



University of Stuttgart
Germany



M.Sc. WASTE Class
Meeting:

Some topics for
Student research
projects and Master
Thesis

31.01.2019

M.Sc.
WASTE
Office Team

AGENDA



| Time | Name | Institute/Company |
|-------|--|-----------------------|
| 15:10 | Cynthia Kroumian, M.Sc. | IFK (KWF) |
| 15:20 | PD Dr.-Ing. Claus Haslauer | IWS - VEGAS |
| 15:40 | Dr. Dietmar Schmidt | IVK |
| 16:00 | Arnav Ajmani, M.Sc. | IMVT |
| 16:20 | Dr. Konrad Glaser | Bosch |
| 16:40 | Nelson Rincon, M.Sc. & Dr.-Ing. Hans Joachim | IFK (BuR) & ITC - KIT |
| 17:00 | Andreas Geß, M.Sc. | IABP – Fraunhofer IBP |
| 17:20 | Dr. Ludger Eltrop | IER |
| 17:40 | Hildemar Méndez, M.Sc. | ISWA |

Introduction and general guidelines for MT, SRP and II

The M.Sc. WASTE Macrostructure



First Semester

| | |
|-------------------|--------|
| Compulsory Module | 6 ECTS |
| Compulsory Module | 6 ECTS |
| Compulsory Module | 6 ECTS |
| Compulsory Module | 6 ECTS |
| Compulsory Module | 6 ECTS |

| | |
|---------------------|--------|
| German Course or KQ | 3 ECTS |
|---------------------|--------|

30 ECTS

Second Semester

| | |
|-------------------|--------|
| Compulsory Module | 6 ECTS |
|-------------------|--------|

| | | | |
|-----------------------|--------|-----------------|--------|
| Core Module | 6 ECTS | Elective Module | 6 ECTS |
| Practical Work | 3 ECTS | Elective Module | 3 ECTS |
| or | | | |
| Industrial Internship | | | 6 ECTS |

| | | | |
|-----------------------|--------|-----------------|--------|
| Core Module | 6 ECTS | Elective Module | 6 ECTS |
| Practical Work | 3 ECTS | Elective Module | 3 ECTS |
| or | | | |
| Industrial Internship | | | 6 ECTS |

| | | | |
|--------------------------|----------|-----------------------|----------|
| Elective | 6/3 ECTS | Elective Module | 6/3 ECTS |
| Elective | 6/3 ECTS | Industrial Internship | 6 ECTS |
| or | | | |
| Student Research Project | | | 12 ECTS |

| | |
|------------------|--------|
| German Course or | 3 ECTS |
|------------------|--------|

30 ECTS

Third Semester

30 ECTS

Fourth Semester

| | |
|---------------|---------|
| Master Thesis | 30 ECTS |
|---------------|---------|

30 ECTS

Compulsory Modules 36 Credits
First Specialised Area 18 Credits
Second Specialized Area 18 Credits

Total Credits

Master Thesis 30 Credits
German Course or Key Qualification 6 Credits
Elective Modules 12 Credits

120 ECTS

SRP and MT Regsitration



University of Stuttgart
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What is a Student Research Project (SRP)?

- 12 ECTS Advanced Module (360h independent work)
- Practical/theoretical/simulation-related activities
- Results may be suitable for academic publications
- Offered by professors/researchers

Main Steps to complete a SRP

1

Find a topic
by contacting
professors

2

Complete the
registration
steps

3

Presentation
and report

Hector García Salamero, Gen. 2018



SRP and MT Registration

What is a Master Thesis (MT)?

- 30 ECTS Advanced Module (900h independent work)
- Practical/theoretical/simulation-related activities
- Results may be suitable for academic publications
- Offered by professors/researchers/companies

Main Steps to complete a MT

1

Find a topic
by contacting
professors

2

Complete the
registration
steps

3

Presentation
and report



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Germany



SRP and MT Regsitration

Step 1: Find a topic by contacting professors



University of Stuttgart
Germany

1. Faculty of Architecture and Urban Planning
2. **Faculty of Civil- and Environmental Engineering**
3. Faculty of Chemistry
4. **Faculty of Energy-, Process- and Bio-Engineering**
5. Faculty of Computer Science, Electrical Engineering and Information Technology
6. Faculty of Aerospace Engineering and Geodesy
7. **Faculty of Engineering Design, Production Engineering and Automotive Engineering**
8. Faculty of Mathematics and Physics
9. Faculty of Humanities
10. Faculty of Management, Economics and Social Sciences



IFK:
View of the
Local Power Plant

SRP and MT Regsitration

Step 1: Find a topic by contacting professors



University of Stuttgart
Germany

1. Institute of Biomaterials and Biomolecular Systems (BIO)
2. Institute of Biomedical Engineering (BMT)
3. Institute of Biochemical Engineering (IBVT)
4. Institute of Chemical Process Engineering (ICVT)
5. Institute of Energy Efficiency in Production (EEP)
6. **Institute of Energy Economics and the Rational Use of Energy (IER)**
7. **Institute of Combustion and Power Plant Technology (IFK)**
8. Institute of Building Energetics, Thermotechnology and Energy Storage (IGTE)
9. Institute of Interfacial Process Engineering and Plasma Technology (IGVP)
10. Institute of High Performance Computing (IHR)
11. Institute of Industrial Genetics (IIG)
12. Institute of Nuclear Technology and Energy Systems (IKE)
13. Institute of Polymer Technology (IKT)
14. Institute of Materials Testing, Materials Science and Strength of Materials (IMWF)
15. **Institute of Mechanical Process Engineering (IMVT)**
16. Institute of Microbiology (IMB)
17. Institute of Fluid Mechanics and Hydraulic Machinery (IHS)
18. Institute of Thermodynamics and Thermal Process Engineering (ITT)
19. Institute of Combustion Technology (ITV)
20. Institute for Textile and Fiber Technologies (DITF)
21. Institute of Thermal Turbomachinery and Machinery Laboratory (ITSM)
22. Institute of Cell Biology and Immunology (IZI)

SRP and MT Regsitration

Step 1: Find a topic by contacting professors



University of Stuttgart
Germany

1. Institute of Construction Management (IBL)
2. Institute of Structural Mechanics (IBB)
3. **Institute for Acoustics and Building Physics (IABP)**
4. Institute of Railway and Transportation Engineering (IEV)
5. Institute of Geotechnical Engineering (IGS)
6. Institute of Structural Design (KE)
7. Institute of Lightweight Structures and Conceptual Design (ILEK)
8. Institute of Applied Mechanics (Civil Engineering) (MIB)
9. Institute of Spatial and Regional Planning (IREUS)
10. **Institute of Sanitary Engineering, Water Quality and Solid Waste Management (ISWA)**
11. Institute of Road and Transportation Science (ISV)
12. **Institute for Modelling Hydraulic and Environmental Systems (IWS)**
13. Institute of Construction Materials (IWB)

ISWA:
Entrance to the
Waste Water
Treatment Plant



SRP and MT Regsitration

Step 1: Find a topic by contacting professors



University of Stuttgart
Germany

1. Institute of Human Factors and Technology Management (IAT)
2. Institute for Diversity Studies in Engineering (IDS)
3. Institute for Manufacturing Technologies of Ceramic Components and Composites (IMTCCC)
4. Institute of Mechanical Handling and Logistics (IFT)
5. Institute of Industrial Manufacturing and Management (IFF)
6. Institute of Design and Production in Precision Engineering (IKFF)
7. Institute for Engineering Design and Industrial Design (IKTD)
8. Institute of Machine Components (IMA)
9. Institute for Nonlinear Mechanics (INM)
10. Institute for Control Engineering of Machine Tools and Manufacturing Units (ISW)
11. Institute of Laser Technologies (IFSW)
12. Institute for System Dynamics (ISYS)
13. Institute for Systems Theory and Automatic Control (IST)
14. Institute of Engineering and Computational Mechanics (ITM)
15. Institute of Applied Optics (ITO)
16. Institute for Metal Forming Technology (IFU)
- 17. Institute for Internal Combustion Engines and Automotive Engineering (IVK)**
18. Institute for Machine Tools (IFW)
19. Institute for Microintegration (IFM)
20. Chair of Microsystems Technology (MST)

SRP and MT Registration

Allowed Examiners – Part I



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Germany

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Allowed
Examiners
Part I

SRP and MT Registration

Allowed Examiners – Part II



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Industrial Internship (II) Registration



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Interns in a host company – Suitability of the host company

Medium (min. 30 staff members)
and large Sized companies.

Internships in *Germany and abroad are permitted. Guidelines*

Not allowed:

- Higher education institutions
- Research institutions
- Own or parent's company
- Only administrative and routine jobs, e.g. HIWIs, Werkstudent



BOSCH
Technik fürs Leben



LEADING IN PRODUCTION EFFICIENCY

EISENMANN



Die Experten für abwasserfreie Produktion



University of Stuttgart
Germany

Thank you!



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Student Research Project Registration

Step 2: Complete the registration steps



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- Examination Regulations version PO2015
- Registration: [Examinations Office](#) of the University [→ Form](#)
(Mr. Vi Tan Le. - Pfaffenwaldring 5c)
- Student research project must be finished by the time that the [→ List](#)
master thesis begins
- First Examiner and supervisor

The student research project is optional and must be conducted at the University of Stuttgart

Master Thesis Registration

Step 2: Complete the registration steps



University of Stuttgart
Germany



M.Sc. WASTE

- Examination Regulations version PO2015
- Registration: **Examinations Office** of the University [→ Form](#)
(Mr. Vi Tan Le. - Pfaffenwaldring 5c)
- At least **72 ECTS-Credits** must be approved for master thesis registration [→ List](#)
- First Examiner and supervisor


Master Thesis could be conducted outside the University of Stuttgart, but the examiner **MUST** be a professor in the list

SRP and MT Registration



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Step 3: Presentation and report

- Maximum of 6 months  Extension up to max. 3 months
- 20-30 min. presentation mandatory, part of the SRPgrading
- The master thesis must be graded by the first examiner and supervisor.
Final grade: Average
- The topic of the student research project can be changed just once and just within the **first month** of being started.
- The topic of the master thesis can be changed just once and just within the **first 6 weeks** of being started.
- PO2015 does not state a deadline for the registration of your master thesis.

Think about the extension of your VISA!

Industrial Internship (II) Registration



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Main Objective

Main Objective:

Learn about engineer's responsibilities and working methods in different fields.

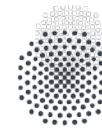
Insight into the organizational structures of a company and social aspects of the work atmosphere.

Apply and reinforce theoretical knowledge in a practical setting:

- Project participation
- In-plant processes and production
- Development, planning, monitoring and controlling methods.



Industrial Internship (II) Registration



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Nature and duration of the industrial internship - Approval

A tutor must approve and support the respective internship:

M.Sc. WASTE Course Director:

- Contents
- Plan
- Report

The student should conduct the industrial internship from the 3rd semester

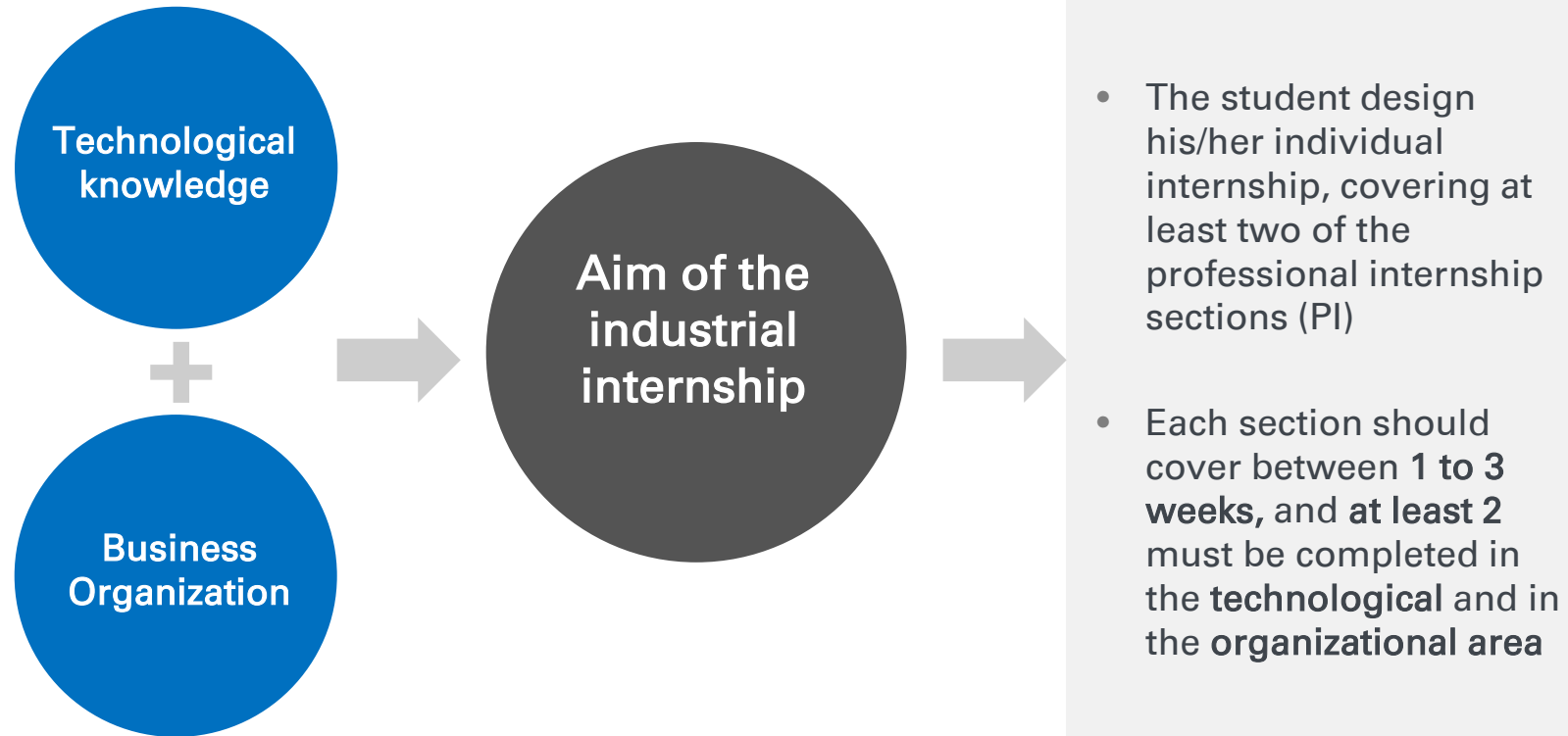


Industrial Internship (I) Registration



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Nature and duration of the industrial internship –Requirements

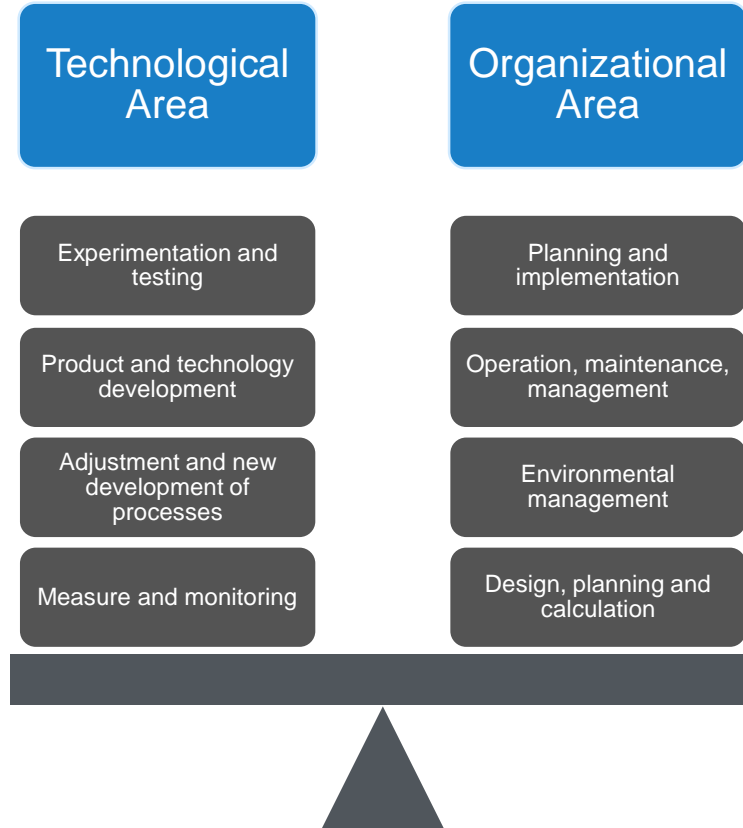


Industrial Internship (II) Registration



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Germany

Nature and duration of the industrial internship – Contents



Industrial Internship (II) Registration

Application for an internship and supervision



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Read the [guidelines](#) and for special cases consult the Course Director.

Internships [are not arranged](#) by the university.

Interns must have an on-site supervisor to discuss and resolve technical issues.



SIEMENS

Building Technologies



Industrial Internship (II) Registration

Legal and social status of the interns



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- Internship contract
- Insurance coverage
- Compensation and grants
- Proof of work experience → **Internship Certificate**
- Holidays, sickness, absence





Final report

- The intern must prepare a final report about her/his internship experience
- Language can be German or English
- Only valid with the supervisor's signature and stamp of the host company



Industrial Internship (II) Registration



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Approval of the internship

Course Director approves the internship once the original report and internship certificate have been submitted.

The student has a maximum of **3 months** after the end of the internship to hand the documents over to the M.Sc. WASTE Office.

