Introduction MSc Computational Engineering
1. Welcome by Prof. Dr. Gerhard Wellein (NHR)
2. Welcome by Dr. Felix Schmutterer (program coordinator)
3. Introduction to the study program
4. „BGCE – our elite programme“ by Tobias Baumeister
5. Welcome by FSI CE (student association)
6. Introduction to FAU‘s CIP-pools
7. „Q&A“
Main Locations

CS Tower & RRZE

The FAU Tech Campus, CS Department highlighted
Persons in Charge/Contact Persons

Prof. Dr. Dietmar Fey (Program Director)
(Professor for Computer Architecture)

Prof. Dr. Gerhard Wellein
(NHR, High Performance Computing)

Dr. Felix Schmutterer (Program Coordinator)

- advice for your studies (appointments)
- accreditation of coursework achievements
- support with formalities

studienberatung-ce@fau.de
General Study Advisory (Informations- und Beratungszentrum, IBZ)

Elisabeth Bächle-Grosso, Halbmondstr. 6-8, 91054 Erlangen, Room: 1.031
elisabeth.baechle-grosso@fau.de
• general study-related problems
• information about changing your study program (advisor for all engineering programs)
• student visa issues (certificate for foreigners office)

Examinations Office Faculty of Engineering (Prüfungsamt TechFak)

Heike Barthelmann, Halbmondstr. 6, 91054 Erlangen
heike.barthelmann@fau.de
• managing exams, credits, grades online by „mein campus“ or by paper certificates, withdrawal from exams (due to illness etc.)
• Report on conditional subjects/“Auflagen“!
International Office Faculty of Engineering
Christine Mohr, Erwin-Rommel-Str. 60, 91058 Erlangen
christine.mohr@fau.de
• Information about studies/internship abroad
• General help and support for international students

Career Service
career-service@fau.de; www.career.fau.de
• Help with your job search (also student jobs)
• Support with applications
• Check of application documents
• Training for job interviews
• Useful workshops and seminars
Office for Gender and Diversity
Bismarckstraße 6, 91054 Erlangen

gender-und-diversity@fau.de

- Advice for students with children
- Help for students with a migratory background
- Support for women (in cases of violence, harassment)
- Support for students experiencing discrimination of any kind (due to gender, ethnicity, religion, sexual orientation etc.)
Advice for students with disabilities or chronic diseases

Dr. Jürgen Gündel, Schloßplatz 3/Halbmondstr. 6, 91054 Erlangen, Room: 1.032
juergen.guendel@fau.de
• General advice and support (e.g. accessibility of buildings)
• Compensation of disabilities during examinations (e.g. more time)

Psychological support (Psychologisch-Psychotherapeutische Beratungsstelle)
Elizabeth Provan-Klotz, Computer Science Tower, Martensstr. 3, 91058 Erlangen, Room: 04.154
elizabeth.provan-klotz@werkswelt.de; +49 9131 85-27935
• Open consultation (anonymous drop-in sessions)
How to find information?

One weblink to rule them all …

https://www.ce.studium.fau.eu

https://www.fau.de

…including today‘s presentation!
How to find information?

General information on the internet:
search the web for “FAU“ + keyword

• FAU + language courses
• FAU + examinations office
• FAU + psychological services
• FAU + semester dates…
Program Structure
Program Structure
General structure of the master program in CE

Mathematics [min 20 ECTS]
Mathematics modules for the master program can be taken from CE module catalogue and are offered by the department of applied mathematics and from the different departments of the School of Engineering. The modules must have a mathematical orientation.

Computer Science [min 20 ECTS]
The student can select modules from CE module catalogue offered by the Computer Science Chairs for the master program in computer science.

Technical Application Field (TAF) [min 20 ECTS]
In this section the student can select modules from CE module catalogue offered by all master programs of the School of Engineering. The only exception are modules from the department of computer science.
Program Structure
General structure of the master program in CE

Seminar [5 ECTS]
The seminar is part of one of the elective subjects mentioned above. Therefore, students can take a seminar of a master program from the department of computer science, the department of applied mathematics or a department of the School of Engineering related to the TAF.

Master Thesis [30 ECTS]
The master’s thesis can be registered at the registrar’s office as soon as the student has successfully collected 70 ECTS point credits.

The topic of the thesis must be related to subjects studied by the student during the master program. A special thesis advisor is usually assigned to each student. The thesis may involve regular meetings with the thesis advisor and also the participation in a larger research group. It can be written in English. An oral presentation of the results of about 30 minutes as well as a consecutive discussion are obligatory.
Standard study plan

<table>
<thead>
<tr>
<th>Module title</th>
<th>SWS (semester hours)</th>
<th>Total ECTS credits</th>
<th>Distribution of workload per semester in ECTS credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mathematics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funktionalanalyse für Ingenieure</td>
<td>2        2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Optimierung für Ingenieure</td>
<td>3        2</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Compulsory elective modules mathematics: Modules from the module catalogue pursuant to Section 40a (4) (min. 7.5 ECTS)</td>
<td>6        3</td>
<td></td>
<td>≥7.5</td>
</tr>
<tr>
<td><strong>Computer science</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compulsory elective modules computer science: Modules from the module catalogue pursuant to Section 40a (3) (min. 20 ECTS)</td>
<td>12       8</td>
<td>4</td>
<td>≥20</td>
</tr>
<tr>
<td><strong>Technical application fields (TAF)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compulsory elective modules technical application field: Modules from the module catalogue for the chosen TAF pursuant to Section 40a (5) (min. 20 ECTS)</td>
<td>12       8</td>
<td>4</td>
<td>≥20</td>
</tr>
<tr>
<td><strong>Seminar</strong></td>
<td>2        5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master's thesis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30       30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

Please note: An updated version of the module catalogue will be published every semester!

Module Catalogue

Keep in mind – some courses might be offered in German and/or English!

The standard progression through the master programme for full-time participants with 30 ECTS per semester.
# Standard study plan

**Module Catalog – Master Program Computational Engineering**

**Summer Term 2023**

Note that standard study plans for all technical application fields are to be found on the CE website!

## General Modules (max. 15 ECTS)

<table>
<thead>
<tr>
<th>Module</th>
<th>SWS (L+E+S+P)</th>
<th>Total ECTS</th>
<th>Language</th>
<th>Exam</th>
<th>Department</th>
<th>Responsible Chair</th>
<th>WS/S$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming Project</td>
<td>5/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Full list is found in the Campo</td>
<td></td>
</tr>
<tr>
<td>Seminar</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Full list is found in the Campo</td>
<td></td>
</tr>
</tbody>
</table>

**Please note:** An updated version of the module catalogue will be published every semester!

**Module Catalogue**

Keep in mind – some courses might be offered in German and/or English!

The standard progression through the master programme for full-time participants with 30 ECTS per semester.
Types of Courses

- V/L: Vorlesung/lecture – generally no registration, attendance not mandatory
- Ü/E: Übung/Tutorium; exercise class/tutorial – usually start in the 2nd week, further details in the 1st lecture, attendance usually not mandatory
- P: Praktikum/Practical course (lab course) – attendance mandatory
- S: Seminar – attendance mandatory, early registration (see Campo)
Types of exams/course achievement

Prüfungsleistung (PL)/Graded course achievement (gCA)

- schriftlich [written]
- mündlich [oral]
- Seminar (presentation and paper)

Studienleistung (SL)/Ungraded course achievement (uCA)

- e.g. exercise classes or practical courses
- Hochschulpraktikum/academic laboratory
- Forschungspraktikum/research laboratory
General Information
What is “ECTS”? 

European Credit Transfer and Accumulation System 
Student workload required for the learning outcomes of a program 

• 30 credits: recommended workload per semester 
• 1 credit: ≈ 25-30 working hours (attendance-based learning + self study!) 

You will find information on ECTS in the module catalogs, on your Master’s certificate/Transcript of Records
Semesters & Exams

• Regular duration of studies: 4 semesters / 2 years  
  (can be extended to 5 by re-registering + paying the fee)

• Semester: lecture period (14/15 weeks) + lecture-free period (≈12 weeks)

• Two exam periods: first 2 weeks and last 3 weeks  
  of the lecture-free period ("holidays")

• Failing an exam: 2nd + 3rd chance in the following two semesters (mandatory registration)  
  • exception: conditional subjects/“Auflagen” (max. 2 chances, i.e. 1 year!)

• You can/must only take exams if you register for them.

• Withdrawal from registered exams: until 3 working days (Mon – Fri) before the exam without a reason  
  • or later in case of illness/severe reasons (medical/other certificate)
Semesters & Exams

Winter Semester 2023 (October 1, 2023 – March 31, 2024):

Lecture Period: October 16, 2023 – February 9, 2024
Exam Registration: November 20, 2023 – December 10, 2023
Re-Registration for SS 23: February 1-9, 2024
Semester break (lecture-free): December 24, 2023 - January 6, 2024
February 10, 2024 – April 14, 2024
Exams: February & April

www.fau.eu/study/current-students/semester-dates/

https://www.fau.eu/education/study-organisation/re-registration/
Conditional Subjects/“Auflagen”

• Must be passed within **one year**.
  
  Otherwise, they will prevent successful re-registration for the 3rd semester.
  
  **No exceptions!**

• After successful completion of conditional subjects:

  **Actively inform** Mrs. Barthelmann (Examinations Office)!

• Examination results of the 2nd semester might be published late.
  
  If this is the case, contact your lecturer to get the results faster.
Sprachenzentrum (Language Center)

Bismarckstraße 1

www.sz.fau.de

• Courses during the lecture period are **free of cost**.
• Intensive courses (with a fee) during the semester break
• **Registration** is required for all courses.
• Registration for **German courses**: online (+ in person; **open as of now**);
  **highly recommended for internships & future job!**
• Recommended languages to prepare for studying abroad:
  • English, Spanish, Portuguese

Many of you will want to stay in Germany …
Visa and late arrival

The programme supports student to arrive at the university until November.

Please note that FAU is not an online university, some modules might be taught / streamed via zoom.

Please make sure not to miss the exams of your first semester.

As soon as it is clear that you will “miss” the first semester, please make sure to cancel your enrollment and defer your admission to the winter semester.
BGCE – our elite programme
Student Association
Student association
Who we are and what we do

- Support regarding your studies, student-life, Erlangen and more.

- Organize different social events BBqs, Pubnights or Beer-Pong-Tournaments :)

- Offer a collection of additional learning materials

- Help if there are any problems with professors, tutors, studies…
Contact Us

Via E-Mail:  fsi-ce@fau.de

Online:  www.ce.fsi.fau.de

In Our Room:  02.133-113
(Computer Science Building)

Just drop by, because we’re nearly always there …
Online Tools
An IdM login is required for nearly all personalized online services at FAU...

- Activate your IdM account with the activation password mailed to you!
- Upload a photo to generate your student ID card
  - The card will be sent to your semester address!
- Problems: service counter/“Service-Theke“ RRZE (Computation Center) next to blue computer science tower (Martensstraße 1); 1st floor

All important information regarding your studies will be sent to your FAU e-mail address!

www.idm.fau.de
Login via "Single Sign-On"

- **Exams**
  - Exam registration (when active – registration: November 20, 2023 – December 10, 2023; preliminary)
  - Withdrawal from exams: three working days before the exam date (Mon–Fri)
  - Overview of registered exams
  - Overview of grades and acquired ECTS credits

- **Timetable & Documents**

Manuals for student relevant content on campo: [click-here](https://www.campo.fau.de)
Enter your FAU username and password

Username: Your IdM ID
Password: Your password
Log in

You forgot your password?
Please follow the link below to start the password recovery process.
Continue with password recovery

For security reasons, please log out and exit your web browser when you are done accessing services that require authentication!
Prüfungen (Exams) - Overview of registered exams

Hamburger menu → My Studies → Show my enrollments
## Overview of registered exams and option to withdraw/de-register

### Prüfung: 41201 Pattern analysis

<table>
<thead>
<tr>
<th>Dates and rooms</th>
<th>Status</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. parallelgroup Pattern Analysis</td>
<td>Your actual status: Admitted to examination</td>
<td><img src="image" alt="More details" /> <img src="image" alt="De-register" /></td>
</tr>
<tr>
<td>Wednesday, Oct 5, 2022 from 4:00 PM to 5:00 PM</td>
<td>Term of the examination: SoSe 2022</td>
<td></td>
</tr>
<tr>
<td>Examinationform: Written examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prüfer-in: PD Dr. Ing. Reiß, Christian</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Prüfung: 33881 Seminar Inverse Rendering

<table>
<thead>
<tr>
<th>Dates and rooms</th>
<th>Status</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. parallelgroup Seminar Inverse Rendering</td>
<td>Your actual status: Admitted to examination</td>
<td><img src="image" alt="More details" /> <img src="image" alt="De-register" /></td>
</tr>
<tr>
<td>No time defined</td>
<td>Term of the examination: SoSe 2022</td>
<td></td>
</tr>
<tr>
<td>Examinationform: Seminar achievement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prüfer-in: Prof. Dr. Weyrich, Tim</td>
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</tbody>
</table>

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**3 working days (Mon–Fri) before the exam date!!!**
Overview of grades, acquired ECTS credits and Transcripts

Hamburger menu → My Studies → My Achievements

Grades, acquired ECTS credit

Transcripts
Certificate of enrollment/Immatrifikationsbescheinigung

Hamburger menu → My Studies → Student Service

Personal details: Your Name

My degree program:

Requested Reports

Documents

Reports

Study documents:
- Certificate of enrollment in English
- Certificate of enrollment in German

Data verification sheet (nur Studierende der Fakultät für Mathematik und Physik)

Requested Reports:
- Certificate of enrollment in English
- Certificate of enrollment in German

Enrollment
Compile your class schedule
Navigate to the CE Programs course catalogue
Hamburger menu → My Studies → Study planner with module plan
Hamburger menu → Studies offered → Show university course catalogue
Compile your class schedule
Faculty of Engineering → Computational Engineering → Master … → Master's examination → Total

Select the semester

Navigate down to the Computational Engineering program
Compile your class schedule

Under the Faculty of Engineering

→ Computational Engineering

......
......
...
.

- Chemical Engineering - Nachhaltige Chemische Technologien
- Chemie- und BioIngenieurwesen
- Clean Energy Processes
- Communications and Multimedia Engineering
- Computational Engineering

- Bachelor of Science Computational Engineering (Rechnergestütztes Ingenieurwesen) Hauptfach PO-Version 2010
- Bachelor of Science Computational Engineering (Rechnergestütztes Ingenieurwesen) Hauptfach PO-Version 20222
- Master of Science Computational Engineering (Rechnergestütztes Ingenieurwesen) Hauptfach PO-Version 2013

- 10000 - Master’s examination
- 2000 - Total

- 1700 - Compulsory electives: Computer Science
- 1750 - Wahlflichtbereich Angewandte Mathematik
- 1799 - Wahlflichtbereich Technisches Anwendungsfach
Click on the course lecture/exercise
Click on parallel groups / dates
Click on save to schedule

10/13/23
# Timetable for Zikeli, Michael

**View options**

- Winter semester 2022/23
- Week choice

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>08:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>Algorithms of Numerical Linear Algebra</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Event/Exercise, 1 PG 8:15 AM to 9:45 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Die Geschichte der Rechentechnik Seminar, 1 PG 10:15 AM to 11:45 AM Weekly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Computer Exercises Exercise, 1 PG 10:15 AM to 11:45 AM Weekly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Algorithms of Numerical Linear Algebra</td>
<td>Numerical Fluid Mechanics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Event/Exercise, 1 PG 12:15 PM to 1:45 PM Weekly</td>
<td>Lecture, 1 PG 12:15 PM to 1:45 PM Weekly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td></td>
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</tr>
</tbody>
</table>

Some timetable download / export options as .pdf or .ics

10/13/23
Register for courses

<table>
<thead>
<tr>
<th>Semester</th>
<th>Wintersemester 2022/23</th>
</tr>
</thead>
</table>

### Functional Analysis for Engineers

**Title:** Functional Analysis for Engineers  
**Short text:** FuncAnEng

- TechFak | Computational Engineering | Master of Science (Verantwortlicher)
- TechFak | Computational Engineering (Elite) | Master of Science (Verantwortlicher)
- TechFak | Computational Engineering (Elite) | Master of Science with Honours (Verantwortlicher)
- TechFak | Informatik | Master of Science (Verantwortlicher)
- TechFak | Medizintechnik | Master of Science (Verantwortlicher)
- More...

**Course type:** Lecture with exercise

**Module frequency:** Only in winter semester

**ECTS credits:** 2.5

**Semester hours per week:** 2.0

**Links:** [Parallelspeise: 1. Functional Analysis for Engineers](Link)

*Comment:* Recorded lecture available online

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10/13/23
Login via "Single Sign-On"

- Often used for courses that require registration
  (seminars, practical courses)
- Platform for sharing course materials

https://www.studon.fau.de
CIP
The Community Computer Pool

- **Registration:** [https://account.cip.cs.fau.de/](https://account.cip.cs.fau.de/)
  See QR-Code

- Reference system for most of the assignments

- Access to our material collection
  - Registration via FSI CE (mail or in person)
  - We need your "IdM name"

- **Remote Login:**
  Available with SSH, Xpra, putty, etc
  more info and a how-to [here](https://account.cip.cs.fau.de/)
What‘s next?
What’s next?

1. **Compile your class schedule** (via Campo)
   Manual: [click here](#)

2. **Register for courses – only if needed** (information via Campo):
   usually via StudOn (see registration link on the respective lecture page in Campo)
   If registration is not required, simply go the first meeting.

3. **Register for exams** (via Campo)
   Manual: [click here](#)
What’s next?

4. **Re-register for SS 2023**
   bank transfer – details via e-mail (t.b.a.)

5. **Study & pass exams**
   study groups, time management, practice with old exams from the FSI

6. **Actively report on your conditional subjects**
   → Examinations Office (Mrs. Barthelmann)

7. **Get your “Deutschland ticket“ for public transport**