

MASTER O-PHASE

Student council MACH/CIW



WELCOME TO KIT

Student council MACH/CIW



EVENTS



- Thursday 6:00pm Information Event
- Thursday 8:00pm Pubtour
 - We meet in front of building 10.91
- Saturday 4:00pm Campustour
 - We meet in front of building 10.23
- So 8:00 Hiking tour
 - We meet in front of Karlsruhe main station
 - Please notify time change from Saturday to Sunday ^{PS1}



IMPORTANT INFORMATION



- All important Information to the events (also in case of changes) will be presented on our Website within the „Master O-Phase“-section
- For the Campustour and the Hiking tour there is no registration necessary. You can just show up and participate
- If you have questions or problems you are invited to write an email to: master.oorga@fs-fmc.kit.edu



STUDENT COUNCIL



- We meet every Wednesday at 7:00pm
- Next week there is a dedicated introductory meeting
- You can participate as intensely as you wish

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

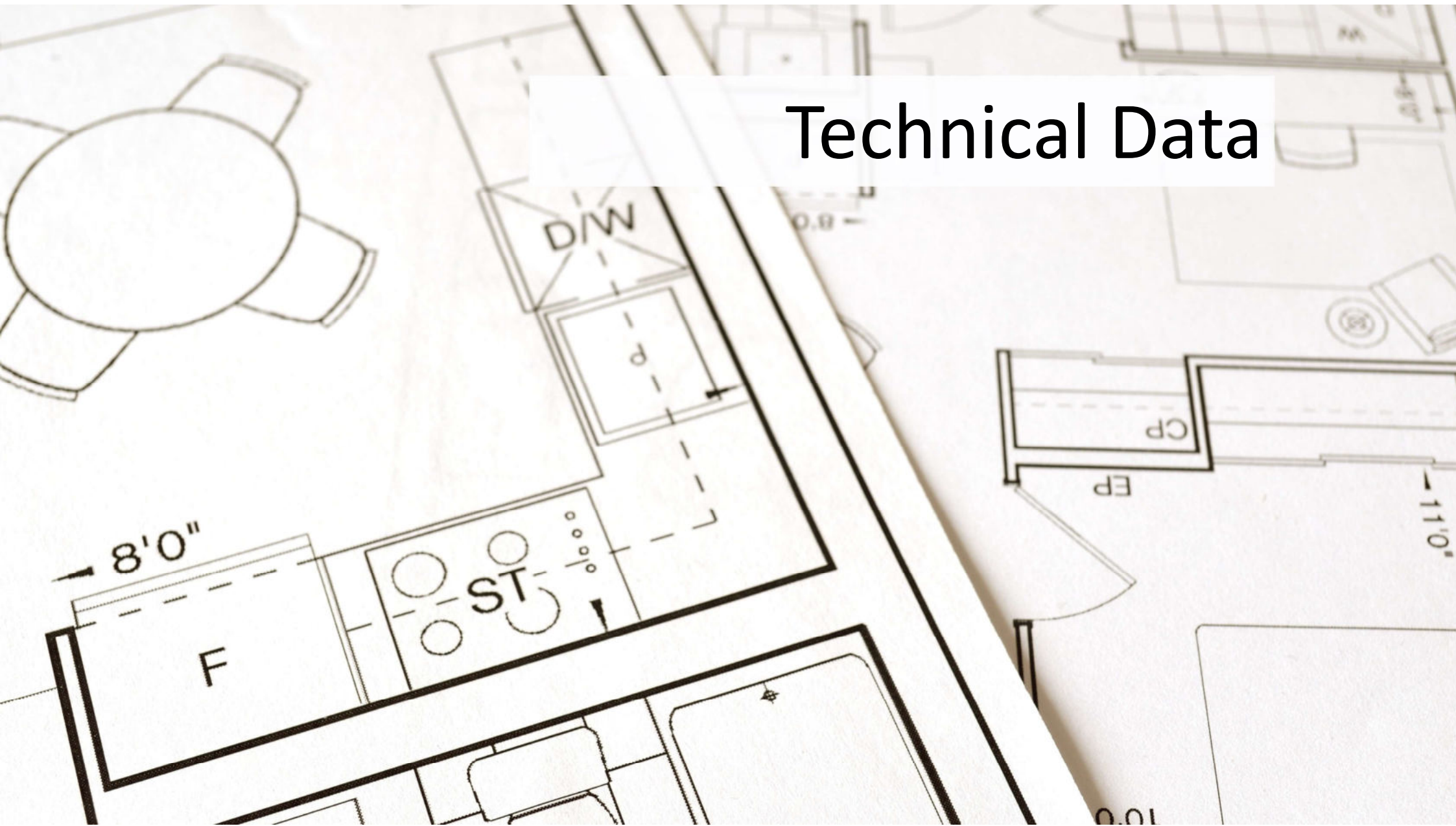


A detailed engineering drawing table with various tools including a blue pen, a black pen, a protractor, a ruler, and a digital display. The drawing shows technical sketches of mechanical parts with labels like 'A1', 'R1', 'R2', and 'R3'.

Master's program Mechanical Engineering (KIT)

Winter Term 2022/2023

Technical Data



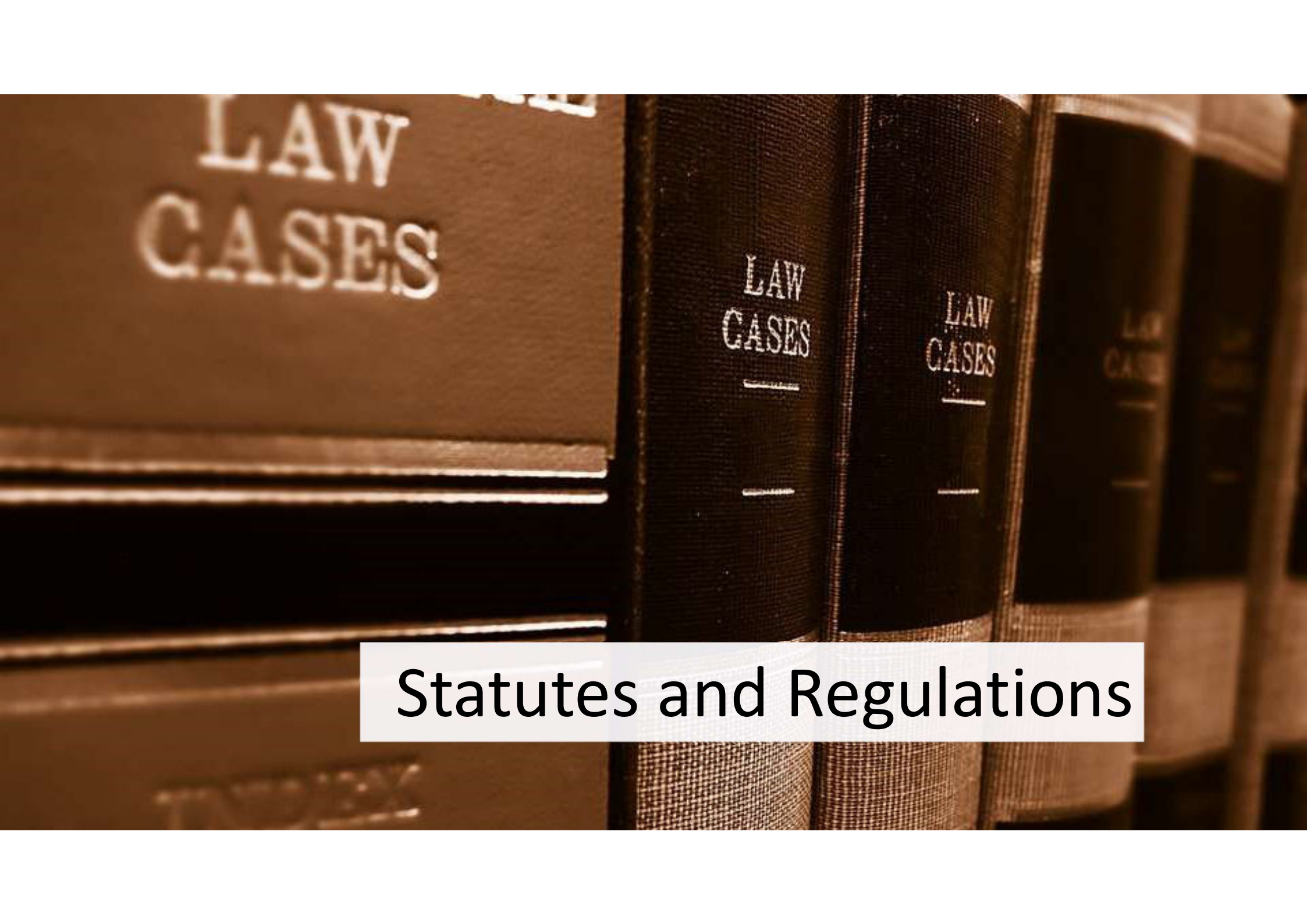
TECHNICAL DATA



- 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)

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





LAW
CASES

LAW
CASES

LAW
CASES

Statutes and Regulations

Studien- und Prüfungsordnung (SPO)



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

Amtliche Bekanntmachung

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

Inhalt

Seite

Studien- und Prüfungsordnung des Karlsruher Instituts für Technologie (KIT) für den Masterstudiengang Maschinenbau 366

Module Handbook



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



Studienbüro
(Student office)

- matriculation
- deregistration





Module Overview



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



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

New catalog will be made public in the next term and is available at the Fachschaft on request

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



SOME REMARKS (II)



CEM Mechanical Engineering:

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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



SOME REMARKS (III)



Key competences

Every course from ZAK (Cultural Studies), HOC (Soft skills) and SpZ (Languages)

Also German course at Studienkolleg -> registration period expired, write an email to kсенija.fazlic-walter@kit.edu



Specialization


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
- [List](#) on the ISIM Website
- Ask the professors
- Ask the Fachschaft

ISIM List ->



Extended search for events

🔍 Search

With the extended search for events you can search more precisely for events in the currently selected Winter Semester 2019/2020. Please specify the desired search parameters in the following fields and click on "Search". Please note that no more than 200 events could be shown as the result of the search.

Course number:

Title:

Event type:

Language:

Contact hours:

Appointment:

Date: 📅

Time: -

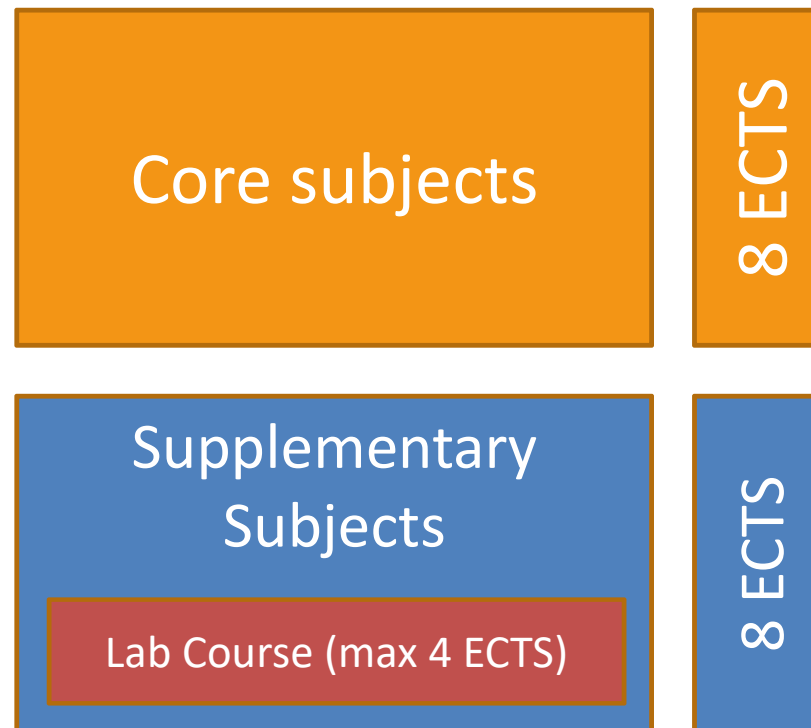
Room:

Lecturer:

Degree Program:
88-604-H-20165 - Mechanical Engineering Master 2016 ✕



CHOOSING A MAJOR



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



KIT
Karlsruhe Institute of Technology

Campus Management for Students

SEARCH: Modelling | SEMESTER: WS 19/20 | DEGREE PROGRAM: 88-604-H-2016

Event: 2185227 **Modelling and Simulation (WS 19/20)**

1 Add to favorites | iCal export | Print

Event details | Further information

Course number: 2185227
Title: Modelling and Simulation
Event type: Lecture (V)
Term: Winter Semester 2019/2020
Language: German
Contact hours: 2
Workspace: No workspace available
Link to this page: <https://campus.studium.kit.edu/ev/LewBIZ7qQuiGjFUHIKmNYg/i>

E-Mail | WhatsApp | Facebook | Twitter

2 Timetable and Calendar

Appointments

Appointment	Room	Start
> Thu 8:00 AM - 9:30 AM, weekly*	30.95 Forum Hörsaal (Audimax)	10/17/2019

* Appointments have been removed from this series.



PERSONAL CALENDAR



app10 (175ms)

Timetable and Calendar overview

[Remove from timetable](#) [Kalenderhöhe](#) [Print](#)

Timetable View | [Month view](#) | [Week view](#) | [Day view](#)

Stundenplan (1962885)

Winter Semester 2019/2020

[Weekly appointment](#) | [Fortnightly appointment](#) | [One-time appointment](#)

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 AM				Proppe et al.: 2185227 – Modelling and Simulation (V) 30.95 Forum Hörsaal (Audimax) 8:00 AM - 9:30 AM	
9:45 AM					
11:30 AM					





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



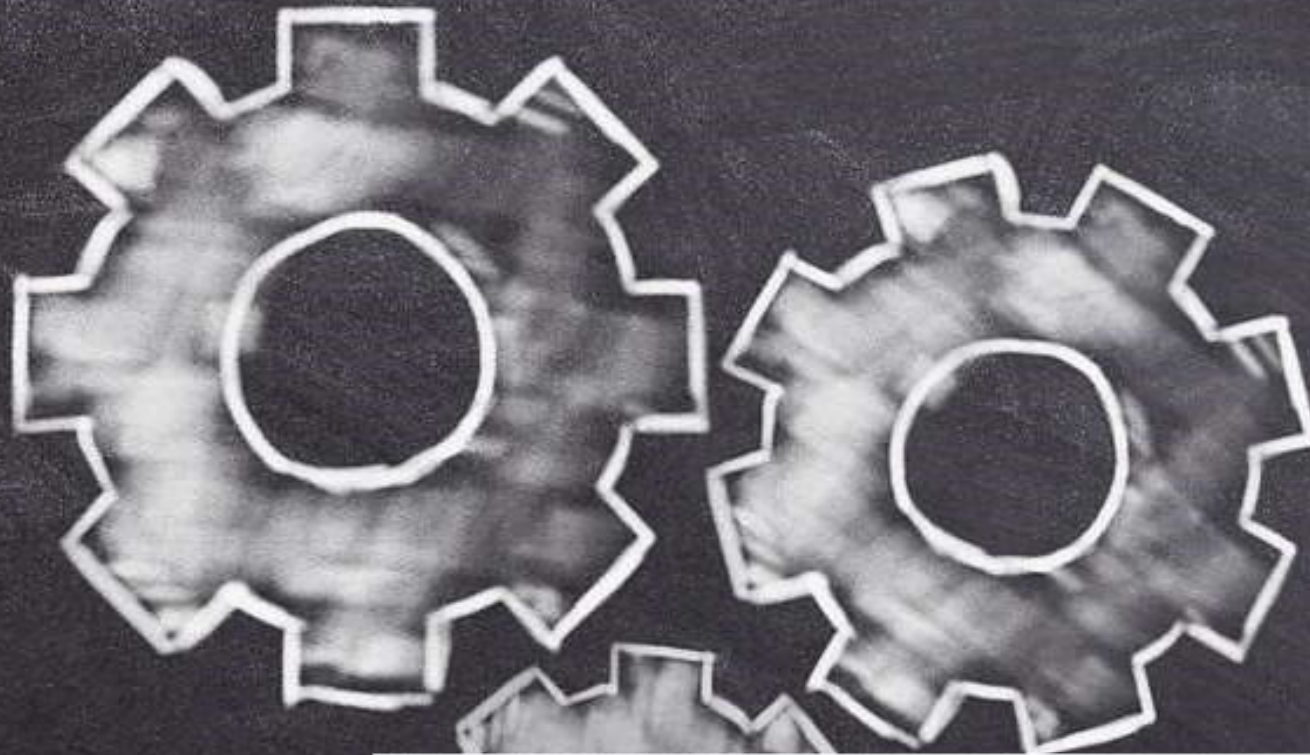
SpZ

(and Studienkolleg)

KEY COMPETENCES

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





Processes

REGISTERING AND DEREGISTERING EXAMS



Examinations		Personal Study Schedule View							
Examination Registration and Unregistration Registered Examinations Unregistered Examinations		Doe, John (12345678) Modules Bricks							
		Title (with Identifier)	Type	Status	Grade	Date	CP (cur.)	CP (req.)	Sem
Re-Registration		88-604-H-20165 -		?			30.0	120.0	1 - 4
Certificates		Master Thesis	CO	?			0.0	30.0	4
Personal Information		M-MACH-102858 - Master's Thesis	CO	?			0.0	30.0	4
Contact		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

campus.studium.kit.edu

Video-Tutorials: <https://www.sle.kit.edu/imstudium/videtutorials-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



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 die Teilnahme an der Erfolgskontrolle

Datum:
Unterschrift & Stempel:

2. Der Prüfungsausschuss genehmigt die Teilnahme an der Erfolgskontrolle

[https://www.mach.kit.edu/download/Formular_WPM_MACH_\(SPO2015\).pdf](https://www.mach.kit.edu/download/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



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

Teilleis- tungs-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.....

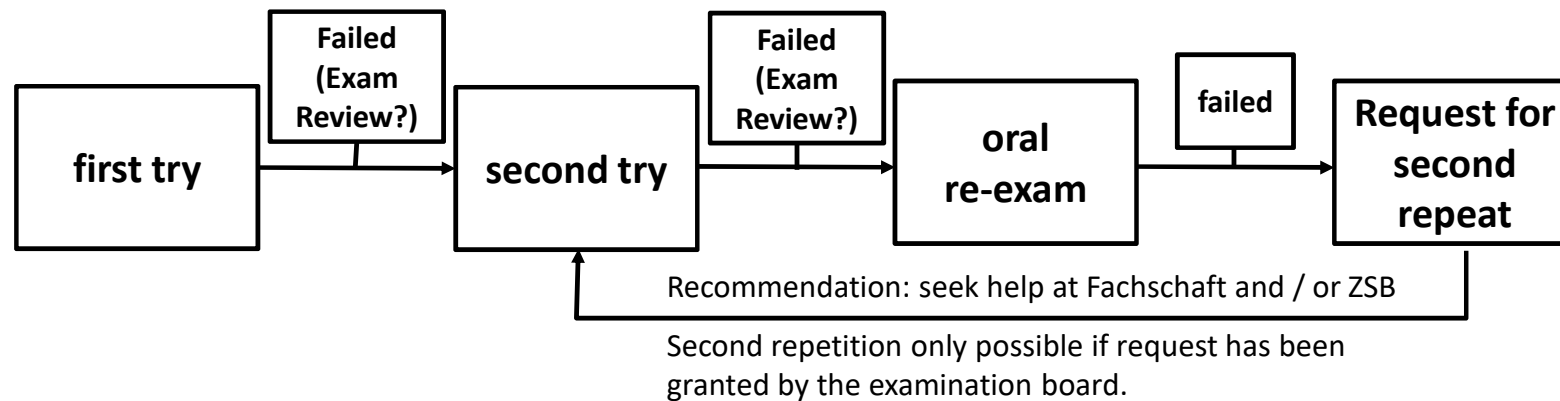
Genehmigung Schwerpunktverantwortliche/r

<https://www.mach.kit.edu/download/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



RECOGNITION OF EXAMS: „MASTERVORZUG“



KIT-Fakultät für Maschinenbau

Übertragung von Zusatzleistungen aus dem Bachelorstudien- gang in den Masterstudiengang Maschinenbau am KIT

ANTRAGSTELLER/IN:

Matr.-Nummer

Familienname:

Vorname:

E-Mail:

Ich beantrage, die im Bachelor-Studiengang am KIT erbrachte Zusatzleistung

Titel der Prüfungsleistung	SWS (V+Ü)	LP ECTS	Note

in den Master-Studiengang für die Vertiefungsrichtung: _____ zu übertragen als
(bitte ankreuzen)*:

- GuMdV = Grundlagen und Methoden der Vertiefungsrichtung
- WPM = Wahlpflichtmodul Maschinenbau
- WPM-Nat = Wahlpflichtmodul nat/in/leit
- WPM-WR = Wahlpflichtmodul Wirtschaft/Recht
- Lab = Laborpraktikum gem. Modulhandbuch
- M = Prüfung im Modul: _____
- MM = Mathematische Methoden
- E = Ergänzungsfach im Schwerpunkt _____
(bitte genehmigten Schwerpunktplan beifügen!)

(Ort) (Datum) (Unterschrift)

Bearbeitungsvermerk: (vom Studiendenservice auszufüllen)

Datum

Unterschrift

*Bereits geprüfte Module nach der alten SPO vom 09.09.2008 im Zusatzmodul des Bachelor Maschinenbaus (SPO 2008) können gemäß Umschreibungstabelle http://www-2.mach.kit.edu/mach/Down/2Spo_Merkblatt_Master.pdf ohne weitere Anerkennung des Prüfungsausschusses übertragen werden.

VERSION 1.0, Stand 11.11.2016

Submit form
via e-mail to
campus@mach.kit.edu

Attach Bachelor's
Transcript of Records

Google: übertrag mastervorzug kit



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_beratungstelle_karlsruhe/

AStA

E.g. consultation on social affairs ,
Legal advice

Website:

<https://www.astakit.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



SEMESTER MAILING LIST



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

