

# **Study and Examination Regulations for the Master's degree programme in Engineering at Rosenheim Technical University of Applied Sciences**

**of 14 January 2015**

**In the amended version of 18 May 2016, 13 May 2019 and 27 February 2023**

On the basis of Article 13 (1) Sentence 2, (2) Sentence 2, Article 43 (5), Article 61 (2 and 3) and Article 66 (1) of the Bavarian Higher Education Act (BayHSchG), Rosenheim Technical University of Applied Sciences issues the following rules:

## **Section 1**

### **Purpose of the study and examination regulations**

These study and examination regulations serve as a supplement to the current versions of the Basic Examination Regulations for Universities of Applied Sciences in Bavaria (*Rahmenprüfungsordnung für die Fachhochschulen in Bayern – RaPO*) of 17 October 2001 and the General Examination Regulations of Rosenheim Technical University of Applied Sciences (*Allgemeine Prüfungsordnung der Technical Hochschule Rosenheim – APO*) of 2 August 2016.

## **Section 2**

### **Study objectives**

(1) The Master's Degree Programme in Engineering is devised as an application-focused course. Its aim is to provide its students with advanced and specialist knowledge of engineering and related areas on a scientific foundation.

(2) The consecutive Master's Degree Programme in Engineering is designed to prepare students for demanding specialist engineering tasks and a fast track into project and leadership responsibility in a technical field, in particular, in international companies. The international focus of the course is demonstrated by the fact that its lectures are offered in English as far as is possible.

(3) In the specialist field of electrical/mechanical engineering, the students deepen their knowledge of the basics of mathematics and natural sciences and important application-focused fields and, by taking an interdisciplinary approach, improve their understanding of connections between systems, especially in the areas of **electrical engineering and information technology** and/or mechatronics and/or mechanical engineering and/or plastics engineering. The ability to choose between specialisation in **Electrical Engineering and Information Technology (EIT), Mechatronics (MEC), Mechanical Engineering/Plastics Engineering (MEN/PEN)** enables students to shape their studies in accordance with their personal interests and career aspirations.

(4) In addition to providing advanced training in engineering, the course is intended to also promote general skills such as teamwork, inter-cultural communication and English language skills. This is aided by the Master's project, which is conducted as group work in a project situation that is as realistic as possible in which students are trained in methodological skills to organise and complete complex tasks as well work together effectively in a group.

## **Section 3**

### **Admission requirements**

(1) Admission to the Master's degree programme requires a Bachelor's or Master's degree in Electrical Engineering and Information Technology or in Mechatronics, Mechanical Engineering, Plastics Engineering or a related field, or an equivalent qualification gained in Germany or abroad. An overall grade of "good" or higher is required. ~~The Examination Committee shall decide on the equivalence of degrees~~

~~and other qualifications stated in Sentence 1 and 2 in accordance with Article 63 (1) of the Bavarian Higher Education Act (BayHSchG).~~

(2) Other requirements for admission to studies are English language skills. The following apply as proof of required English language skills:

1. TOEFL with 550 or more points
2. CBTOEFL with 213 or more points
3. Internet-based TOEFL with 84 or more points
4. IELTS with a band score of 6.0 or higher
5. Cambridge CEFR CPE at Grade C or higher
6. Cambridge CEFR CAE at Grade B or higher
7. A grade of at least "good" in the "Technical English" module or a comparable English module from a previous degree or [school qualification](#).

Native English speakers are not required to submit proof of adequate English language skills. In cases of doubt or non-submission of proof, applicants may be required additionally/alternatively to pass a language test comparable to those listed above [at Rosenheim University of Applied Sciences](#).

(3) If German is not the candidate's native language, sufficient German language skills must be evidenced by passing German courses at a university which covers at least 4 ECTS credits, or via the following certificates:

1. Deutsches Sprachdiplom Level 1 (level GER A2/B1)
2. Goethe certificate at level A2
3. TELC certificate at level A2.

(4) The Examination Committee shall decide on the equivalence and relevance of qualifications required for admission and the fulfilment of other admission requirements, ~~in particular the equivalence of foreign university qualifications. Article 63 (1) of the Bavarian Higher Education Act (BayHSchG) applies.~~

(5) If applicants submit proof of a qualification required for admission that is worth less than 210 ECTS credit points but at least 180 ECTS credit points or equivalent, they must acquire the missing credit points from relevant undergraduate courses at [Rosenheim Technical University of Applied Sciences](#) ~~before completing their studies~~. On admission, the Examination Committee shall determine which courses and examinations need to be taken. For each individual case, the Examination Committee shall determine which modules need to be taken in order to catch up on required credit points as defined in Sentence 1 in order to consolidate basic engineering knowledge as defined in Paragraph (1). Catch-up examinations must be taken before the Master's thesis is issued. Section 19 of the General Examination Regulations of Rosenheim Technical University of Applied Sciences (APO) applies accordingly to opportunities to resit failed examinations.

## Section 4 Course structure

(1) The Master's degree programme covers a standard period of study of three semesters of full-time study or a maximum of 6 semesters of part-time study. It includes a practical project as well as a Master's thesis ~~to be completed in the final semester~~.

(2) The applicant can choose from one of the following specialist fields:

- Electrical Engineering and Information Technology (EIT)
- Mechatronics (MEC)
- Mechanical Engineering and Plastics Engineering (MEN/PEN).

A binding decision on the chosen specialist field must be made within a week of starting the degree programme. This choice can be changed once, subject to approval by the Examination Committee. For a specialist field, at least 20 credit points for advanced modules (see Appendix, Item 3) must be derived from modules assigned to the particular specialist subject.

## **Section 5**

### **Modules and examinations**

(1) The modules, their number of hours, credit points, type of lecture as well as type and scope of examinations are set out in the Appendix to these rules. The regulations defined in these rules are supplemented by the study plan.

(2) All modules are either basic mathematics and natural sciences modules, advanced modules from the fields of **electrical engineering and information technology, mechatronics and mechanical engineering/plastics engineering**, application-focused modules or specialist required elective modules.

## **Section 6**

### **Study plan**

(1) The Faculty of Engineering produces a study plan detailing the course structure for the students' information and to ensure compliance with the curriculum. It is approved by the Faculty Council and is published within the university. New regulations must be published at the latest at the start of the semester in which the regulations come into force for the first time. In particular, the study plan includes regulations and information on:

1. Objectives, content, hours per week per semester, credit points and types of lecture used in individual modules, if this is not regulated conclusively in these rules, and, in particular, a list of current required elective modules, including conditions and restrictions regarding student numbers.
2. More detailed conditions relating to examinations, certificates of attendance and admission requirements.
3. Allocation of the modules to the specialist fields **or fields of study**.

(2) No assertion is made that all specialist fields, **fields of study**, required elective modules and elective modules shall actually be available. Equally, no assertion is made that associated lectures shall be conducted if there are insufficient attendees. The Examination Committee can also set requirements for attendance as well as maximum numbers of attendees for certain lectures.

## **Section 7**

### **Master's thesis**

(1) **At the earliest, students can apply for the topic for their Master's thesis to be issued at the start of the 2nd semester Irrespective of suggestions for a subject for the Master's thesis by the member of staff appointed by the Examination Committee, students may also submit their own suggestions to such a member of staff.**

(2) **Full-time students have 6 months to complete the Master's thesis and part-time students have 12 months.**

(3) **The Master's thesis is assessed and graded by two examiners. At least one of these two examiners should be a full-time professor at the Faculty of Engineering at Rosenheim Technical University of Applied Sciences.**

**The Master's thesis may be written in German or English.**

(5) **The Master's thesis must be orally presented and defended in person within a 20 to 60-minute time period. The defence is subject to the provisions in Section 21 (9) as well as the terms and conditions for oral examinations set out in Section 16 of the General Examination Regulations (APO).**

## **Section 8**

### **Academic Advising**

If students do not obtain at least 30 credit points after two semesters of full-time study, or four semesters of part-time study, they are required to seek assistance from Academic Advising by order of the Examination Committee.

## **Section 9 Examination Committee**

~~The Faculty Council shall appoint an Examination Committee comprising at least three professors from the Faculty of Engineering as well as a Chair elected from within and by the Examination Committee itself for a term of two years. The Examination Committee comprises at least three professors from the Faculty of Engineering.~~

## **Section 10 Overall examination grade **and certificate****

The overall examination grade is the arithmetic average of significant individual grades weighted with credit points, rounded off to one decimal point.

~~(2) A certificate and a diploma supplement shall be issued for the passed Master's examination in accordance with the relevant templates provided in the Appendix to the General Examination Regulations of Rosenheim Technical University of Applied Sciences (Allgemeine Prüfungsordnung der Hochschule Rosenheim – APO).~~

## **Section 11 Academic title**

On passing the Master's examination, the student shall be awarded the academic title of "Master of Engineering", or "M. Eng." for short.

~~(2) The academic title shall be awarded together with a certificate set out according to the template provided in the Appendix to the General Examination Regulations of Rosenheim Technical University of Applied Sciences (Allgemeine Prüfungsordnung der Hochschule Rosenheim – APO).~~

## **Section 12 Effective date, transitional regulations**

~~(1) These study and examination regulations come into force on 1 October 2014.~~

~~(2) The Faculty Council of the Faculty of Engineering can establish general regulations or regulations specific to an individual case for the degree programme, the relevant Examination Committee can establish special regulations for examinations, insofar as this seems necessary in order to prevent hardship.~~

(1) These study and examination regulations come into force on 15 March 2023. They apply to students enrolling as from the 2023 summer semester. They also apply to students who started their studies before this semester, but postponed or delayed their degree (e.g. by a leave of absence, interrupted studies) which resulted in a range of courses which complied with the previous study and examination regulations no longer being available when they continued their studies.

(2) The study and examination regulations from 14 January 2015 in the version with amendments from 18 May 2016 and 13 May 2019 remain valid for students not subject to these study and examination regulations; otherwise the older version ceases to be in force.

**The regulations in the 3rd amended rules from 27 February 2023 have been coloured blue and enter into force for the 2023 summer semester.**

Produced on the basis of the resolution by the Senate of Rosenheim Technical University of Applied Sciences of ... and the approval of the President of Rosenheim Technical University of Applied Sciences. The agreement of the Bavarian State Ministry of Science and the Arts was issued with its correspondence of ... No. ... .

Rosenheim, dated ...

Prof. Heinrich Köster  
President

These rules were laid down on ... at Rosenheim Technical University of Applied Sciences. This was published within the university on ... . The publication date is therefore ... .

## Anlage zur Studien- und Prüfungsordnung für den Masterstudiengang Ingenieurwissenschaften an der Technischen Hochschule Rosenheim

Appendix to the study and examination regulations for the Master's degree programme in Engineering Sciences at Rosenheim Technical University of Applied Sciences.

### 1. Advanced mathematics and natural sciences basic modules

Modul Nr. No	Modulbezeichnung Modules	SWS / Hours per week	Leistungs- punkte ECTS	Art der Lehrver- anstaltung 1) Type of course	Prüfungen Examinations 1) 2)		Ergänzende Re- gelungen 1) Supplementary reg- ulations	
					Art u. Dauer in Minuten Type and duration in mi- nutes	ZV		
MGxx	Modules according to study plan 1) Module laut Studienplan 1)	1)	1)	1)	P	1)	1)	
Total for this module pool:			10					

### 2. Application-based focus modules

Modul Nr. No	Modulbezeichnung Modules	SWS / Hours per week	Leistungs- punkte ECTS	Art der Lehrver- anstaltung 1) Type of course	Prüfungen Examinations 1) 2)		Ergänzende Re- gelungen 1) Supplementary reg- ulations	
					Art u. Dauer in Minuten Type and duration in mi- nutes	ZV		
MAxx	Modules according to study plan 1) Module laut Studienplan 1)	1)	1)	1)	P	1)	1)	
Total for this module pool:			10					

### 3. Advanced modules from the fields of Electrical Engineering and Information Technology (EIT), Mechatronics (MEC), Mechanical Engineering/Plastics Engineering (MEN/PEN)

Modul Nr. No	Modulbezeichnung Modules	SWS / Hours per week	Leistungs- punkte ECTS	Art der Lehrver- anstaltung 1) Type of course	Prüfungen Examinations 1) 2)		Ergän- zende Rege- lungen 1) Supple- mentary regu- lations	EIT	MEC	MEN/ PEN
					Art u. Dauer in Mi- nuten Type and duration in minutes	ZV				
MVxx	Modules according to study plan 1) Module laut Studienplan 1)	1)	1)	1)	P	1)	1)	1)	1)	1)
Total for this module pool:								20	20	20

### 4. Specialist elective modules

Modul Nr. No	Modulbezeichnung Modules	SWS / Hours per week	Leistungs- punkte ECTS	Art der Lehrver- anstaltung 1) Type of course	Prüfungen Examinations 1) 2)		Ergänzende Re- gelungen 1) Supplementary reg- ulations	
					Art u. Dauer in Minuten Type and duration in mi- nutes	ZV		
MFxx	Elective Modules 1) Fachwissenschaftliche Wahlmodule 1)	1)	1)	SU, Ü, Pr	P	-	1)	
Total for this module pool:			13					

## 5. Project course, Master's thesis

Modul Nr. No	Modulbezeichnung Modules	SWS / Hours per week	Leis- tungs- punkte ECTS	Art der Lehrver- anstaltung 1) Type of course	Prüfungen Examinations 1) 2)		Ergänzende Re- gelungen 1) Supplementary reg- ulations
					Art u. Dauer in Minuten Type and duration in mi- nutes	ZV	
MP01	Master's Project Masterprojekt	10	12	PA	PB, SV, Kol	-	3)
MP02	Masterarbeit Master's Thesis	-	25	MA	MA, mdlP	-	4)
Total for this module pool:			<b>37</b>				

1) The Faculty Council sets out the details in the study plan.

2) A minimum grade of "sufficient" for all significant examinations is required to successfully complete the programme.

3) Submission on time is necessary to pass.

4) The oral examination is weighted at 15/100 and the Master's thesis is weighted at 85/100 of the total number of credit points it is possible to achieve in the module.

### Erklärung der Abkürzungen (Abbreviations):

SWS	=	Semesterwochenstunden <i>hours per week per semester</i>
ECTS	=	European Credit Transfer System
V	=	Vorlesung <i>lecture</i>
Ü	=	Übung <i>practical exercise</i>
SU	=	Seminaristischer Unterricht <i>seminar-based lectures</i>
ZV	=	Zulassungsvoraussetzung <i>admission requirements</i>
MA	=	Masterarbeit <i>Master's thesis</i>
P	=	Prüfungen <i>examinations</i>
Kol	=	Kolloquium <i>colloquium</i>
PA	=	Projektarbeit <i>project work</i>
PB	=	Praxisbericht <i>practice report</i>
Pr	=	Praktikum <i>work experience</i>
S	=	Seminar <i>seminar</i>
SV	=	Seminarvortrag <i>seminar presentation</i>
TN	=	Teilnahmenachweis <i>attendance</i>