Digital Engineering
Master’s Degree Program

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October 2022
What is Digital Engineering?
Digital Engineering

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Computer Science + Engineering Discipline(s)

➡ Diverse application scenarios

• Robotics
• Autonomous Vehicles
• Smart factory/Smart home
• Intelligent Production

Web page: http://www.digi-eng.ovgu.de/en/
Study Program Structure
Digital Engineering — Structure

- Fundamentals of Computer Science: \( \sum 120 \text{ CP} \)
- Fundamentals of Engineering: \( \geq 15 \text{ CP (or } \geq 5 \text{ CP*)} \)
- Human factors: \( \geq 5 \text{ CP} \)
- Methods of Computer Science: \( \geq 5 \text{ CP} \)
- Methods of Engineering: \( \geq 10 \text{ CP} \)
- Interdisciplinary team project: \( 6 \text{ CP} \)
- Specialization: \( \geq 15 \text{ CP} \)
- Digital Engineering project: \( 12 \text{ CP} \)
- Master’s thesis: \( 30 \text{ CP} \)

(* dependent on your first study degree)
Where to Choose Modules from?

- Module list:
  1. Go to https://www.inf.ovgu.de/
  2. Click on Examination Office, on the next page click on Study Regulations
  3. There you find everything you need (see screenshot next page)
     - Module list
     - Module catalogue
     - even the (most recent) study regulations
Introduction Digital Engineering
Where to Choose Modules from?

Some general rules for choosing modules

• Computer Science modules
  • Fundamentals: all courses from FIN Bachelor & Master programs
  • Methods of Computer Science: all courses from FIN Master programs

• Engineering modules
  • Fundamentals: all courses from FEIT/FMB/FVST Bachelor & Master programs
  • Technical Specialization: all courses from FEIT/FMB/FVST Master programs

• Human factors
  • all courses of Bachelor and Master programs of FHW/FWW

The modules offered in the current term are in the LSF

DO NOT use LSF to map modules to thematic areas!!
First Semester Courses — Example

• For Engineering background
  • Introduction to Computer Science for Engineers
  • Introduction to Software-Engineering for Engineers
  • Introduction to Simulation
  • Algorithm Engineering
  • Database Concepts
• Lectures are given at Summer or Winter term → Distribute them over 1\textsuperscript{st} and 2\textsuperscript{nd} semester
Winter Term — Exemplary Courses

- Introduction to Computer Science for Engineers (if engineering background)
- Principles and Practices in Scientific Working
- Introduction to Simulation
- Electronic Circuits (if computer science background, ask teacher)
- Systems & Control (if computer science background, ask teacher)
Summer Term — Exemplary Courses

• Introduction to Computer Science for Engineers (if engineering background)

• Principles and Practices in Scientific Working

• Database Concepts (if engineering background)

• Student Conference

• Distributed Control Systems (if computer science background)

• Introduction to Distributed Sensor Data Fusion
Choosing Modules to

PLAN YOUR STUDIES
Which Engineering Direction?

- Mechanical
- Electrical
- Chemical
- Medical Engineering
- ....

YOU
choose the courses you want to attend!
Recommendation: Create a Study Plan

Personalized Plan of Studies

1. Find modules:
   - Review modules offered according to the LSF [https://lsf.ovgu.de/qislsf/rds?state=wtree&search=1&trex=step&root120222=21295%7C20969%7C21269%7C20961&P.vx=kurz](https://lsf.ovgu.de/qislsf/rds?state=wtree&search=1&trex=step&root120222=21295%7C20969%7C21269%7C20961&P.vx=kurz)
   - read module descriptions (web pages) AND
   - drop by at the first one or two meetings (if no limits)
   - Make sure you have the background needed to attend the course – ASK the teacher if you are not sure

2. Assign modules you choose to thematic areas
   - Go through the module catalog/module list
3. Write down your plan

4. Update your plan at the end of each semester!
   - What do you have accomplished?
   - Additional courses?
   - Something skipped?
   - It’s all fine to skip courses, but you should keep track of what you got ;}

Personalized Plan of Studies
## Personal Plan of Studies

<table>
<thead>
<tr>
<th>Thematic Area</th>
<th>Semester</th>
<th>Module</th>
<th>CP</th>
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</thead>
<tbody>
<tr>
<td>Fundamentals of Computer Science</td>
<td>1</td>
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<td>2</td>
<td>2.</td>
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<td>2</td>
<td>3.</td>
<td>...</td>
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<tr>
<td>Methods of Engineering</td>
<td>2</td>
<td>1.</td>
<td>...</td>
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<td>3</td>
<td>2.</td>
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<tr>
<td>Human Factors</td>
<td>1</td>
<td>1.</td>
<td>...</td>
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<td></td>
<td>2</td>
<td>2.</td>
<td>...</td>
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</tbody>
</table>

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Important Notes on Modules

- Each module is initially **optional** ⇒ you are free to choose a module you want (according to the DE master program structure, cf. slide 5)

- After taking the first exam in a module, it becomes **mandatory** ⇒ you need to finish this module!

- Decisions on thematic areas of modules are done when registering for the exam

- Do not place modules in *Additional Achievements (zusätzliche Leistungen)* ⇒ *credits won’t count…never ever!*
Examinations
Examinations for Master Students

• Each module must be completed with an exam
• What types of exam are there?
  • Oral examination – mündliche Prüfung
  • Written examination – Klausur
  • Homework – Hausarbeit
• Type of exam depends on module —> ASK TEACHER
Examinations for Master Students \2

- When planning the 1st exam for a course, BEWARE
  - NO automatic enrollment – YOU must take action!
  - There are enrollment deadlines; if you miss a deadline, you cannot enroll
  - You can cancel an enrollment until 7 days before exam.
  - Never register for an examination where you have not attended the lecture!

- BEWARE
  - At most three tries per course.
  - You can have three tries for three courses total.
    For all other courses you have two tries.
  - You have only ONCE the chance to step back from the exam of a course!
Getting Advice
http://www.inf-international.ovgu.de
Even more (specific) information for Incoming Students

You can get Advice from…

1. Studies Coordinators

- Prof. Benjamin Noack
  Office: G28-001
  E-Mail: benjamin.noack@ovgu.de

- Prof. Gunter Saake
  Office: G29-110
  E-Mail: saake@iti.cs.uni-magdeburg.de
You can get Advice from…

1. Studies Coordinators
2. Coordinator for DE projects
   - NN
3. International Relationships and Exchange Coordinator
   - Dr. Claudia Krull
      Office: G29-214
      E-Mail: claudia.krull@ovgu.de
You can get Advice from...

1. Studies Coordinators
2. Coordinator for DE projects
3. International Relationships and Exchange Coordinator
4. Examination Office
   - Office: FIN building, room 101/102
   - Web: [http://www.inf.ovgu.de/pamt.html](http://www.inf.ovgu.de/pamt.html)
5. FaRaFIN
   - Email: post@farafin.de
   - Web: [www.farafin.de](http://www.farafin.de)
You can get Advice from…

1. Studies Coordinators
2. Coordinator for DE projects
3. International Relationships and Exchange Coordinator
4. Examination Office
5. FaRaFIN
6. Other DigiEng students/Mentors
7. DigiEng Facebook Group
   - https://www.facebook.com/groups/223056807855119/