MASTER O-PHASE WELCOME AT KIT

Fachschaft MACH/CIW

IMPORTANT INFORMATION

- Remember to bring your certificate of study next Tuesday
  → then you will get your ribbon

- All important info and changes can be found here on our homepage:

INFO ZUM GRILLEN

- Please bring your own dishes (plates and cutlery) for the barbecue

Thank You!

ZEITPLAN

Uhrzeit	Montag 23.10.2023	Dienstag 24.10.2023	Mittwoch 25.10.2023	Donnerstag 26.10.2023
15:00				
16:00			Masterconsultation	16:30 Uhr Campustour
17:00		Welcoming		
18:00		18:30 Uhr Pub Crawl		Barbecue and Beer
19:00				

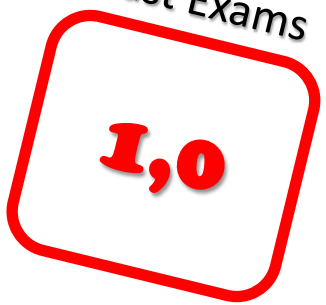
ADDITIONAL PROGRAM

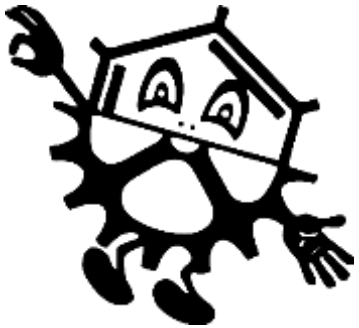
- Tonight: (indoor beer garden) “Kühler Krug”
- Tomorrow: Bavarian Breakfast
- Friday: Behind the Scenes

WHAT IS THE STUDENT COUNCIL?

studying

Past Exams





Conferences

Consulting

Partys

WELCOME TO KIT

Student council MACH/CIW

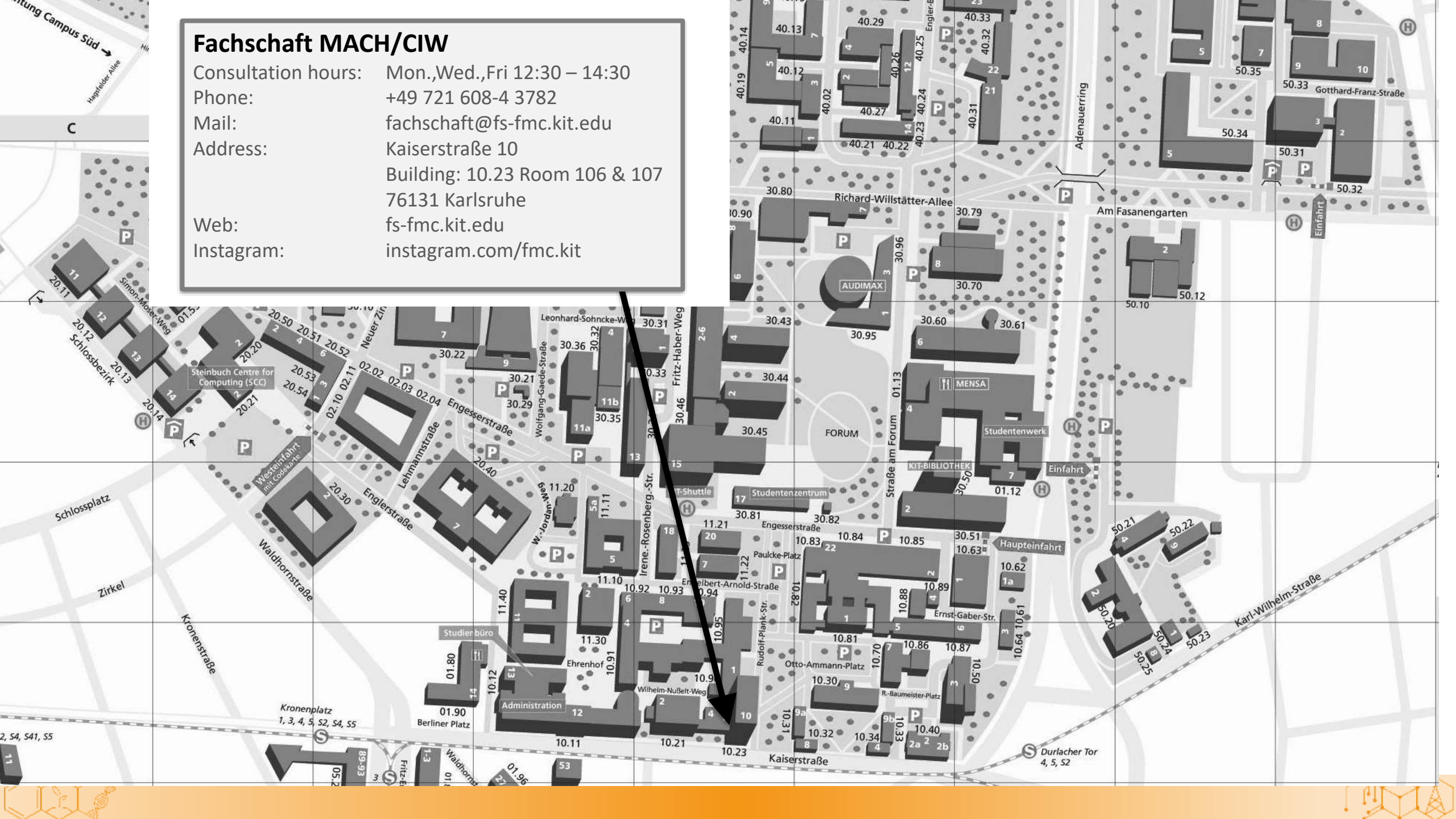
STUDENT COUNCIL

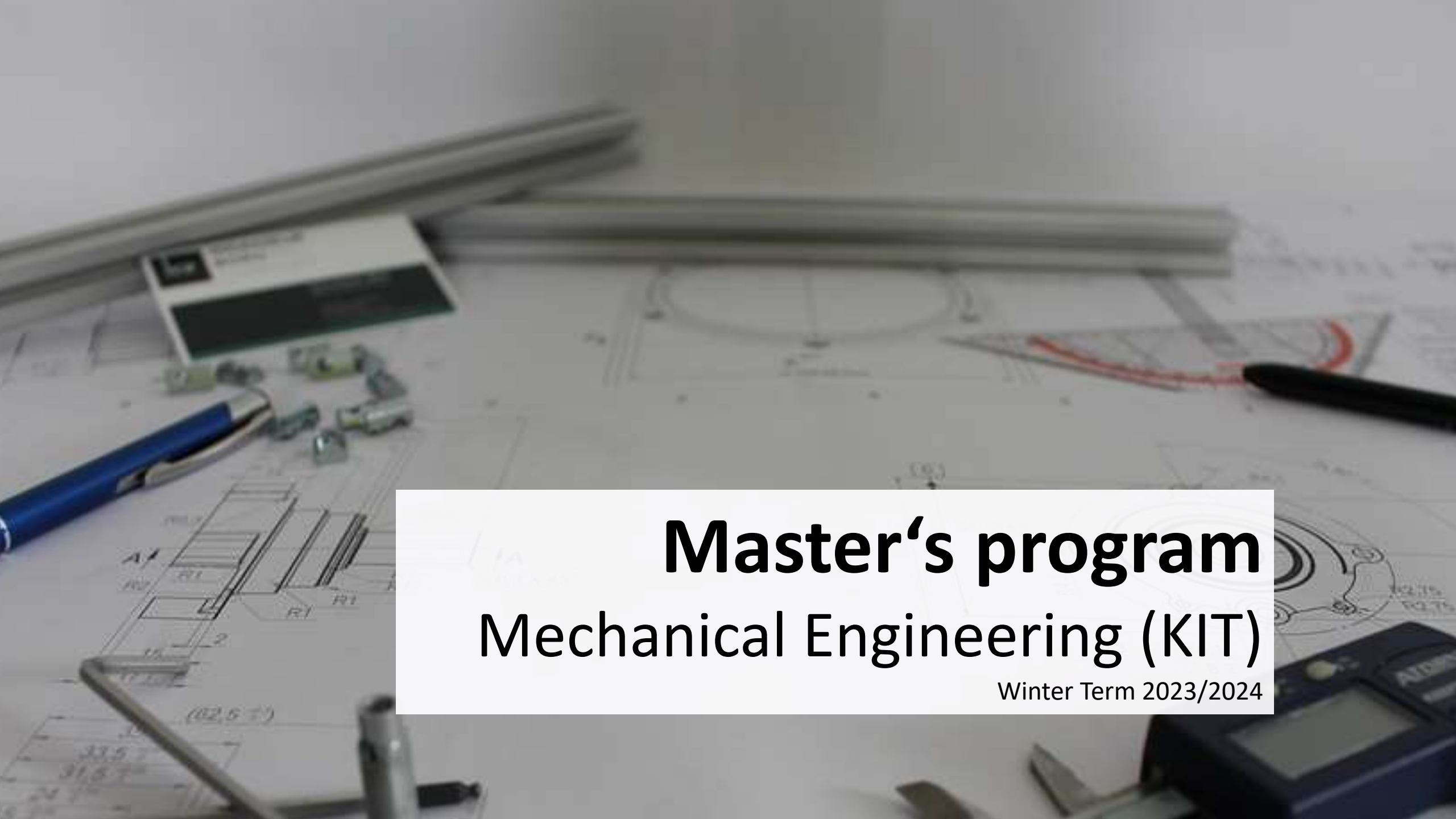
- Meeting every Wednesday at 7:00pm
- Before every meeting we get pizza
- You can help as much as you want

- Email-Crew-Distributor
  (for bigger events like parties etc.)

Fachschaft MACH/CIW

Consultation hours:	Mon.,Wed.,Fri 12:30 – 14:30
Phone:	+49 721 608-4 3782
Mail:	fachschaft@fs-fmc.kit.edu
Address:	Kaiserstraße 10 Building: 10.23 Room 106 & 107 76131 Karlsruhe
Web:	fs-fmc.kit.edu
Instagram:	instagram.com/fmc.kit



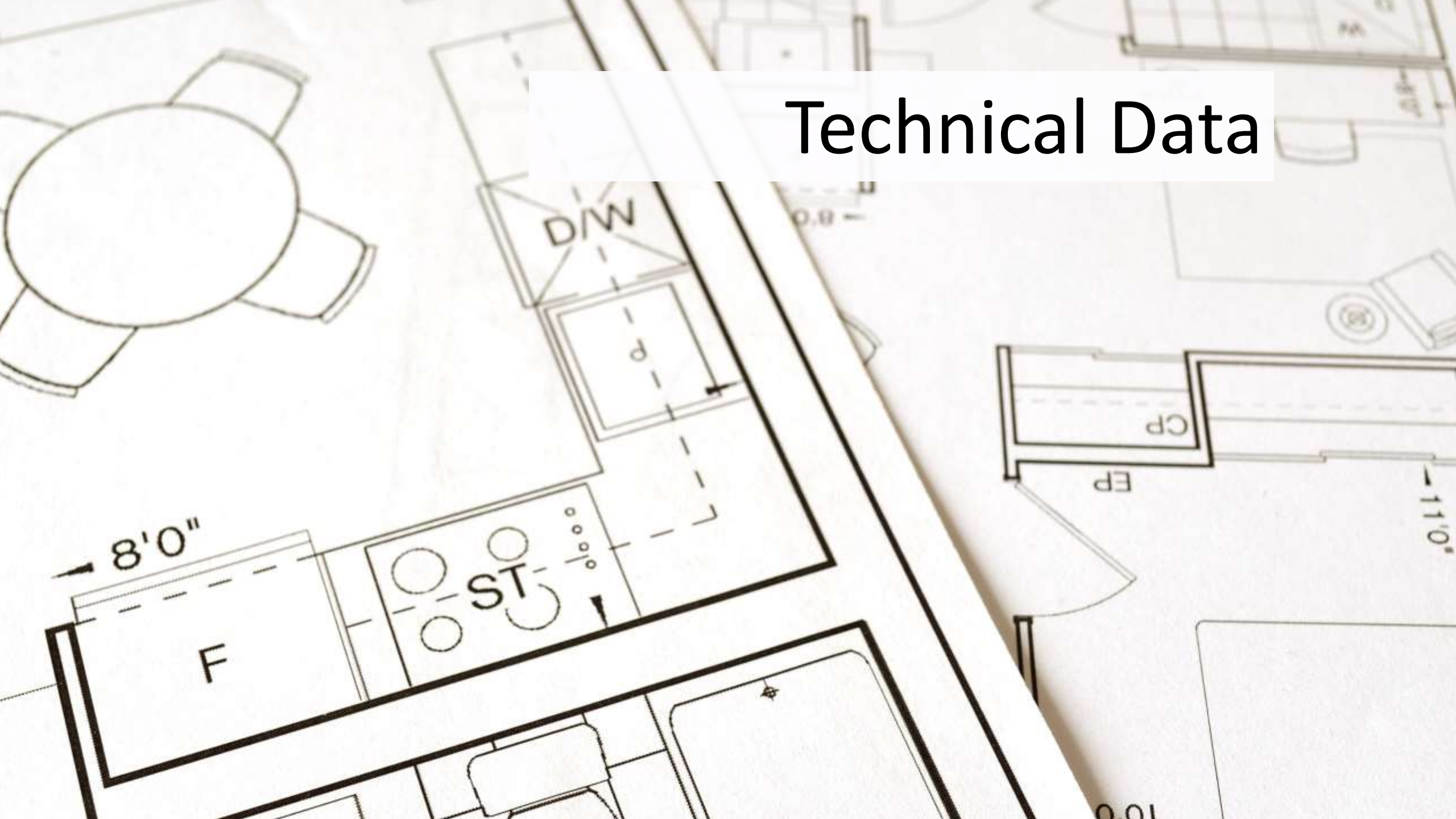


Master‘s program

Mechanical Engineering (KIT)

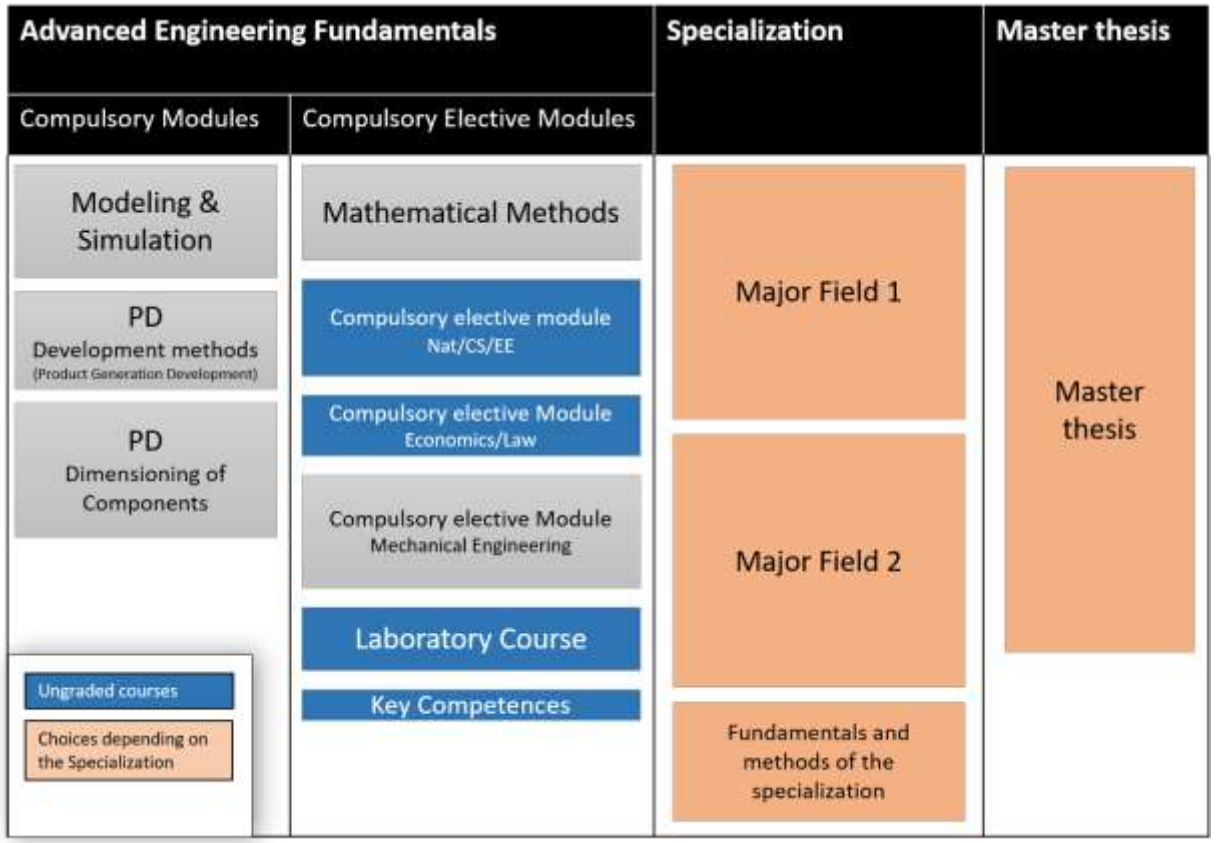
Winter Term 2023/2024

Technical Data



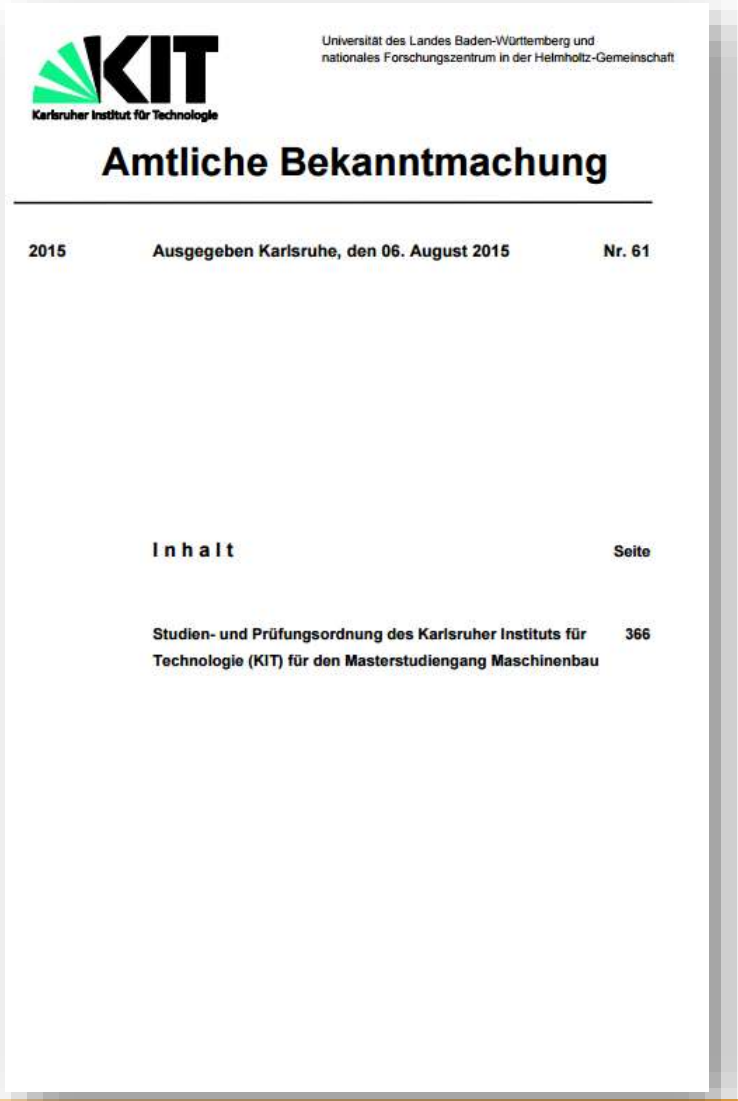
TECHNICAL DATA

- Regular study time:
  - 4 semester
- Total credit points:
  - 120 ECTS
- Maximum study time:
  - 7 semester
- Proof of internship
  - Latest to the 3rd semester
- Repetition of exams
  - Latest one year later
  - (exception: examination board)



Statutes and Regulations

Studien- und Prüfungsordnung (SPO)



Universität des Landes Baden-Württemberg und
nationales Forschungszentrum in der Helmholtz-Gemeinschaft

Karlsruher Institut für Technologie

Amtliche Bekanntmachung

2015 Ausgegeben Karlsruhe, den 06. August 2015 Nr. 61

Inhalt Seite

Module Handbook

Karlsruher Institut für Technologie

Module Handbook
Master Program Mechanical Engineering (M.Sc.)
SPO 2016, for study beginners since summer term 2019
Valid from Summer Term 2020
Date: 15/02/2020

KIT DEPARTMENT OF MECHANICAL ENGINEERING

KIT – The Research University in the Helmholtz Association

www.kit.edu

IMPORTANT OFFICES

§

Prüfungsausschuss (examination board)

- Examination matters
- Legally binding statements
- recognitions
- extensions
- second repetition

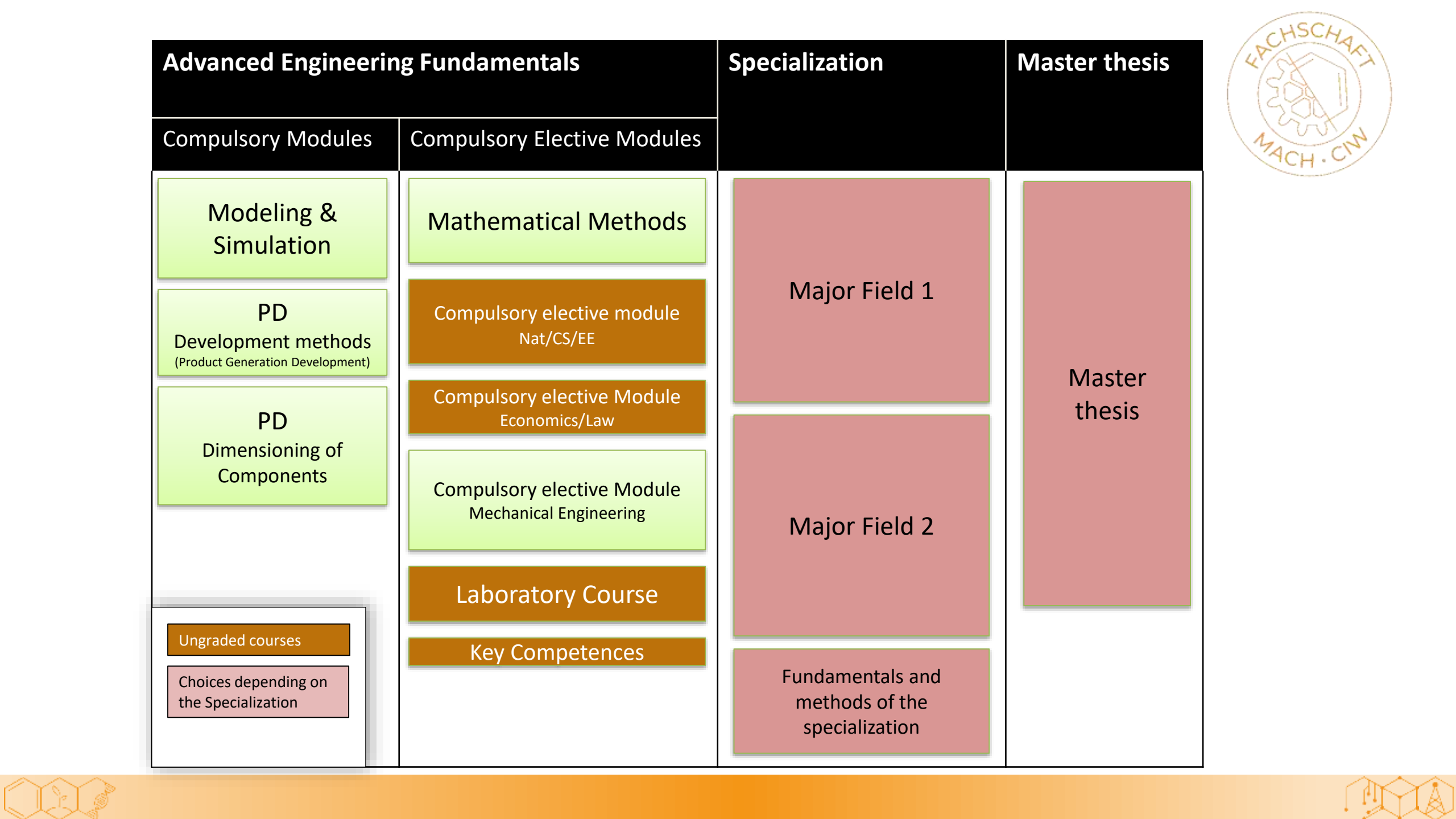
InSL (Information and service for students in Mechanical Engineering)

- Recognition of internships
- Official advice center for general study concerns
- Help for international students

Studienbüro (Student office)

- matriculation
- deregistration

Module Overview


Advanced Engineering Fundamentals
Specialization
Master thesis
Compulsory Modules
Compulsory Elective Modules
Modeling & Simulation
PD Development methods (Product Generation Development)
PD Dimensioning of Components
Mathematical Methods
Compulsory elective module Nat/CS/EE
Compulsory elective Module Economics/Law
Compulsory elective Module Mechanical Engineering
Laboratory Course
Key Competences
Major Field 1
Major Field 2
Fundamentals and methods of the specialization
Master thesis
Ungraded courses
Choices depending on the Specialization

SOME REMARKS (I)

Compulsory modules Product Development

Currently not taught in English.

English slides and Exam, Lecture Translator

Modeling & Simulation

Slides, Lecture videos, Tutorial available in English

Mathematical Methods

Two English choices:

Mathematical Models and Methods for Production systems

Mathematical Methods of Fluid Dynamics

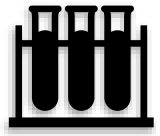
Mathematical Methods

Bricks					
Identifier	**Title**	**Ver**	**Wgt**	**CP**	**Sem**
Mathematical Methods	**Count** 1				
T-MACH-105293	Mathematical Methods in Dynamics	2	1	6.0	0
T-MACH-105294	Mathematical Methods of Vibration Theory	2	1	6.0	0
T-MACH-105295	Mathematical Methods in Fluid Mechanics	1	1	6.0	0
T-MACH-105189	Mathematical Models and Methods for Production Systems	1	1	6.0	0
T-MATH-102242	Numerical Mathematics for Students of Computer Science	3	1	6.0	0
T-MATH-109620	Probability Theory and Statistics	2	1	5.0	0
T-MACH-110375	Mathematical Methods in Continuum Mechanics	1	1	4.0	0
T-MACH-110378	Mathematical Methods in Micromechanics	1	1	5.0	0
Tutorial Mathematical Methods					
T-MACH-110376	Tutorial Mathematical Methods in Continuum Mechanics	1	1	1.0	0
T-MACH-110379	Tutorial Mathematical Methods in Micromechanics	1	1	1.0	0

SOME REMARKS (II)

CEM Mechanical Engineering:

Nearly every lecture of the ME faculty can be chosen



CEM Economics / Law, Natural Sciences / CS / EE

Current catalog doesn‘t contain English lectures

You can basically take every lecture from the WIWI resp. PHYS/CHEM/INFO/ETIT faculties, just discuss it with the responsible professor first (Prof. Furmans / Prof. Maas)

Laboratory course

Two english subjects: Decentrally controlled intralogistics systems and Energy Technology Lab

Specializations

Multiple possibilities

Most German students choose General Mechanical Engineering

→ no restrictions

SPECIALIZATIONS

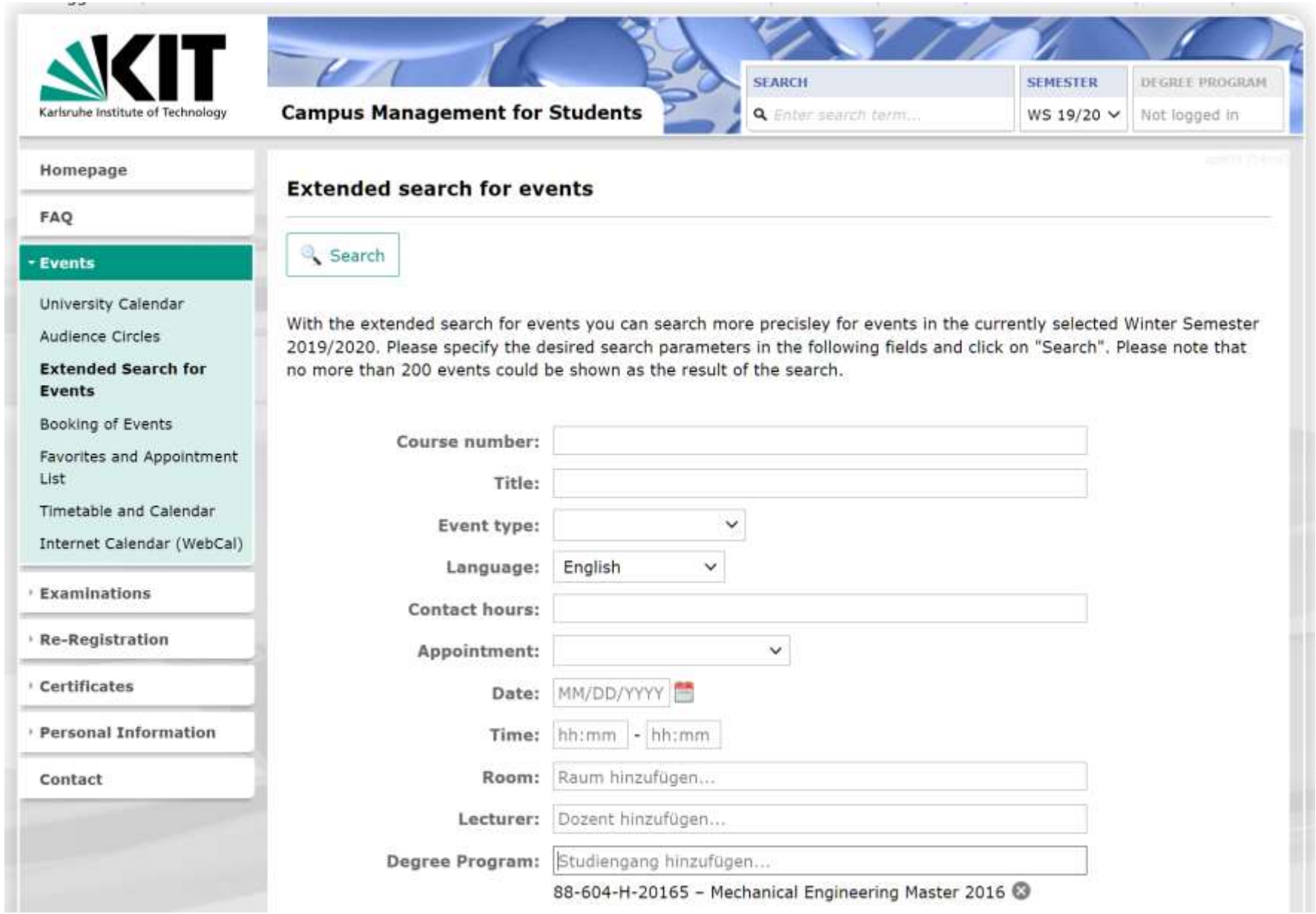
Fields			
Title	**Wgt**	**CP**	**Sem**
Specialization **Count** 1			
Specialization: General Mechanical Engineering	1	40.0	0 - 3
Specialization: Energy- and Environment Engineering	1	40.0	0 - 3
Specialization: Vehicle Technology	1	40.0	0 - 3
Specialization: Mechatronics and Microsystems Technology	1	40.0	0 - 3
Specialization: Product Development and Engineering Design	1	40.0	0 - 3
Specialization: Production Technology	1	40.0	0 - 3
Specialization: Theoretical Mechanical Engineering	1	40.0	0 - 3
Specialization: Materials and Structures for High Performance Systems	1	40.0	0 - 3

MAJOR FIELDS AND FUNDAMENTALS & METHODS IN THE SPECIALIZATIONS

Modules					
Identifier	**Title**	**Ver**	**Wgt**	**CP**	**Sem**
Compulsory					
M-MACH-102405	Fundamentals and Methods of General Mechanical Engineering	1	1	8.0	0
Major Fields	**Count** 2				
M-MACH-102649	Major Field: Advanced Materials Modelling	1	1	16.0	0
M-MACH-102598	Major Field: Advanced Mechatronics	2	1	16.0	0
M-MACH-102646	Major Field: Applied Mechanics	2	1	16.0	0
M-MACH-102599	Major Field: Powertrain Systems	2	1	16.0	0
M-MACH-102601	Major Field: Automation Technology	2	1	16.0	0
M-MACH-102641	Major Field: Rail System Technology	2	1	16.0	0
M-MACH-102604	Major Field: Computational Mechanics	1	1	16.0	0
M-MACH-102642	Major Field: Development of Innovative Appliances and Power Tools	2	1	16.0	0

HOW TO FIND LECTURES IN ENGLISH

- Filtering the University Calendar by language
- Ask the professors
- Ask the Fachschaft



campus.studium.kit.edu

MAJOR FIELDS

Bricks					
Identifier	**Title**	**Ver**	**Wgt**	**CP**	**Sem**
Microactuators and Microsensors (K) CP min. 8.0					
T-MACH-101910	Microactuators	2	1	4.0	0
T-MACH-102152	Novel Actuators and Sensors	3	1	4.0	0
Microactuators and Microsensors (E) CP max. 11.0					
T-MACH-105238	Actuators and Sensors in Nanotechnology	1	1	4.0	0
T-MACH-100966	BioMEMS - Microsystems Technologies for Life-Sciences and Medicine I	2	1	4.0	0
T-MACH-105321	Introduction to Theory of Materials	1	1	4.0	0
T-MACH-102166	Fabrication Processes in Microsystem Technology	1	1	4.0	0
T-MACH-105182	Introduction to Microsystem Technology I	1	1	4.0	0
T-MACH-105183	Introduction to Microsystem Technology II	1	1	4.0	0
T-MACH-105334	Mechanics in Microtechnology	1	1	4.0	0

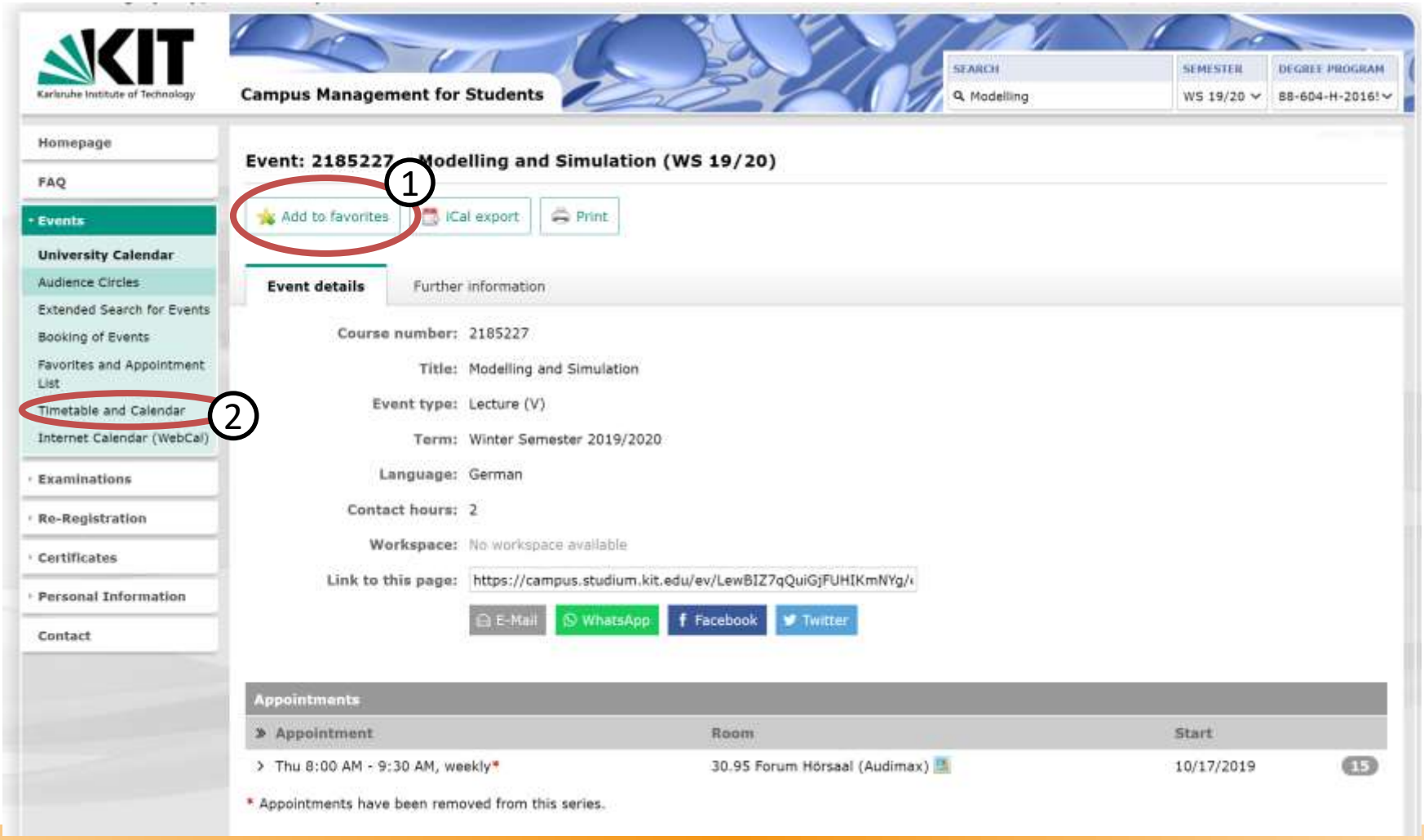
ENGLISH MAJOR FIELDS

- Requirements can be fulfilled with English courses:
  - SP12 (Vehicle Technology)
  - SP23 (Power Plant Technology)
  - SP33 (Microsystem Technology)
  - SP46 (Thermal Turbomachines)
  - SP59 (Entrepreneurship)
  - SP26 (Materials Science and Engineering)
- With some small changes (custom Major Field):
  - SP21 (Nuclear Energy)
  - SP24 (Energy Converting Engines)
  - SP60 (Vibration Theory)
  - SP56 (Advanced Materials Modeling)

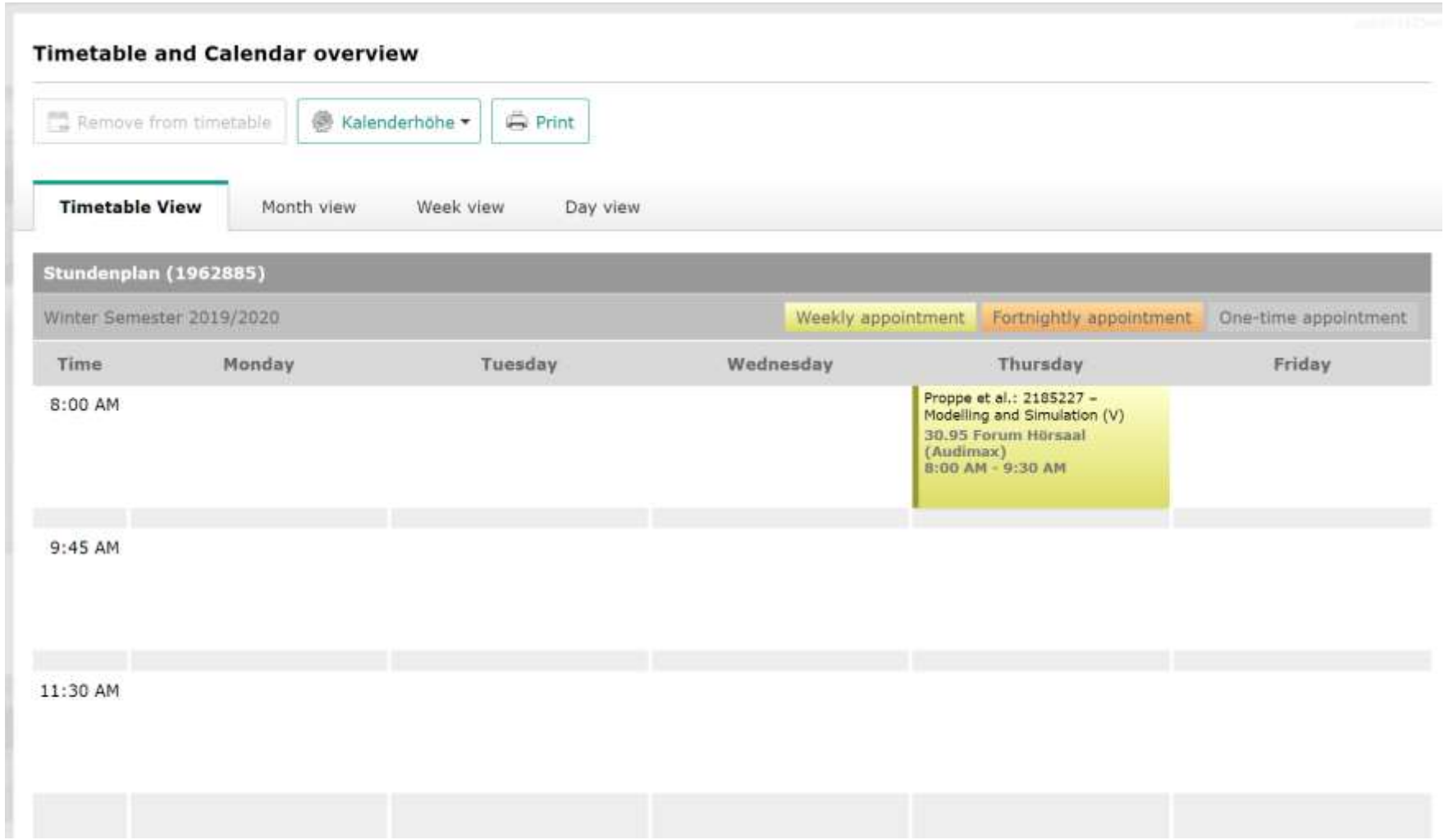
HOW TO CHOOSE ELECTIVE SUBJECTS?

- Add all courses that interest you to your personal time table on campus.studium.kit.edu

PERSONAL CALENDAR



PERSONAL CALENDAR



HOW TO CHOOSE ELECTIVE SUBJECTS?

- Add all courses that interest you to your personal time table on campus.studium.kit.edu
- Visit all of them in the first week, then select
  - Join the ILIAS Courses for more information
  - Watch the videos/lectures
- You don‘t have to register for most courses, just for the exam

SpZ

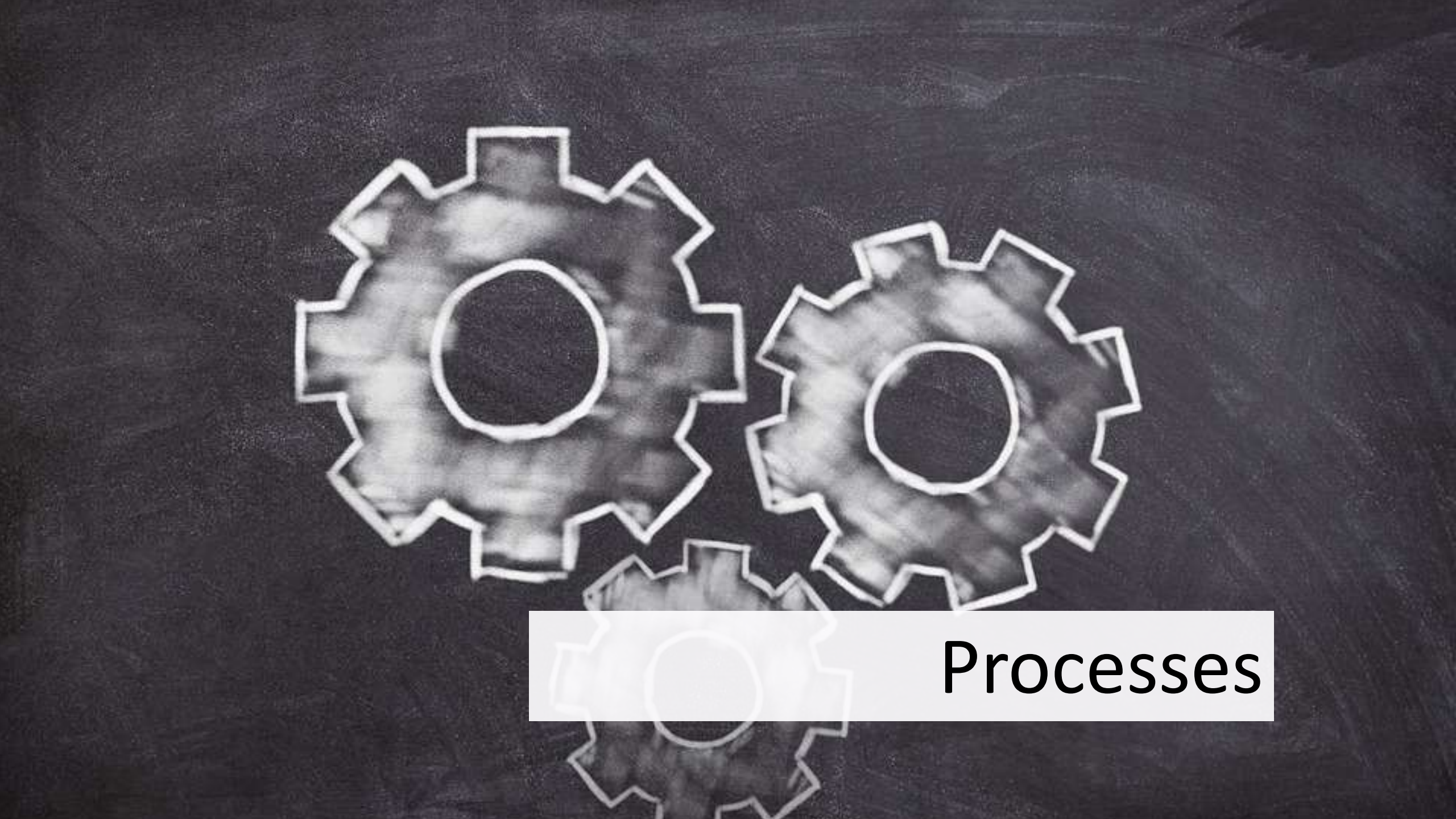
(and Studienkolleg)

KEY COMPETENCES

- Courses are added to the „unassigned“
- If key competence:
  - form for assignment→ google the form

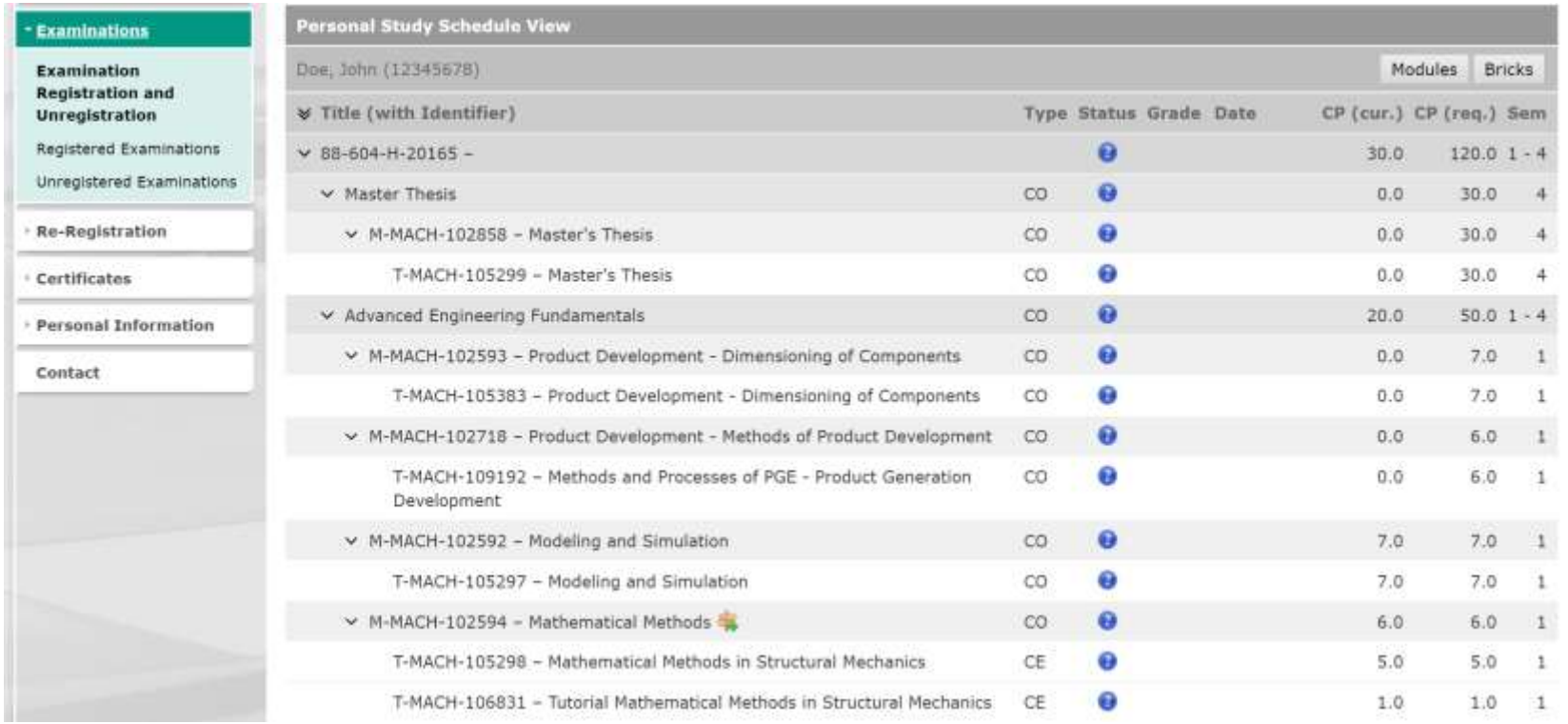
HoC House of Competence

ZAK



Processes

REGISTERING AND DEREGISTERING EXAMS



Title (with Identifier)	Type	Status	Grade	Date	CP (cur.)	CP (req.)	Sem
88-604-H-20165 –					30.0	120.0	1 - 4
Master Thesis	CO				0.0	30.0	4
M-MACH-102858 – Master's Thesis	CO				0.0	30.0	4
T-MACH-105299 – Master's Thesis	CO				0.0	30.0	4
Advanced Engineering Fundamentals	CO				20.0	50.0	1 - 4
M-MACH-102593 – Product Development - Dimensioning of Components	CO				0.0	7.0	1
T-MACH-105383 – Product Development - Dimensioning of Components	CO				0.0	7.0	1
M-MACH-102718 – Product Development - Methods of Product Development	CO				0.0	6.0	1
T-MACH-109192 – Methods and Processes of PGE - Product Generation Development	CO				0.0	6.0	1
M-MACH-102592 – Modeling and Simulation	CO				7.0	7.0	1
T-MACH-105297 – Modeling and Simulation	CO				7.0	7.0	1
M-MACH-102594 – Mathematical Methods	CO				6.0	6.0	1
T-MACH-105298 – Mathematical Methods in Structural Mechanics	CE				5.0	5.0	1
T-MACH-106831 – Tutorial Mathematical Methods in Structural Mechanics	CE				1.0	1.0	1

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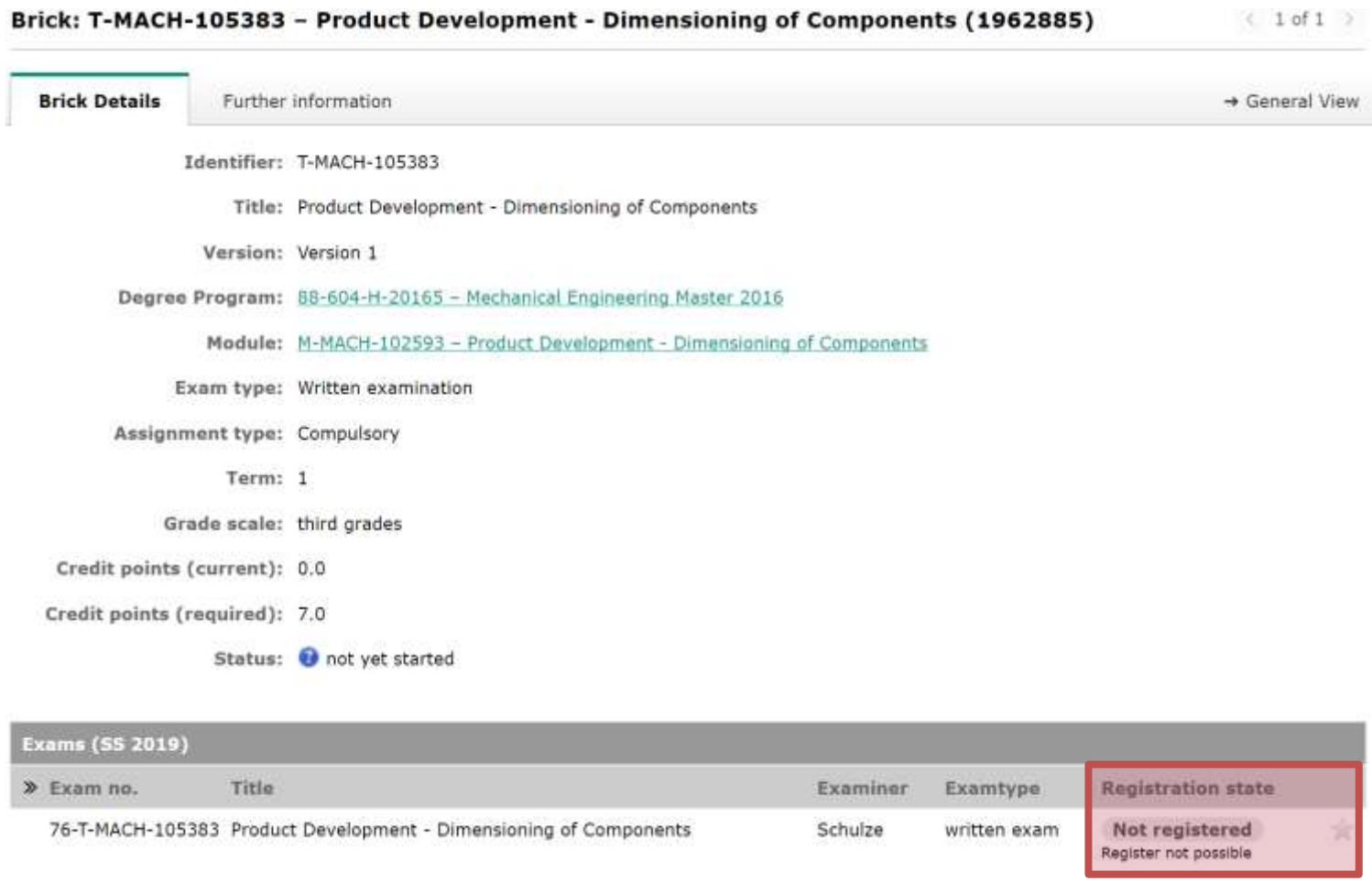
Video-Tutorials: https://www.sle.kit.edu/imstudium/videotutorials-campus.php

REGISTERING AND DEREGISTERING EXAMS



Brick: T-MACH-105383 – Product Development - Dimensioning of Components (1962885) 1 of 1

Brick Details | Further information | → General View

Identifier:	T-MACH-105383
Title:	Product Development - Dimensioning of Components
Version:	Version 1
Degree Program:	88-604-H-20165 – Mechanical Engineering Master 2016
Module:	M-MACH-102593 – Product Development - Dimensioning of Components
Exam type:	Written examination
Assignment type:	Compulsory
Term:	1
Grade scale:	third grades
Credit points (current):	0.0
Credit points (required):	7.0
Status:	not yet started

Exams (SS 2019)

» Exam no.	Title	Examiner	Examtype	Registration state
76-T-MACH-105383	Product Development - Dimensioning of Components	Schulze	written exam	**Not registered** Register not possible

Video-Tutorials: https://www.sle.kit.edu/imstudium/videotutorials-campus.php

VOLUNTARY / UNSCHEDULED EXAM

Prüfungssekretariat der
Studiengänge MACH / MEI
KIT-Fakultät für Maschinenbau
Geb. 10.91, Raum 126
pa@mach.kit.edu

Karlsruher Institut für Technologie

Zulassung zu einer außerplanmäßigen Prüfungsleistung am KIT im „Wahlpflichtmodul Maschinenbau“

Familienname: ..... Vorname: .....

Matrikelnummer: ..... Vertiefung: Bitte auswählen!

KIT-E-Mail-Adresse: @student.kit.edu Studiengang verwaltet in ☒ CAS ☐ HIS-POS

Hiermit beantrage ich die nachfolgend genannte Erfolgskontrolle im „Wahlpflichtmodul Maschinenbau“ des Masterstudiengangs Maschinenbau zu genehmigen, da diese im aktuellen Modulhandbuch nicht für das Modul vorgesehen ist. **Die Modulbeschreibung lege ich der/dem Modulverantwortlichen zur Prüfung vor.**

Unterschrift ..... **Datum** .....

Titel der Erfolgskontrolle (Deutsch und Engl.)	LP	Prüfer/in	Institut	Fakultät
T-MACH-				

Die Prüfungsleistung wird im „Wahlpflichtmodul Maschinenbau“ mit 4 LP und Note verbucht. Prüfungsleistungen sind schriftliche, mündliche oder praktische Leistungen. Die fachliche Entscheidung, ob die Lehrveranstaltung den Qualifikationszielen des Moduls entspricht, trifft der Prüfungsausschuss in Vertretung der Modulverantwortlichen.

1. **Prüfer/in genehmigt de Teilnahme an der Erfolgskontrolle**

   Datum:

   Unterschrift & Stempel:

2. **Der Prüfungsausschuss genehmigt die Teilnahme an der Erfolgskontrolle**

https://www.mach.kit.edu/download/MACH/Formular_WPM_MACH_(SPO2015).pdf

Google: kit mach pa formulare

UNSCHEDULED MAJOR

Prüfungssekretariat der
Studiengänge MACH / MEI
KIT-Fakultät für Maschinenbau
Geb. 10.91, Raum 126
campus@mach.kit.edu

Karlsruher Institut für Technologie

Außerplanmäßiger Schwerpunktplan im Masterstudiengang Maschinenbau

Familienname: ..... Vorname: .....

Matrikelnummer: ..... Vertiefung: Bitte auswählen!

KIT-E-Mail-Adresse: ..... @student.kit.edu Studiengang verwaltet in ☒ CAS ☐ HIS-POS

Hiermit beantrage ich die unten aufgeführte Fächerkombination zu genehmigen.

☐ Ich erkläre, dass ich innerhalb eines Bachelor- oder Masterstudiengangs am KIT **keine** Prüfungsleistung in einem der aufgeführten Fächer erbracht habe

ODER

☐ Ich erkläre, dass ich in den unten aufgeführten Fächern wo angegeben bereits eine Prüfungsleistung erbracht habe.
Zur Dokumentation lege ich einen aktuellen Notenauszug bei

*Schwerpunkt wählen oder eingeben

Teilleistungs-Nr.	Titel	Kat	LP	bereits geprüft?
T-MACH-		P		nein
T-MACH-		K		nein
T-MACH-		E		nein
T-MACH-		apl.		nein
T-MACH-		Prakt		nein
T-MACH-				nein
	Summe der Leistungspunkte im Schwerpunkt (min.16, max.19):			

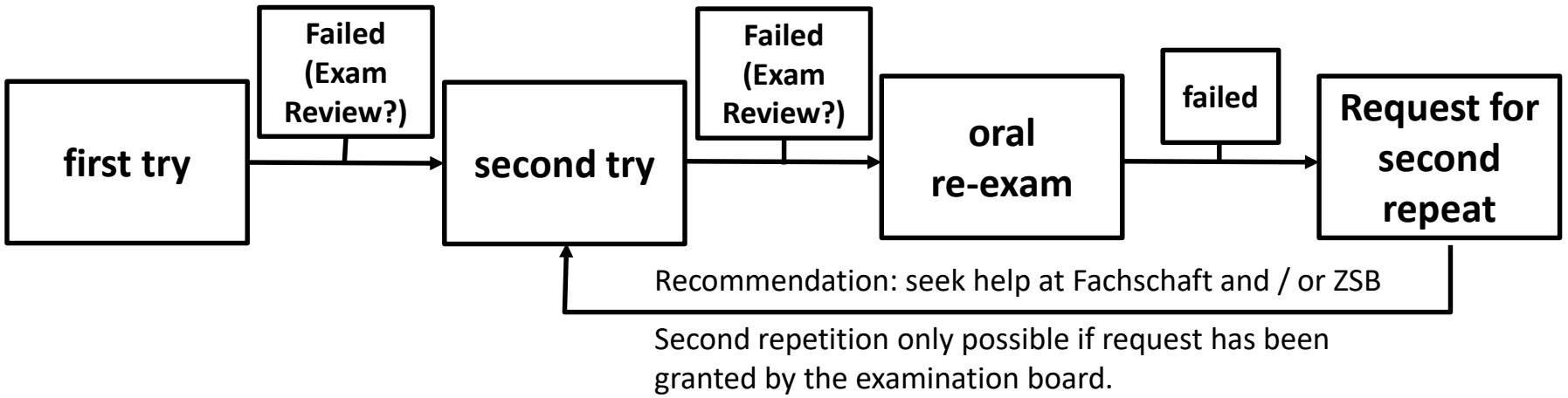
Unterschrift Studierende/r ..... **Datum** .....

Genehmigung Schwerpunktverantwortliche/r

https://www.mach.kit.edu/download/MACH/APL-Schwerpunktplan.pdf

Google: kit mach pa formulare

REPETITION OF WRITTEN EXAMS



Special cases:

- Ungraded modules
- Oral examination

INTERNSHIP

- 18 weeks of internship as engineer mandatory
- Either before the beginning of the Master‘s program (submitted with application)
- Or within the first three semesters
- Internship documents have to be submitted to InSL

REGISTERING YOUR INTERNSHIP

Internship certificate (original)

Until 3rd semester

InSL

https://www.mach.kit.edu/insl.php
Google: kit mach insl

WHERE TO FIND AN INTERNSHIP

- Institutes often have industry partners
- Internship offers are published on the websites of Fachschaft and KIT Career Service
- Ask your fellow students

REGISTRATION OF MASTER THESIS

- 74 credits required
- Internship needs to be recognized
- Advisor registers thesis in CAS

- „external“ Master theses
  - Professor of faculty ME needs to be corrector
  - Other people can be advisors/second corrector

SEMESTER OF LEAVE

- You can apply for up to two semesters of leave for important reasons, i.e.
  - Parental leave
  - Medical leave
  - Caring for a relative
  - Founding a startup
  - Exchange semester
- All deadlines are moved by one semester
- You can take exams in a semester of leave
- Semester of leave is granted by the Study Office

WHERE TO FIND HELP?

Student advisory services (ZSB)

Information about changing degrees etc.

Website:
https://www.sle.kit.edu/vorstudium/zib.php

Psychological Help (PBS)

Appointments via phone

Tel.: 0721 9334060
pbs@sw-ka.de
Website:
https://www.sw-ka.de/en/beratung/psychologisch/psychotherapeutische_beratungsstelle_karlsruhe/

AStA

E.g.
consultation on social affairs ,
Legal advice

Website:
https://www.asta-kit.de/

EXAM PREPARATIONS

- Old exams
  - Available from mid December on
- Exam protocols
  - Written by students
  - Overview of available exams on our homepage
- where?
  - Fachschaft
- Remarks: almost all old exams are in German only

FURTHER QUESTIONS?

Search your question on the internet!

Check the module handbook 

FAQ on the Fachschaft homepage:
https://fs-fmc.kit.edu/faq/mach
(Google Translate)

Visit the Fachschaft or contact us via email: fachschaft@fs-fmc.kit.edu 

Ask ISIM

Ask the Examination Board or InSL