign your report, and confirm that you have written the report by yourself and have appropriately referenced any sources you have quoted.
- **Internship Reports which do not comply with the points above will be rejected.**
- The *Praktikantenamt* is aware of the need to keep commercially sensitive technical details and facts confidential. Company sensitive information never leaves the *Praktikantenamt*.