Tsinghua Double Degree Students 2019/20

Rules, Regulations and Guidelines
at the Faculty of Mechanical Engineering

Seda Sancaktar
International Relations
Faculty of Mechanical Engineering

- October 09th, 2019 -
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)

<table>
<thead>
<tr>
<th>Course</th>
<th>L</th>
<th>E</th>
<th>CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechatronics and Control Techniques for Production Plants</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Quality Management</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Gear and Transmission Technology</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Manufacturing Technology II</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Production Management E</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Welding and Joining Technologies</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td><strong>Master Thesis</strong></td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td><strong>German Language Course</strong></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Sum of workload per semester (recommended)</strong></td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

### Electives (19 CP)

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

### Electives (19 CP)

- German Language Course
- Master Thesis

**Sum of workload in total**: 90 CP

- **Mini Thesis**: 9 ECTS
- **Machine Tools**: 5 ECTS

---

WS = Winter Semester
SS = Summer Semester
L = Lecture
E = Exercise
CP = Credit Points
### Curriculum: Automotive Engineering (AE)

#### Compulsory Courses

<table>
<thead>
<tr>
<th>Moduleverantwortliche</th>
<th>Academic</th>
<th>Module</th>
<th>CP</th>
<th>L</th>
<th>P/L</th>
<th>CH</th>
<th>summer/winter</th>
<th>Σ CP</th>
<th>Σ CH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eckstein / Pleschinger</td>
<td>Eckstein</td>
<td>Alternative and Electrically Driven Vehicle Propulsion Systems</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Eckstein</td>
<td>Eckstein</td>
<td>Automotive Engineering III</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Hamayer</td>
<td>Hamayer</td>
<td>Electric Drives and Storage Systems</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Murenzech</td>
<td>Murenzech</td>
<td>Fundamentals of Fluid Power (Hydraulics and Pneumatics)</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Pleschinger</td>
<td>Pleschinger</td>
<td>Internal Combustion Engines I</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Hising</td>
<td>Hising</td>
<td>Machine Dynamics of Rigid Systems</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Schröder / Lüder</td>
<td>Schröder / Lüder</td>
<td>Processes and Principles for Lightweight Design</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Urban</td>
<td>Urban</td>
<td>Structural Design of Vehicles</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Master Thesis</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Elective Courses

<table>
<thead>
<tr>
<th>Moduleverantwortliche</th>
<th>Academic</th>
<th>Module</th>
<th>CP</th>
<th>L</th>
<th>P/L</th>
<th>CH</th>
<th>summer/winter</th>
<th>Σ CP</th>
<th>Σ CH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isakov</td>
<td>Isakov</td>
<td>Advanced Finite Element Methods for Engineers</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Poprawe</td>
<td>Poprawe</td>
<td>Applications of Laser Technology</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Eckstein</td>
<td>Eckstein</td>
<td>Automotive Engineering - Practical Course II &amp; III</td>
<td>6</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Eckstein</td>
<td>Eckstein</td>
<td>Automotive Engineering IV - Automated Driving</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Schwalm</td>
<td>Schwalm</td>
<td>Automotive System Evaluation</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Abel</td>
<td>Abel</td>
<td>Control Engineering</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Doser</td>
<td>Doser</td>
<td>Environmental Sustainability in Transport Engineering</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Schröder</td>
<td>Schröder</td>
<td>Fatigue Design of Lightweight Structures</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>Broicher / Klocke</td>
<td>Broicher / Klocke</td>
<td>Gear and Transmission Technology</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>N.N.</td>
<td>N.N.</td>
<td>Industrial Engineering</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Pleschinger</td>
<td>Pleschinger</td>
<td>Internal Combustion Engines II</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Nautur</td>
<td>Nautur</td>
<td>Measurement and Testing Methods in Joining Technology</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Markert</td>
<td>Markert / Jenkow</td>
<td>Mechanics of Forming Processes</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Brecher</td>
<td>Brecher</td>
<td>Mini Thesis **</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>270</td>
<td>270</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Villée</td>
<td>Villée</td>
<td>Mobility Research and Transportation Modeling</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Markert</td>
<td>Markert</td>
<td>Molecular Mechanics and Multiscale Modelling of Materials</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Markert</td>
<td>Markert</td>
<td>Porous Media Mechanics</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Schmitt</td>
<td>Schmitt</td>
<td>Quality Management</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Eckstein</td>
<td>Eckstein</td>
<td>Self-Driving Car - Programming Automated Vehicles</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Jacobs</td>
<td>Jacobs</td>
<td>Textile Technology</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Biermann</td>
<td>Biermann</td>
<td>Vehicle Acoustics</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

* The total amount of weekly contact hours (SWS) depends on the modules selected.

** Only for Tsinghua University exchange students

---

Mini Thesis 9 ECTS

7 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, 7 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!)

- 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!)

- At all times, keep your e-mail confirmation that the registration was successful
  - Also: Check your exam registration account!
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

- 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

- RWTHonline is used by students to create a digital schedule, register for courses and exams, and to cancel exam registrations
The Mini Thesis
Mini Thesis (I)

- A Mini Thesis is a research project that will take at least 200h to complete (to a maximum of 270h, depending on the project) (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](http://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
  - 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 further elective courses to a total of 14 ECTS (AE) or 16 ECTS (PSE) 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!

Peter Hartges / International Office
Peter.hartges@zhv.rwth-aachen.de
Super C, 4th Floor

Seda Sancaktar/ Faculty of Mechanical Engineering
sancaktar@fb4.rwth-aachen.de