The background of the slide is a detailed engineering drawing, likely a technical sketch of a mechanical part. It features various geometric shapes, lines, and dimensions. A blue pen is visible on the left side, and a black pen is on the right. A small electronic device, possibly a calculator or a small screen, is also present. The drawing includes labels like 'R1', 'R2', 'R3', 'R4', 'R5', 'R6', 'R7', 'R8', 'R9', 'R10', 'R11', 'R12', 'R13', 'R14', 'R15', 'R16', 'R17', 'R18', 'R19', 'R20', 'R21', 'R22', 'R23', 'R24', 'R25', 'R26', 'R27', 'R28', 'R29', 'R30', 'R31', 'R32', 'R33', 'R34', 'R35', 'R36', 'R37', 'R38', 'R39', 'R40', 'R41', 'R42', 'R43', 'R44', 'R45', 'R46', 'R47', 'R48', 'R49', 'R50', 'R51', 'R52', 'R53', 'R54', 'R55', 'R56', 'R57', 'R58', 'R59', 'R60', 'R61', 'R62', 'R63', 'R64', 'R65', 'R66', 'R67', 'R68', 'R69', 'R70', 'R71', 'R72', 'R73', 'R74', 'R75', 'R76', 'R77', 'R78', 'R79', 'R80', 'R81', 'R82', 'R83', 'R84', 'R85', 'R86', 'R87', 'R88', 'R89', 'R90', 'R91', 'R92', 'R93', 'R94', 'R95', 'R96', 'R97', 'R98', 'R99', 'R100'.

Master's programme Mechanical Engineering (KIT)

Summer Term 2020

Fachschaft MACH/CIW

Consultation hours: Mon-Fri 12:30 – 14:30

Phone: +49 721 608-4 3782

Mail: fachschaft@fs-fmc.kit.edu

Address: Kaiserstraße 10

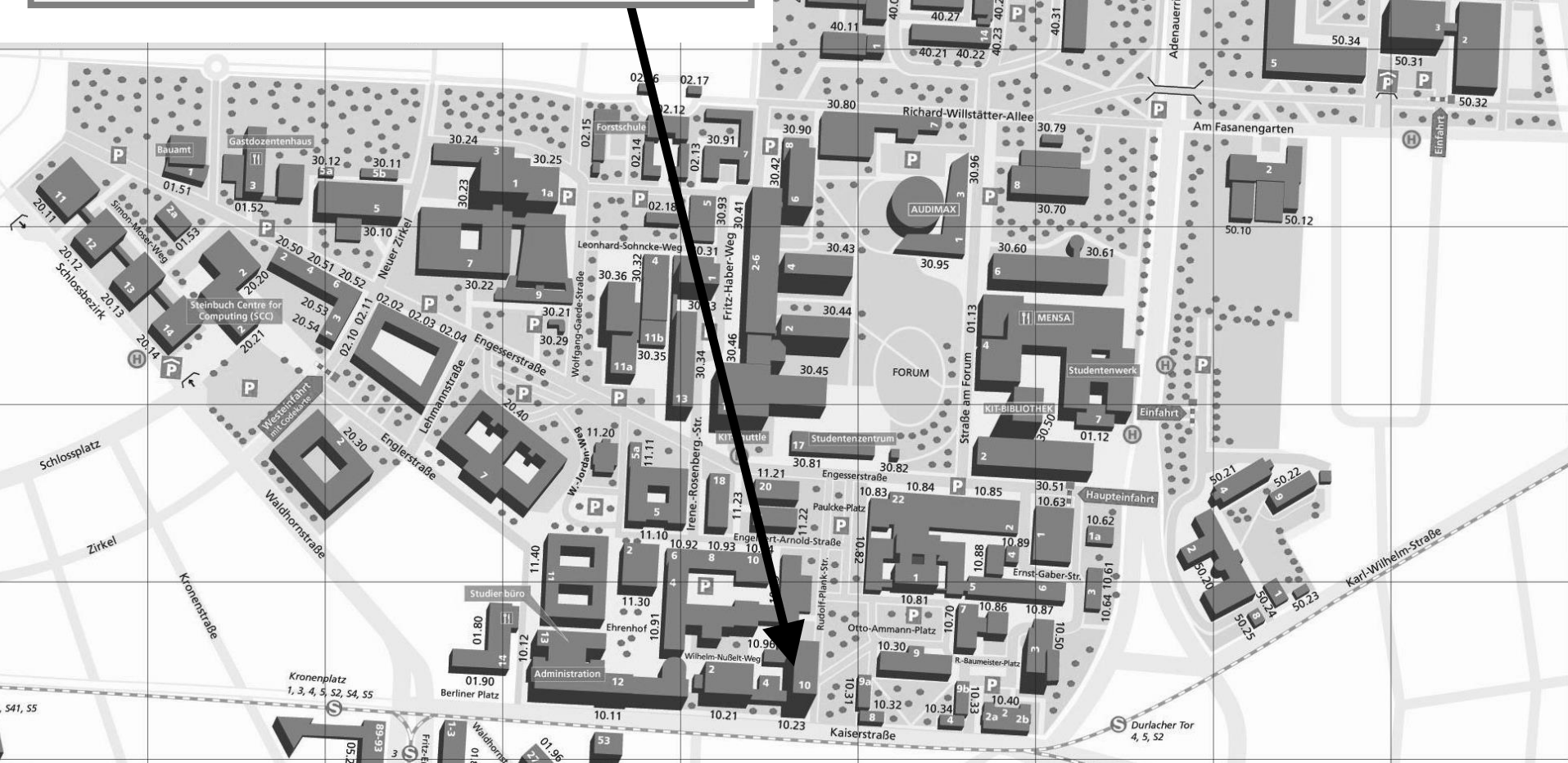
Building: 10.23 Room 106 & 107

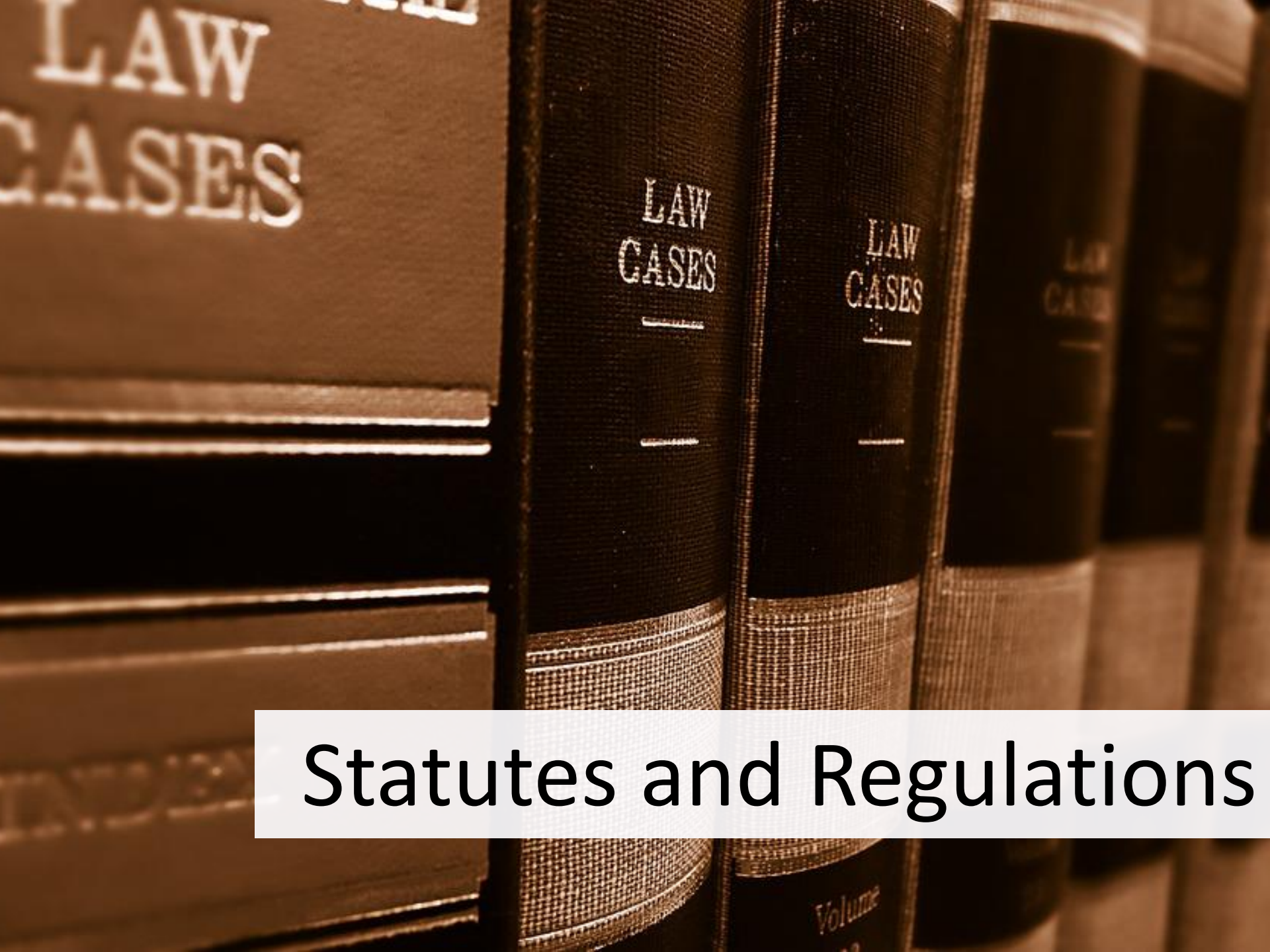
76131 Karlsruhe

Web: fs-fmc.kit.edu

Facebook: facebook.com/fmc-kit

Instagram: instagram.com/fmc.kit





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



Module Overview

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

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

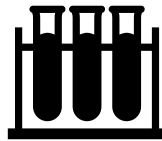
T-MACH-110376	Tutorial Mathematical Methods in Continuum Mechanics	1	1	1.0	0
T-MACH-110379	Tutorial Mathematical Methods in Micromechanics	1	1	1.0	0

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

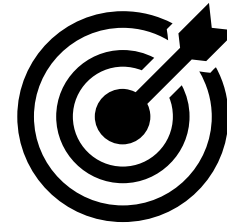
Some remarks (III)



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 ksenija.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



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

Homepage

FAQ

▼ Events

University Calendar

Audience Circles

Extended Search for Events

Booking of Events

Favorites and Appointment List

Timetable and Calendar

Internet Calendar (WebCal)

▸ Examinations

▸ Re-Registration

▸ Certificates

▸ Personal Information

Contact

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 ✕

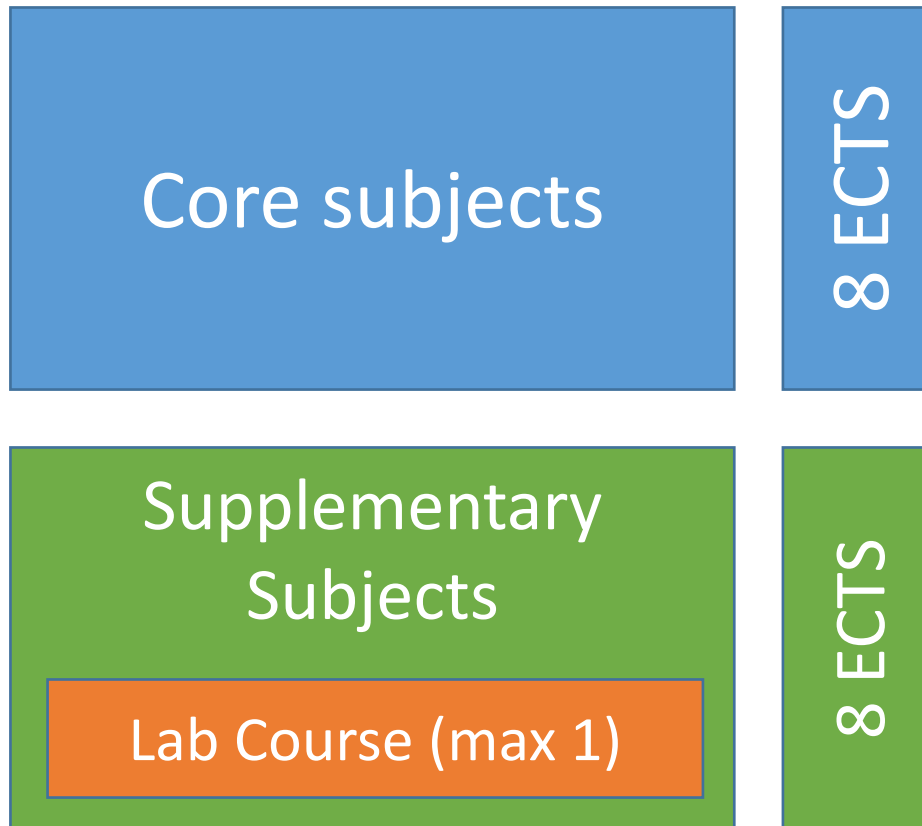
How to find lectures in English

- Filtering the University Calendar by language
- [List](#) on the ISIM Website
- Ask the professors
- Ask the Fachschaft

ISIM List ->



Choosing a major



Major fields

Bricks						
Identifier	Title	Ver	Wgt	CP	Sem	
Microactuators and Microsensors (K) CP i 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 i 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)
 - SP56 (Advanced Materials Modeling)
 - SP59 (Entrepreneurship)
- With some small changes (custom Major Field):
 - SP21 (Nuclear Energy)
 - SP26 (Material Science and Engineering)
 - SP24 (Energy Converting Engines)
 - SP60 (Vibration Theory)

How to choose elective subjects?

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

Personal Calendar

The screenshot displays the KIT Campus Management for Students interface. The top navigation bar includes the KIT logo, the title 'Campus Management for Students', a search bar with 'Modelling' entered, and dropdown menus for 'SEMESTER' (WS 19/20) and 'DEGREE PROGRAM' (88-604-H-2016!). The left sidebar contains a menu with 'Homepage', 'FAQ', 'Events', 'University Calendar', 'Audience Circles', 'Extended Search for Events', 'Booking of Events', 'Favorites and Appointment List', 'Timetable and Calendar' (circled in orange with a '2'), 'Internet Calendar (WebCal)', 'Examinations', 'Re-Registration', 'Certificates', 'Personal Information', and 'Contact'. The main content area shows the event 'Event: 2185227 Modelling and Simulation (WS 19/20)' with a circled '1' over the 'Add to favorites' button. Below the event title are buttons for 'Add to favorites', 'iCal export', and 'Print'. The event details section includes: 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, and a link to the event page. At the bottom, there is a table of appointments.

KIT
Karlsruhe Institute of Technology

Campus Management for Students

SEARCH
Modelling

SEMESTER
WS 19/20

DEGREE PROGRAM
88-604-H-2016!

Homepage

FAQ

Events

University Calendar

Audience Circles

Extended Search for Events

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Favorites and Appointment List

Timetable and Calendar

Internet Calendar (WebCal)

Examinations

Re-Registration

Certificates

Personal Information

Contact

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

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/€>

E-Mail WhatsApp Facebook Twitter

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.

15

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				<div>Proppe et al.: 2185227 – Modelling and Simulation (V) 30.95 Forum Hörsaal (Audimax) 8:00 AM - 9:30 AM</div>	
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
- You don't have to register for most courses, just for the exam

SpZ

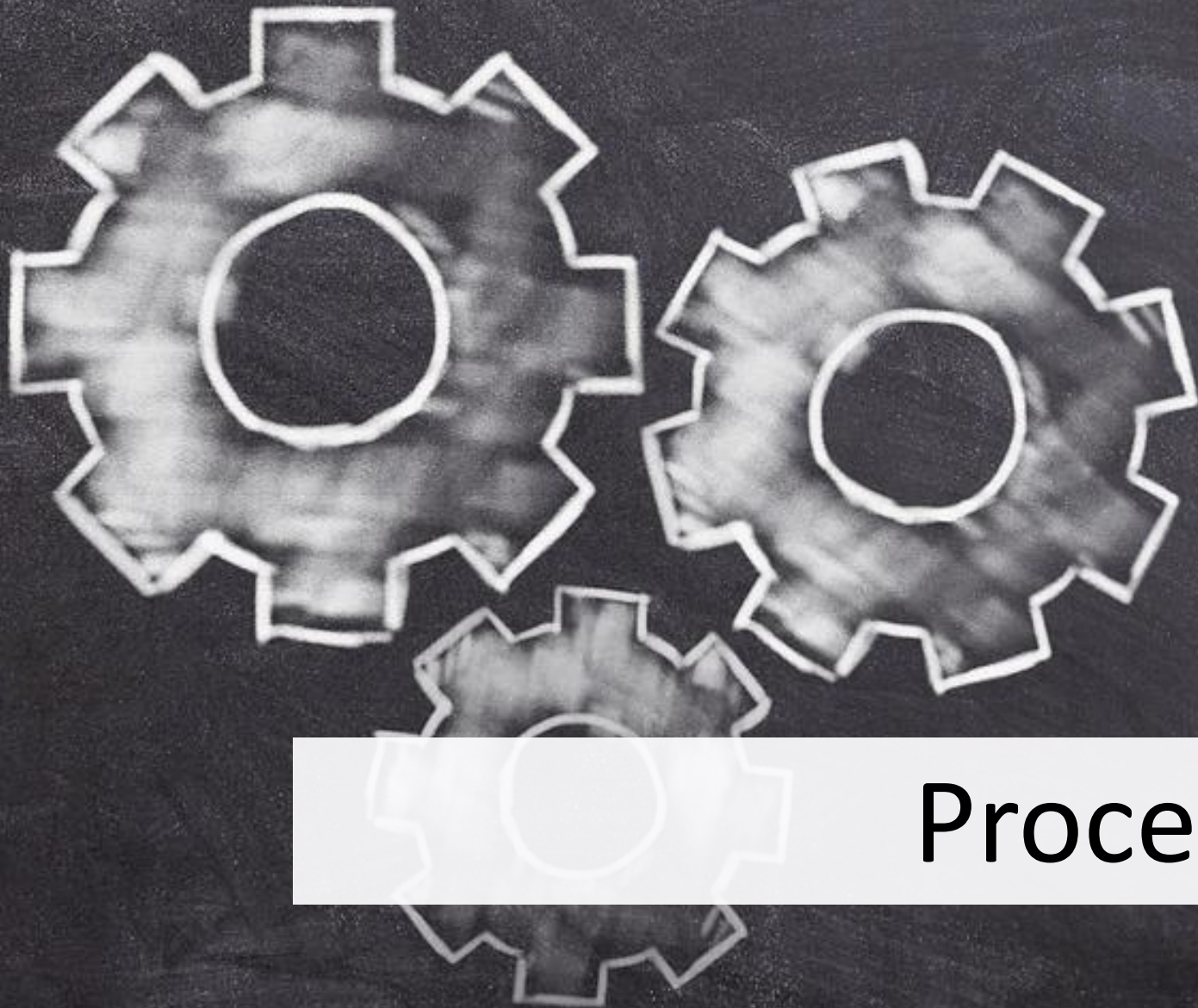
(and Studienkolleg)

Key Competences



Restrictions in Summer Term 2020

- Reduced amount of lectures
 - Online (MS Teams, Zoom, ILIAS)
 - Block seminars later in the semesters
 - Lab courses are cancelled
- Summary of available lectures:
https://www.fs-fmc.kit.edu/vorlesungen_2020
- Also check ILIAS for up-to-date information
- Official KIT FAQ: <https://www.kit.edu/kit/25911.php>



Processes

Registering and unregistering exams

Examinations	
Examination Registration and Unregistration	
Registered Examinations	
Unregistered Examinations	
Re-Registration	
Certificates	
Personal Information	
Contact	

Personal Study Schedule View							
Doe, John (12345678)						Modules	Bricks
✕ 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

campus.studium.kit.edu

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

Registering and unregistering 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



KIT-Fakultät für Maschinenbau

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

Familienname: Vorname:
Matrikelnummer: Vertiefung: Bitte auswählen!
KIT-E-Mail-Adresse: 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 entsprechende Modulbeschreibung lege ich der/dem Modulverantwortlichen zur Prüfung vor.

Unterschrift Datum

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

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 des/der Modulverantwortliche/n.

1. Genehmigung durch Prüfungsausschuss in Vertretung des/der Modulverantwortliche/n

Datum:

Unterschrift & Stempel:

2. Genehmigung durch Prüfer/in

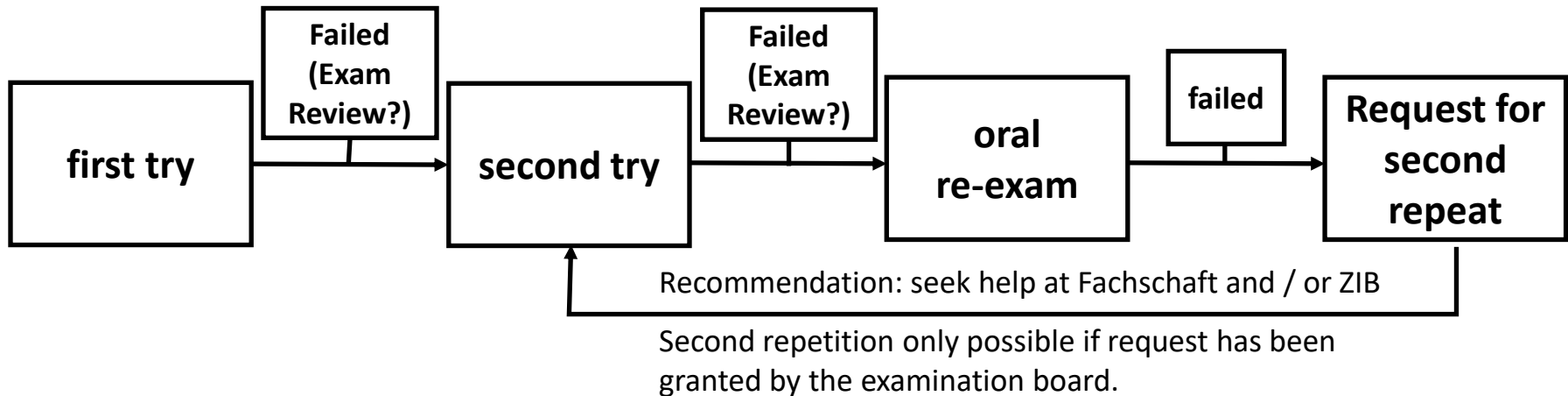
Erfolgskontrolle ☐ mündlich ☐ schriftlich ☐ praktisch

Unterschrift & Stempel:

3. Anmeldung der Erfolgskontrolle beim Studierendenservice

<https://www.mach.kit.edu/1597.php>

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 programme (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

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:

[illegible]

Familienname:

[illegible]

Vorname:

[illegible]

E-Mail:

[illegible]

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)*:

- | | | |
|--------------------------|---------|--|
| <input type="checkbox"/> | GuMdV | = Grundlagen und Methoden der Vertiefungsrichtung |
| <input type="checkbox"/> | WPM | = Wahlpflichtmodul Maschinenbau |
| <input type="checkbox"/> | WPM-Nat | = Wahlpflichtmodul nat/informat |
| <input type="checkbox"/> | WPM-WR | = Wahlpflichtmodul Wirtschaft/Recht |
| <input type="checkbox"/> | Lab | = Laborpraktikum gem. Modulhandbuch |
| <input type="checkbox"/> | M | = Prüfung im Modul: _____ |
| <input type="checkbox"/> | MM | = Mathematische Methoden |
| <input type="checkbox"/> | E | = Ergänzungsfach im Schwerpunkt _____
(bitte genehmigten Schwerpunktfach beifügen!) |

(Ort)

(Datum)

(Unterschrift)

Bearbeitungsvermerk: (vom Studierendenservice 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/srmach/Down/XSpo_Merkblatt_Master.pdf ohne weitere Anerkennung des Prüfungsausschusses übertragen werden.

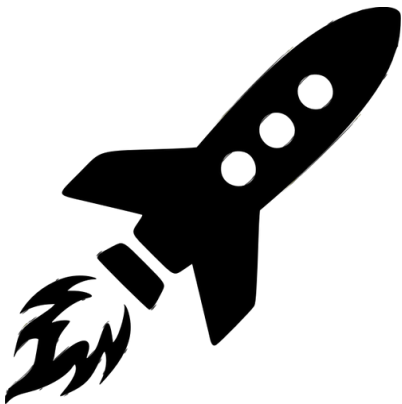
VERSION 1.0, Revised 12.12.2019

**Submit form to
Examination Board
Attach Bachelor's
Transcript of Records**



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



Deadlines

7 Semesters – Maximum study duration

3 Semesters – Proof of Internship



Prüfungsausschuss (examination board)

- Examination concerns
- 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

More 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

