



Tsinghua Double Degree Students 2023/24

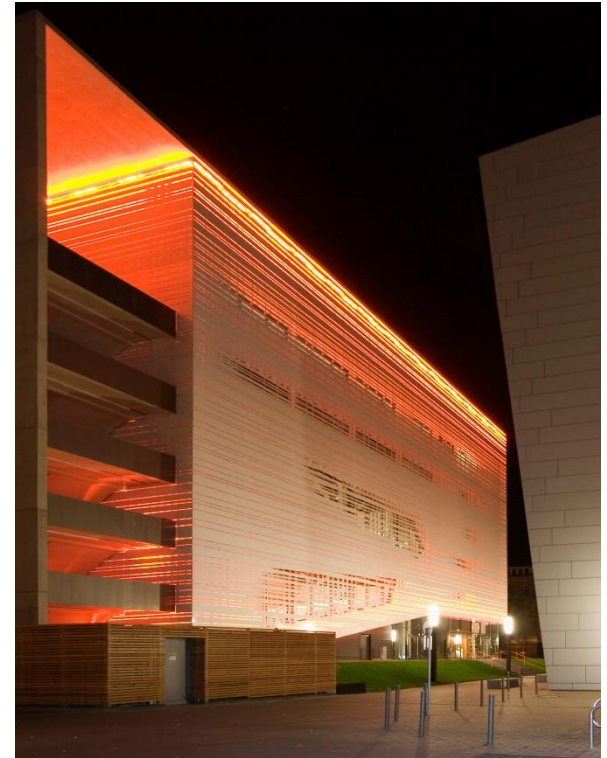
Rules, Regulations and Guidelines
at the Faculty of Mechanical Engineering

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Overview

- Degree Programs & Curricula at RWTH:
 - Production Systems Engineering
 - Automotive Engineering
- Exams, Regulations and RWTHonline
- The Mini Thesis
- Questions? Concerns?





Degree Programs and Curricula at RWTH

Production Systems Engineering & Automotive Engineering

Curriculum: Production Systems Engineering (PSE)

	L	E	CP	L	E	CP	L	E	CP
Mechatronics and Control Techniques for Production Plants	2	2	6						
Quality Management	2	2	6						
Gear and Transmission Technology	2	2	6						
Manufacturing Technology II				2	2	6			
Production Management B				2	2	5			
Welding and Joining Technologies				2	2	6			
Electives	19								
Master Thesis									30
German Language Course			6						
Sum of workload per semester (recommended)	30			30			30		

Mini Thesis
9 ECTS

Machine Tools
5 ECTS

Electives (19 CP)	
Industrial Logistics	SS
Multibody Dynamics	SS
Factory Planning	SS
Modeling, Model Reduction and Simulation in Laser Processing I	SS
Production Metrology	SS
Process Chains for Replication of Complex Optical Components	SS
Control Engineering	WS
Advanced Software Engineering	WS
Machine Design Process	WS
Modeling, Model Reduction and Simulation in Laser Processing II	WS
Tribology	WS

5 credits need
to be collected

Electives	19 CP
German Language Course	6 CP
Master Thesis	30 CP
Sum of workload in total	90 CP

WS = Winter Semester
SS = Summer Semester
L = Lecture
E = Exercise
CP = Credit Points

Curriculum: Automotive Engineering (AE)

Master programme in Automotive Engineering of RWTH Aachen University

Compulsory Courses									
Modulverantwortliche	Academic	Module	CP	L	P/L	Σ CH	summer / winter	Σ CP	Σ CH
Eckstein / Pischinger	Eckstein / Pischinger	Alternative and Electrified Vehicle Propulsion Systems	5	2	1	3	s	68	24
Eckstein	Eckstein	Automotive Engineering III	5	2	1	3	w		
Sauer	Sauer	Battery Storage Systems	5	2	1	3	w		
Pischinger	Pischinger	Internal Combustion Engines: Design and Mechanics	6	2	2	4	s		
Hüsing	Hüsing	Machine Dynamics of Rigid Systems	6	2	2	4	s		
Schröder/Sprehe	Schröder/Mekala/Sprehe	Processes and Principles for Lightweight Design	6	2	2	4	w		
Urban	Urban	Structural Design of Vehicles	5	2	1	3	s		
		Master Thesis	30				sw		

Curriculum: Automotive Engineering (AE)

Elective Courses									
Modulverantwortliche	Academic	Module	CP	L	P/L	Σ CH	summer / winter	Σ CP	Σ CH
Schleifenbaum	Schleifenbaum	Additive Manufacturing	6	2	2	4	w	22	•
Itskov	Itskov	Advanced Finite Element Methods for Engineers	5	2	2	4	w		
Poprawe	Poprawe	Applications of Laser Technology	6	2	2	4	s		
Eckstein	Eckstein	Automotive Engineering - Practical Course I&II	6	0	4	4	w&s		
Eckstein	Eckstein	Automotive Engineering IV - Automated Driving	5	2	1	3	s		
Schwalm	Schwalm	Automotive System Evaluation	5	2	1	3	s		
Eckstein	Löwer/ Bölddeker	Cooperative Product Design in Automotive Engineering	6	1	3	4	s		
Abel	Abel	Control Engineering	5	2	1	3	w		
Oeser	Oeser	Environmental Sustainability in Transport Engineering	6	2	2	4	w		
Schröder	Schröder	Fatigue Design of Lightweight Structures	5	2	2	4	s		
Schmitz	Schmitz	Fundamentals of Fluid Power	6	2	2	4	w		
Brecher/Klocke	Brecher/Klocke	Gear and Transmission Technology	6	2	2	4	w		
N.N.	N.N.	Industrial Engineering	5	2	2	4	w		
Pischinger	Pischinger	Internal Combustion Engines: Thermodynamics and Emissions	6	2	2	4	w		
Natour	Natour	Measurement and Testing Methods in Joining Technology	6	2	2	4	ws		
Markert	Markert/Jenkouk	Mechanics of Forming Processes	5	2	2	4	w		
Brecher	Brecher	Mini Thesis **	9	0	0	270	sw		
Vallée	Vallée	Mobility Research and Transportation Modeling	6	2	2	4	s		
Markert	Markert	Molecular Mechanics and Multiscale Modelling of Materials	5	2	2	4	w		
Markert	Markert	Porous Media Mechanics	6	2	2	4	s		
Schmitt	Schmitt	Quality Management	6	2	2	4	w		
Eckstein	Eckstein	Self-Driving Lab - Programming Automated Vehicle	2	1	0	1	s		
Jacobs	Jacobs	Tribology	6	2	2	4	w		
Biermann	Biermann	Vehicle Acoustics	5	2	2	4	s		

Mini Thesis
9 ECTS

13 credits
need to be
collected

Elective Modules

What you need to know

- Elective modules can be chosen freely – we make a suggestion in this semester's schedule
- Electives can be taken in either semester – you do not have to stick to the suggestion in the curriculum and in your schedule for this semester, respectively!
- It is your responsibility to gather the needed amount of credits (5 for PSE students, 13 for AE students)



Questions or Concerns?



Exams, Regulations, and RWTHonline

Exams (I)

What you need to know

- Exams at RWTH are comprehensive – there are usually no „mid-terms“, take-home exams, projects etc. to achieve a good grade
- That means: Your performance on exam date is what counts!
- Exams take place once a semester
 - If you fail an exam, your re-try will take place in the next semester
 - Only after a failed (1st) re-try attempt will you be able to ask for an oral exam (if the regular exam was a written examination)
- Exams can be repeated twice

Exams (II)

Exam Registration (I)

- Exams are registered through your RWTHOnline account
- Exam registration does not equal course registration
 - Course Registration: Access to e-learning platform L2P
- Exam registration deadlines are **NOT TO BE MISSED!**
 - (Pay attention to information regarding deadlines provided by your faculty!)
- At all times, keep your e-mail confirmation that the registration was successful
 - Also: Check your exam registration account!
- You may cancel a registration up until 3 days before the exam date
 - The Central Examination Office (ZPA) explains how to do so [online](#)
 - Note: 3 days before the exam date
 - Example: Exam on September 30th → cancellation possible until September 26th, 11:59pm (the exam day itself does not count!)

Exams (III)

Exam Registration (II)

- In case of sickness, a doctor's certificate must be submitted
 - If you feel sick *before* the exam starts: see the doctor and submit a doctor's certificate to the Central Examination Office (ZPA) on the very same day!
 - If you feel sick *after* the exam has started: see the doctor and submit a doctor's certificate that includes a „Befundtatsache“, an indication of your illness, to ZPA on the very same day!
 - If you feel sick after the exam was completed: see the doctor and submit a doctor's certificate that includes a „Befundtatsache“, an indication of your illness, and a reason why you did not feel sick before the exam concluded, to ZPA on the very same day!
 - Take ZPA regulations to the doctor's office to receive the correct attestation!

RWTHonline Website

- RWTHonline is used by students to create a digital schedule, register for courses and exams, and to cancel exam registrations
- You will find course information, exam dates and more on RWTHonline:
<https://online.rwth-aachen.de/>
- Module handbooks („Modulhandbücher“) give comprehensive descriptions on particular courses in your program



The Mini Thesis

Mini Thesis (I)

- A Mini Thesis is a research project that will take at least 200h to complete (9 ECTS)
- A Mini Thesis needs to be arranged individually – we cannot allocate projects!
- How to arrange a Mini Thesis
 - Check www.maschinenbau.rwth-aachen.de for an overview on our research institutes
 - Identify research projects on their homepages and get in touch with the institute

Or

- Check RWTH's [database](#) for available projects in our faculty
 - <http://www.rwth-aachen.de/cms/root/Studium/Im-Studium/Pruefungen-Abschlussarbeiten/~cmjw/Studien-und-Abschlussarbeiten/?showall=1>
 - Look for projects of the size of a bachelor's thesis or project work – BUT you have to discuss clearly with the supervisor whether the project can be reduced to the size of a Mini Thesis (especially a Bachelor Thesis is not equivalent to a Mini Thesis!)

Mini Thesis (II)

- A Mini Thesis can be arranged either in the summer or in the winter term, but must be completed by the time you leave Aachen
 - Make sure you look for available projects early on!
 - The project should be **at least 200 hours** long, but a **maximum of 270 hours**
- The Mini Thesis can be done externally (outside the faculty of Mechanical Engineering), but you then need to find an external AND an internal supervisor and the examination board needs to approve the topic (documentation sheet) **before you start your work**
- If you cannot find a Mini Thesis project at all, you are asked to complete elective courses to a total of 19 ECTS (PSE) or 22 ECTS (AE) in the elective category
 - You **MUST** notify your home coordinator and us in this situation.



Questions or Concerns?

Have a great stay at RWTH!



Please check dates and information online

www.maschinenbau.rwth-aachen.de

Central Examination Office (Exam Regulations, Dates etc.)

Need Help or Advice? Get in touch!

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