

University of Stuttgart
Germany



M.Sc. WASTE Specialized areas

15.02.2023

M.Sc. WASTE
Office Team

AGENDA



M.Sc. WASTE

14:00 – 14:30	Introduction and general guidelines informed by the M.Sc. WASTE Office
14:30 – 15:00	Waste Water Process Engineering - Specialized Area (Presented by Ms. Marilia Nunes Freire Ribeiro)
15:00 – 15:30	Solid Waste Process Engineering – Specialized Area (Presented by Mr. Daniel Anim)
15:30 – 16:00	Air Quality Control – Specialized Area (Presented by Mr. Javier Rangel and Ms. Pratistha Shrestha)

Introduction and general guidelines

The M.Sc. WASTE Macrostructure



M.Sc. WASTE

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

German Course or KQ	3 ECTS
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30 ECTS

Third Semester

30 ECTS

Fourth Semester

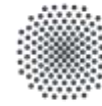
Master Thesis	30 ECTS
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30 ECTS

Compulsory Modules	36 Credits	Master Thesis	30 Credits
First Specialized Area	18 Credits	German Course or Key Qualification	6 Credits
Second Specialized Area	18 Credits	Elective Modules	12 Credits

Total Credits 120 ECTS

SRP



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

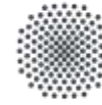
Complete the
registration
steps

3

Presentation
and report



MT



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

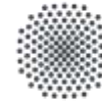
Complete the
registration
steps

3

Presentation
and report



SRP and MT Registration



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Step 1: Find a topic by contacting professors

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

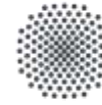


IFK:
View of the
Local Power Plant

SRP and MT Registration

Step 1: Find a topic by contacting professors

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)

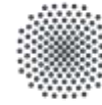


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ISWA:
Entrance to the
Waste Water
Treatment Plant



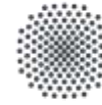
SRP and MT Registration



Step 1: Find a topic by contacting professors

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 Registration

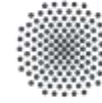


Step 1: Find a topic by contacting professors

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 of Automotive Engineering (IFS)**
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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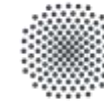
Prof. Dr. Andreas Kronenburg
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SRP and MT Registration

Allowed Examiners – Part II



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Ord. Prof. Dr.-Ing. i.R. Prof. Michael Schmidt
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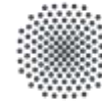
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SRP and MT Registration

Step 1: Find a topic by contacting professors



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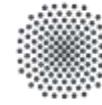
Class Meeting: SOME
Research Topics at the
University of Stuttgart

23.02.2023
15:00 – 18:00 (CET)

SAVE THE DATE!

Student Research Project Registration

Step 2: Complete the registration steps



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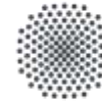
M.Sc. WASTE

- Examination Regulations version PO2015
- Registration: **Examinations Office** of the University → **Form**
(Online Contact Form / Office hours at Pfaffenwaldring 5c)
- Student research project must be finished by the time that the master thesis begins → **List**
- First Examiner and supervisor

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

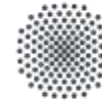
Master Thesis Registration

Step 2: Complete the registration steps




- Examination Regulations version PO2015
- Registration: **Examinations Office** of the University → **Form**
(Online Contact Form / Office hours at 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



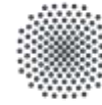
SRP and MT Registration

Step 3: Presentation and report

- Maximum of 6 months  Extension up to max. 3 months
- 20-30 min. presentation mandatory, part of the SRP grading
- 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 Registration



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Main Objective:

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

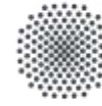
Insight into the organizational structures of a company and social aspects of the work atmosphere.

Apply and reinforce theoretical knowledge in a practical setting:

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



Industrial Internship Registration



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Nature and duration of the industrial internship - Approval

A tutor must approve and support the respective internship:

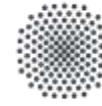
M.Sc. WASTE Course Director

- Contents
- Plan
- Report

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

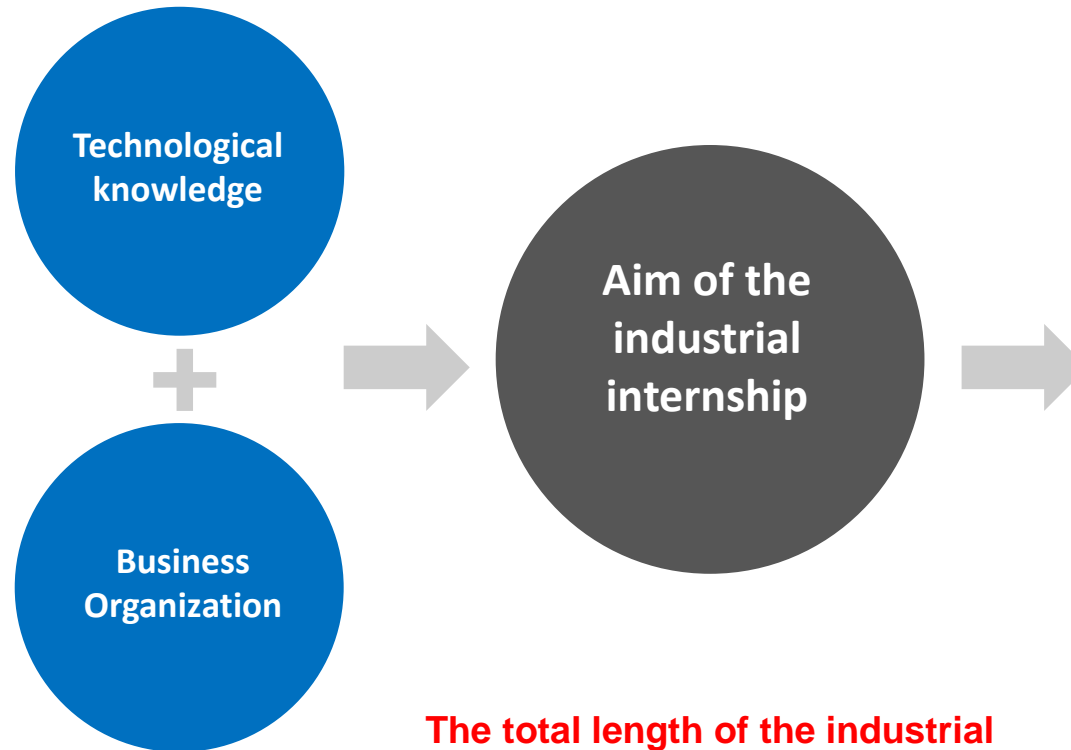


Industrial Internship Registration



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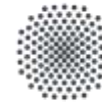
Nature and duration of the industrial internship – Requirements



- The student design his/her individual internship, covering at least two of the professional internship sections (PI)
- Each section should cover between **1 to 3 weeks**, and **at least 2** must be completed in the **technological** and in the **organizational area**

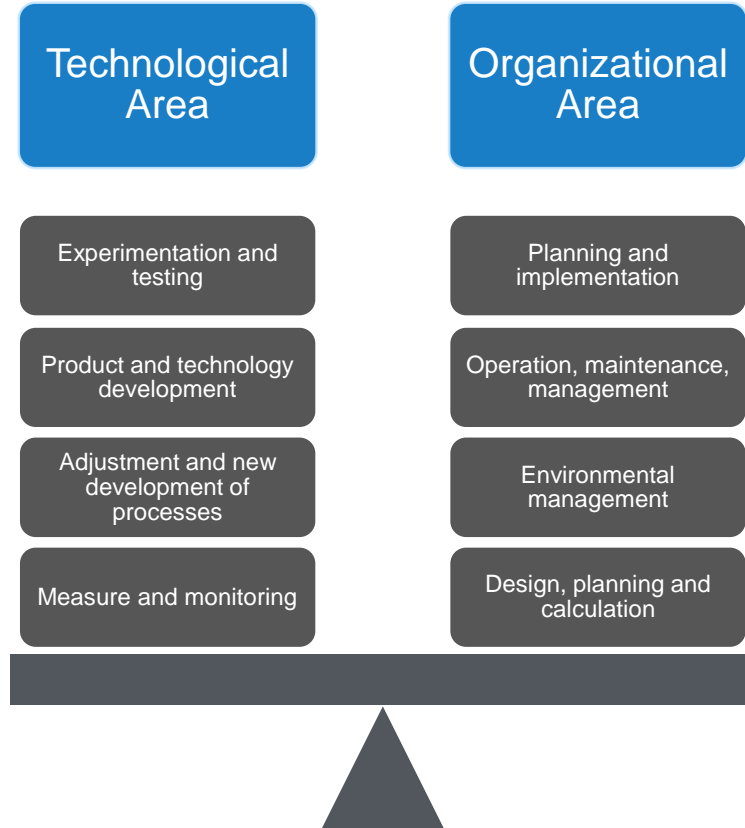
The total length of the industrial internship is at least 6 weeks!

Industrial Internship Registration



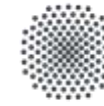
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Nature and duration of the industrial internship – Contents



Industrial Internship Registration

Interns in a host company – Suitability of the host company



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

Internships in *Germany and abroad are permitted.*

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

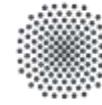


H₂O

Die Experten für abwasserfreie Produktion

Industrial Internship 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



DAIMLER



University of Stuttgart
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Thank you!



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Universität Stuttgart

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