

Masterstudiengang
Ingenieurwissenschaften (Master course
Engineering Sciences)

Prof. Dr. Norbert Seliger

April 16, 2020

- ▶ Beauftragter der Prüfungskommission/Commissioner of examination board: Prof. Dr. Holger Stahl (holger.stahl@th-rosenheim.de)
- ▶ Program Coordinator: Ms. Maria Heinrich (maria.heinrich@th-rosenheim.de)
- ▶ Tutors
- ▶ Sekretariat/Secretary: Ms. Gabriele Strasser

Structure of the course

- ▶ Vollzeit/Full time 3 semester
- ▶ Teilzeit/Part time 6 semester
- ▶ Studienschwerpunkte/Specialization in
 - ▶ Elektro- und Informationstechnik/Electrical Engineering and Information Technology
 - ▶ Mechatronik/Mechatronics
 - ▶ Maschinenbau/Mechanical Engineering-Kunststofftechnik/Plastics Engineering
- ▶ Commitment to specialization one week after enrollment (fill out corresponding form at examination office)

Master degree



Master of Engineering (M.Eng.)

Die Fakultät
Ingenieurwissenschaften
der Hochschule für
angewandte
Wissenschaften
Fachhochschule
Rosenheim
gratuliert Herrn

Max Mustermann

zum erfolgreichen
Abschluss des
Studiengangs

**Ingenieurwissensch
aften
(Engineering
Sciences)**

und dem damit
verliehenen
akademischen Grad

**Master of
Engineering
(M.Eng.)**

Rosenheim, den 15. Juni 2018

Prof. Dr. Markus Stichler
Dekan der Fakultät
Ingenieurwissenschaften

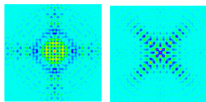


Study plan, Commitment



Study Plan
Master's (M.Eng.) Program
Engineering Sciences

Studienplan incl. Modulhandbuch
Masterstudiengang
Ingenieurwissenschaften
SPO 20191



Heatmap generated using the Simulink Model Compiler. For more information on the usage of the Model Compiler, please refer to the Model Compiler User Guide.

Prof. Dr. Norbert Seliger
Maria Heimrich
Hochschule Rosenheim

January 31, 2020

Masterstudiengang Ingenieurwissenschaften
Master Course Engineering Sciences

Festlegung der Spezialisierung
Commitment to Specialization

First Name:	
Last Name:	
e-Mail:	
Registration Number: (Application Number)	
Specialization:	Electrical Engineering and Information Technology (EIT) <input type="checkbox"/> Mechatronics (MEC) <input type="checkbox"/> Mechanical Engineering/Plastics Engineering (MEN/PEN) <input type="checkbox"/>
Signature:
Date:	Rosenheim,

Erstellt: 10.05.2019, letzte Änderung: 20.06.2019, Prof. Dr. Norbert Seliger

- Commitment to specialization: during application process or one week after enrollment (fill out corresponding form at examination office)

Modules, Lectures, Lab courses

- ▶ Free choice of modules (see study regulations)
- ▶ Attending lectures highly recommended
- ▶ Lab courses require specific registrations
- ▶ Information on module specific regulations/prerequisites during first lecture
- ▶ Lab courses: **regular personal participation mandatory**

Study and examination regulations (SPO 2019)

- ▶ Module pools: MG, MA, **MV (specialization specific)**, MF, MP
- ▶ **Note a minimum number of CP/pool**
- ▶ 'Standard' student gains 30CP per semester
- ▶ Master's project in second semester 12CP (!)
- ▶ Master's thesis in third semester 25CP (!), usually in industry

- ▶ Exam registration during registration period online (OSC)
- ▶ During the exam registration period, all MG/MA/MV modules can alternatively be registered for the MF pool

SPO 2019-MG

1. Vertiefung mathematisch naturwissenschaftlicher Grundlagenmodule

Lfd. Nr.	Module	SWS	Art der Lehrveranstaltung	Prüfungen Art u. Dauer 1) 2)	Ergänzende Regelungen	Leistungspunkte
MG01	Advanced Engineering Mathematics Angewandte Mathematik	4	SU, Ü	SchrP 90-120 Min		5
MG02	Electrodynamics Elektrodynamik	4	SU, Pr	SchrP 90-120 Min		5
MG03	Solid State Electronics Festkörperelektronik	4	SU, Pr	MdIP 30 Min		5
MG04	Statistics Statistik	4	SU, Ü	SchrP 90-120 Min		5
MG05	Fluid Mechanics Strömungsmechanik	4	SU, Ü	SchrP 90-120 Min PStA 2-12 Wo	SchrP 75 % PStA 25 %	5
Gesamt						10³⁾

- ▶ MG minimum of 10CP (choice **independent** of specialization)
- ▶ Spare CP transferable to MF or MA pool

SPO 2019-MV

2 Vertiefungsmodulare aus den Bereichen Elektro- und Informationstechnik (EIT), Mechatronik (MEC), Maschinenbau/
Kunststofftechnologie (MEN/PEN)

Lfd. Nr.	Module	SWS	Art der Lehrveranstaltung	Prüfungen Art u. Dauer (1/2)	Ergebnisregelungen	Leistungspunkte	EIT	MEC	MEN/PEN
MV01	Advanced Control Systems Regelungstechnik	4	SU, Pr	SchrP 90-120 Min		5	x	x	
MV02	Industrial Process Control Industrielle Steuerungstechnik	4	SU, Pr	SchrP 90-120 Min		5	x	x	
MV03	Servo Drive Systems Servoantriebsysteme	4	SU, Pr	SchrP 90-120 Min		5	x	x	
MV04	Automation Systems Automatisierungssysteme	4	SU, Pr	SchrP 90-120 Min	GU	5	x	x	
MV05	Reliability of Mechatronic Systems Zuverlässigkeit Mechatronischer Systeme	4	SU, Pr	SchrP 90-120 Min		5		x	x
MV06	Wireless Communication Systems Drahtlose Kommunikationssysteme	4	SU, Pr	PSIA 2-12 Wo		5	x		
MV07	Advanced Digital Communication Nachrichtübertragung	4	SU, Pr	PSIA 2-12 Wo		5	x		
MV08	Digital Signal Processing and Machine Learning Digitale Signalverarbeitung und maschinelles Lernen	4	SU, Pr	PSIA 2-12 Wo		5	x	x	
MV09	Advanced FEM FFM	4	SU, Pr	SchrP 90-120 Min		5		x	x
MV10	Electromagnetic Compatibility Elektromagnetische Verträglichkeit	4	SU, Pr	SchrP 90-120 Min		5	x	x	
MV11	Image Processing for Automated Production Bildverarbeitung in der Produktion	4	SU, Pr	SchrP 90-120 Min		5	x	x	
MV12	Mechanical Design Mechanische Konstruktion	4	SU, Pr	PSIA 2-12 Wo		5		x	x
MV13	Advanced Lightweight Construction Leichtbau <u>Vertiefung</u>	4	SU, Ü	SchrP 90-120 Min		5			x
MV14	Advanced injection molding Spritzgusstechnologie	4	SU, Ü	PSIA 2-12 Wo		5			x
MV15	Selected topics of Polymer Chemistry and Materials Science Ausgewählte Themen der Polymerchemie und Materialeigenschaften	4	SU, Pr	MdP 30 Min		5			x
MV16	Free Form Surfaces Freiformflächen	4	SU, Pr	PSIA 2-12 Wo		5			x
MV17	Mechanical Transmission Getriebe Technologie	4	SU, Pr	SchrP 90-120 Min		5			x
Gesamt						20 41	20	20	20

- ▶ Minimum of 20CP (choice **according** to specialization)
- ▶ Spare CP (choice **independent** of specialization)

SPO 2019-MA

3. Applikationsorientierte Vertiefung

Lfd. Nr.	Module	SWS	Art der Lehrveranstaltung	Prüfungen Art u. Dauer 1) 2)	Ergänzende Regelungen	Leistungspunkte
MA01	Real-Time Systems Realzeitsysteme	4	SU, Pr	SchrP 90-120 Min		5
MA02	Integrated Circuit System Design and Test IC-Systementwurf und -test	4	SU, Pr	SchrP 90-120 Min		5
MA03	Mixed Signal Systems Mixed-Signal-Systeme	4	SU, Pr	SchrP 90-120 Min		5
MA04	Selected Topics in Assembly Technology Ausgewählte Themen in der Montagetechnik	4	SU, Pr	SchrP 90-120 Min	9)	5
MA05	Model based development Modellbasierter Entwurf	4	SU, Pr	SchrP 90-120 Min		5
MA06	Materials from Renewable Resources Materialien aus erneuerbaren Quellen	4	SU, S	MdIP 30 Min	10)	5
Gesamt						10⁸⁾

- ▶ MA minimum of 10CP (choice **independent** of specialization)

SPO 2019-MF, MP

- ▶ MF minimum of 13CP (choice **independent** of specialization)
- ▶ MF: Available modules announced online and in study plan
- ▶ Listed language and VHB courses: CP transferable to MF on request (see study plan)

4. Fachwissenschaftliche Wahlpflichtmodule

Lfd. Nr.	Module	SWS	Art der Lehrveranstaltung	Prüfungen Art u. Dauer 1) 2)	Ergänzende Regelungen	Leistungspunkte
MF01	Fachwissenschaftliche Wahlpflichtmodule [®]		SU, U, Pr	P	7)	
Gesamt						13 [®]

5. Projektstudium, Masterarbeit

Lfd. Nr.	Module	SWS	Art der Lehrveranstaltung	Prüfungen Art u. Dauer 1) 2)	Ergänzende Regelungen	Leistungspunkte
MP01	Master's Project Masterprojekt	10	SU, U, Pr	PSIA 2-12 Wo	7)	12
MP02	Master's Thesis Masterarbeit	---	---	M		25
Gesamt						37

Master's Project

- ▶ Team Project (2-6 members)
- ▶ Plan for your second semester
- ▶ Announcement of available projects June 2020: learning campus
- ▶ Registration and application: learning campus
- ▶ **Mandatory registration (OSC) during examination period in November 2020**

Master's thesis



- ▶ Apply for open positions in industry
- ▶ Career center
- ▶ IKORO 2021
- ▶ German or English documentation
- ▶ Duration for 'standard' student: 6 months

Modules summer term 2020

Engineering Sciences Master's Program - Courses expected to be offered in summer term 2020, SPO2019

No.	Modul / Course Title	Lecturer	Type	Hours	CPs
MG01	Advanced Engineering Mathematics	Prof. Dr. Schütze	Lect./Exerc.	4	5
MG02	Electrodynamics	Prof. Dr. Seliger	Lect./Exerc.	4	5
MG05	Fluid Mechanics	Prof. Dr. Buttlinger / Prof. Dr. Schäffe	Lect./Exerc.	4	5
MA01	Real-Time Systems	Prof. Dr. Mysliwetz	Lect./Lab	4	5
MA03	Mixed Signal Systems	Prof. Dr. Mayr / Prof. Dr. Versen	Lect./Lab	4	5
MA05	Model based development	Prof. Dr. Perschl	Lect./Lab	4	5
MA06	Materials from Renewable Resources	Prof. Dr. Schroeter	Lect./Exerc.	4	5
MV06	Wireless Communication Systems	Prof. Dr. Stahl	Lect./Lab	4	5
MV07	Advanced Digital Communications	Prof. Dr. Stöckler	Lect./Lab	4	5
MV12*	Mechanical Design	Prof. Dr. Ragai	Lect./Proj.	4	5
MV14	Advanced Injection Molding	Prof. Karlinger	Lect./Proj.	4	5
MV17	Mechanical Transmission	Prof. Dr. Doleschel	Lect./Proj.	4	5
MF01	Microelectronics	Prof. Dr. Popp	Lect./Lab	4	5
MF03	Advanced OpAmp Circuit Design	Prof. Dr. Mayr	Lect./Lab	4	5
MF04	Applied Didactics	offered on demand	Tutorial	2	3
MF23	Design of Materials	Prof. Dr. Strübbe	Lect./Lab	3	5
MF30	Experimental Modelling and Simulation	Prof. Dr. Zentgraf	Lect./Lab	2	3
MF31	Advanced additive manufacturing	Prof. Dr. Rib	Lect./Lab	4	5
MF32	Intellectual Property Protection	LB Hermann Wagner	Lect.	2	3
MF33	Heat Transfer	Prof. Dr. Stanzel	Lect.	2	3
MF34**	Applied numerical methods for mechanical engineering	Prof. Dr. Rib / Prof. Dr. King	Lect./Exerc.	4	5
	Business and Technical English C1 for German students only	n.n.	Lect.	4	4
	Business English B2 for German students only	n.n.	Lect.	4	5
	Technisches Deutsch B1 for non-German students only	n.n.	Lect.	2	2
	Technisches Deutsch B2 for non-German students only	n.n.	Lect.	2	2
	Konversations- und Präsentationstechniken C1 for non-German students	on n.n.	Lect.	2	3

MP02	Master's Project			10	12
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VHB	Scientific writing			2	3
VHB	Medical Image Processing for Diagnostic Applications			4	5
VHB ***	Integrated Production Planning			4	5
VHB	Leadership and Communication in Global Business			2	3

* block course

** could be transferred to MA pool (MEN/PEN only)

*** could be transferred to MA or MV pool (MEN/PEN only)

Details such as course contents, prerequisites and examination type/grading can be found at: www.fh-rosenheim.de/ing-master-reg.html

Rev. Dec 11, 19

Planned modules winter term 2020/21

Engineering Sciences Master's Program - Courses expected to be offered in winter term 2020/21, SPO 20191

No.	Model / Course Title	Lecturer	Type	Hours	CPs
MS03	Solid State Electronics	Prof. Dr. Popp / Prof. Dr. Müller	Lect./Lab	4	5
MS04	Statistics	Prof. Dr. Bischof	Lect./Exec.	4	5
MA02	Integrated Circuit Design and Test	Prof. Thumer, Prof. Versen	Lect./Exec.	4	5
MA04	Selected topics in assembly technology	Prof. Dr. Meisloth	Lect./Exec.	4	5
MA05	Materials from Renewable Resources	Prof. Dr. Schroeter	Lect./Exec.	4	5
MF16	Free-Form Surfaces	Prof. Dr. Lacer	Lect./Prog.	4	5
MF01	Advanced Control Systems	Prof. Dr. King	Lect./Lab	4	5
MF02	Industrial Process Control	Prof. Dr. Krämer / Krämer	Lect./Lab	4	5
MF03	Servo Drive Systems	Prof. Dr. Hagl	Lect./Lab	4	5
MF04	Automation Systems	Prof. Dr. Meisloth	Lect./Lab	4	5
MF05	Reliability of Mechatronic Systems	Prof. Dr. Versen	Lect./Lab	4	5
MF08	Digital Signal Processing	Prof. Dr. Stöckler	Lect./Lab	4	5
MF09	Advanced FEM	Prof. Dr. Schinagl	Lect./Exec.	4	5
MF10	Electromagnetic Compatibility	Prof. Dr. Seliger	Lect./Lab	4	5
MF11	Image Processing for automated Production	Prof. Dr. Wagner	Lect./Lab	4	5
MF13 ***	Advanced light weight construction	Prof. Dr. RB	Lect./Exec.	4	5
MF04	Applied Optics	offered on demand	Tutorial	2	3
MF10	Microelectronics Packaging and Manufacturing	Prof. Dr. Winter	Lect./Lab	4	5
MF20	RF and Microwave Systems	Dr. Leuther	Lect./Exec.	4	5
MF22	Kalman Filtering in Control Systems and Communications Applications	Prof. Dr. Stöckler / Prof. Dr. Mylswitz	Lect./Exec.	4	5
MF23	Design of Materials	Prof. Dr. Strube	Lect./Exec.	3	5
MF27 **	PLM Product Lifecycle Management	Prof. Vilsmeier	Lect./Exec.	4	5
****	Business and Technical English C1 for German students only	n.n.	Lect.		
****	Business English B2 for German students only	n.n.	Lect.		
****	Technisches Deutsch B1 for non-German students only	n.n.	Lect.		
****	Technisches Deutsch B2 for non-German students only	n.n.	Lect.		
****	Konversations- und Präsentationstechniken C1 for non-German students only	n.n.	Lect.		
RenewEnerg	Renewable Energies	Prof. Sber	Lect.	4	5
MP02	Master's Project			10	12
V08	Generic writing			2	3
V08	Medical Image Processing for Diagnostic Applications			4	5
V08 **	Integrated Production Planning			4	5
V08	Leadership and Communication in Global Business			4	5

** could be transferred to MA or MF pool (MEN/EN only)

*** replaces MF 16 Plastics based lightweight construction (SPO2016)

**** will be accepted as MF module (SPO2019 and SPO2016)

Details such as course contents, prerequisites and examination type/grading can be found at: www.fh-rosenheim.de/eng-master-reg.html

Rev. Dec 9, 2019

Learning campus module registration

- ▶ <https://learning-campus.th-rosenheim.de/course/view.php?id=xxxx>
- ▶ Password key 'xxxxxx'
- ▶ Register for the course you plan to attend
- ▶ **Does not replace official registration for the exams via OSC!**

Module registration for summer term 2020

If you are planning to join a module in summer semester 2020, please register by voting.

In order to further improve the planning for the next semester, we kindly ask for a review of your voting.

Note that there will be limited number of participants in modules

MG05
MA01
MA03
MA05
MA06

The examination board will decide based on criteria as type of specialization and achieved CP records.

IMPORTANT NOTE: This registration is used for a detailed planning of the modules for the upcoming semester. It is NOT replacing the official registration for courses or exams.

- 🔍 MG01 Advanced Engineering Mathematics
- 🔍 MG02 Electrodynamics
- 🔍 MG05 Fluid Mechanics (Restricted)
- 🔍 MA01 Real-Time Systems
- 🔍 MA03 Mixed Signal Systems

- ▶ Planning tool for the master's program
- ▶ Used to organize participation for modules which have limited laboratory or computer equipment
- ▶ In case of limitation of attendency, ranking is based on already gained credit points (CP) → higher semester students are preferred

ING-Master: Module Registration Summer Term SoSe 2020

[Dashboard](#) / [Meine Kurse](#) / [Module SoSe 2020](#) / [Module registration for summer term 2020](#) / [MG02 Electroynamics](#)

MG02 Electroynamics

Die Ergebnisse werden nach Ihrer Antwort nicht veröffentlicht.

I will attend this module in summer term 2020.

[Meine Auswahl speichern](#)

Highlights

- ▶ Lectures in English, some offered by native speakers (Dr. Paul Leather, Prof. Ragai)
- ▶ International Master's Project (planned with academic partner universities, e.g. in Finland)
- ▶ Accredited by ACQUIN e.V. since 2016
- ▶ Master's program suitable for studies at a foreign university for one semester (for German students, contact International Office)
- ▶ Courses on writing skills etc. (organized by International Office)

Organisation



- ▶ Semester speaker
- ▶ Represents first semester students
- ▶ Feedback to program administration
- ▶ Stundenplan/Curriculum online: splan
- ▶ Information on lectures etc.: Community or Learning Campus on intranet
- ▶ Studienplan/Study plan: Modulhandbuch/Module description
Studienplan