

Study and examination regulations for the bachelor's degree programme Engineering Science at the Technical University of Applied Sciences Würzburg-Schweinfurt (SPO BESE)

Version of 12 May 2026

Based on Section 9 Sentences 1 and 2, Section 80 (1), Section 84 (2) Sentence 1, (3) and (4) as well as Section 96 (3) Sentence 1 of the Bavarian Higher Education Innovation Act (BayHIG) of 05 August 2022 (GVBl. p. 414, BayRS 2010-1-3-WK) as amended, the Technical University of Applied Sciences Würzburg-Schweinfurt (THWS) issues the following regulations:

Contents

1. Chapter

General matters

- § 1 Purpose of these study and examination regulations
- § 2 Programme objective and profile
- § 3 Conditions for admission to the programme

2. Chapter

Programme structure

- § 4 Standard time to degree and start of the programme
- § 5 Programme structure and modules
- § 6 Internship module

3. Chapter

Examinations and deadlines

- § 7 Supplementary regulations for other types of assessment
- § 8 Bachelor's thesis
- § 9 Standard deadlines

4. Chapter

Organisational matters

- § 10 Examination committee

5. Chapter

Academic degree, concluding provisions

- § 11 Academic degree
- § 12 Coming into effect, expiration
- § 13 Transitional provisions

1. Chapter

General

§ 1

Purpose of the study and examination regulations

¹These study and examination regulations govern the course of the bachelor's programme Engineering Science. ²They serve the implementation and amendment of the General Examination Regulations of the Technical University of Applied Sciences Würzburg-Schweinfurt (APO THWS) of 26 April 2023 as amended.

§ 2

Programme objective and profile

- (1) ¹The English-taught programme aims to train engineers by combining application-oriented teaching with a sound academic basis. ²In this programme, students build sound knowledge in central engineering disciplines like mechanics, production planning and control as well as and electrical engineering and information technology.
- (2) ¹To prepare our students for the multiple career options in the field, they develop a solid basis of engineering science. ²Students are enabled to think interdisciplinarily and create innovative solutions at the intersection of different engineering disciplines as well as apply modern technologies and tools in practice. ³Graduates will be able to create sustainable and future-oriented concepts for industrial and environmental challenges, successfully work in international teams, and specifically apply their intercultural communication skills. ⁴Our programme is particularly application-oriented through the internship module and its focus on practice (see § 6). ⁵Additionally, students will develop the ability to independently perform entrepreneurial activities and process-oriented thinking.
- (3) The bachelor's degree programme Engineering Science is conceptualised as an online degree programme, i.e. all contents are covered in specifically conceptualised online modules.

§ 3

Conditions for admission to the programme

- (1) ¹Admission to the bachelor's programme Engineering Science is conditional upon evidence of
 - a) a general higher education entrance qualification,
 - b) an entrance qualification for a university of applied sciences (*Fachhochschulreife*) or
 - c) an university entrance qualification within the meaning of Section 88 (5) and (6) of the Bavarian Higher Education Innovation Act of 05 August 2022 (GVBl. p. 414, BayRS 2210-1-3-WK) as amended.

²Evidence of the existence of the condition under Sentence 1 a) to c) is provided in accordance with the Regulation Concerning Eligibility for Studying at the Universities of the Free State of Bavaria and the State-recognised Private Universities of 02 November 2007 (GVBl p. 767) in its current version.

- (2) Other conditions for admission to the programme (in particular with regard to the student's linguistic aptitude for the programme) and for enrolment arise from the Regulations for the Procedure of Enrolment, Leave of Absence, and Termination of Enrolment at the Technical University of Applied Sciences Würzburg-Schweinfurt (THWS Enrolment Regulations) and the Schedule of Fees for Online Studies at the Technical University of Applied Sciences Würzburg-Schweinfurt (OnlineGES THWS) in the current version.

2. Chapter

Programme structure

§ 4

Standard time to degree and start of the programme

- (1) ¹The standard time to degree is thirteen semesters with a total of 210 credit points in accordance with the European Credit Transfer and Accumulation System (ECTS, hereinafter referred to as ECTS credits). ²The degree programme consists of twelve semesters focussing on theoretical knowledge of 15 ECTS credits each and one practical semester (internship semester, § 6) of 30 ECTS credits.
- (2) Studies start in the winter semester.

§ 5

Programme structure and modules

- (1) ¹The programme structure is laid down in the annex to these study and examination regulations.
- (2) ¹In the first six semester, students lay the basis required for understanding the specialist contents of the following modules ("generalistisch ausgebildeter Grundlageningenieur"). ²Students then complete advanced studies in Industrial and Systems Engineering.
- (3) ¹Core electives (FWPMs)/elective modules (ELMs) in accordance with § 7 (3) APO THWS serve the development of advanced competencies; therefore, they have an immediate thematic relation to other modules of the bachelor's degree programme Engineering Science and specialising in Industrial and Systems Engineering. ²Every student must choose core electives (FWPM)/elective modules (ELM) amounting to a total of 20 ECTS credits. ³Choice is made by taking a core elective's (FWPM's)/elective module's (ELM's) exam for the first time. ⁴Modules with the best grades up to the total of ECTS credits mentioned above are included in the calculation of the degree grade, unless the student makes a different binding selection to the Department of Student Affairs (HSST) before the degree certificate is issued.

§ 6

Internship module

- (1) ¹The Internship Module consists of
 - a) a continuous, supervised internship lasting at least 20, but no more than 26 weeks, and
 - b) a seminar (internship seminar) preparing students for the internship and offering them the possibility of reflecting the internship.

²Only students who have gained 90 ECTS credits at the start of the Internship Module are entitled to enter this part of studies.

- (2) ¹The internship seminar takes place as a block course shortly before, during, or after the supervised internship. ²Contents are described in the training plan. ³The seminar preparing and reflecting the internship is deemed to be successfully completed if a multimedia presentation or documentation report is delivered and graded "passed with success."
- (3) The internship module is assessed at 30 ECTS credits and the grade "passed successfully" or "failed".

3. Chapter Examinations and deadlines

§ 7

Supplementary regulations for other types of assessments

- (1) ¹The topic set for a research/engineering project should be such that the work can generally be completed in two or a maximum of three weeks if it is worked on continuously to the exclusion of everything else. ²After the paper/project work is submitted, the work is presented by the student in person in accordance with § 26 (4) APO THWS.
- (2) To substantiate § 27 (1) Sentence 6 APO THWS, a portfolio assignment consists of a written summary of 10 to 15 pages or a summary delivered orally in 10 to 20 minutes.
- (3) Assessment criteria for other types of assessments (*sonstige Prüfungsleistungen*) must be determined and communicated before the start of the assessment(s).

§ 8

Bachelor's thesis

- (1) ¹Students may start work on their bachelor's thesis not before
 - a) the Internship Module has been passed successfully as well as
 - b) at least 150 ECTS credits have been earned.²Exceptions may be approved by the examination committee.
- (2) ¹The topic set should be such that the thesis can generally be completed within four months, provided it is worked on consistently and exclusively. ²At the latest with issuance of the topic, the student must be officially informed about additional submission criteria exceeding the provisions of § 30 (8) Sentence 1 and Sentence 2 APO THWS.

§ 9

Standard deadlines

- (1) ¹The following examinations are considered foundation examinations and orientation tests in the meaning of § 39 (1) Sentence 1 APO THWS:
 - Mathematics 1,
 - Engineering Mechanics 1, and
 - Fundamentals of Electrical Engineering

and must be taken for the first time no later than by the end of the fourth programme semester. ²If students have exceeded one of these deadlines for reasons for which they are responsible, any

examination that has not been taken on time is regarded as having been taken for the first time and is awarded the grade "non-sufficient" or considered "failed" (*Fristfünf*).

- (2) Additional deadlines (especially regarding ECTS credits to be obtained) can be found in § 39 (1) Sentences 2 and 3 APO THWS.

4. Chapter

Organisational matters

§ 10

Examination committee

In accordance with § 20 (1) Sentence 3 APO THWS for the bachelor's programme in Engineering Science, the number of additional members of the examination committee is three.

5. Chapter

Academic degree, concluding provisions

§ 11

Academic degree

After successful completion of the bachelor's examination, graduates are awarded the academic degree Bachelor of Engineering (abbrev. "B.Eng.").

§ 12

Coming into effect, expiration

These study and examination regulations shall come into effect on 01 October 2026.

§ 13

Transitional provisions

This version of the study and examination regulations is only valid in conjunction with the General Examination Regulations of THWS (APO THWS) in the version of 26 April 2023 as amended; it applies to all students who commence their studies in the bachelor's degree programme Engineering Science on 01 October 2026 or thereafter or who are allocated to this period by credit transfer or recognition of coursework and examinations.

Drawn up based on the resolution of the Senate of the Technical University of Applied Sciences Würzburg-Schweinfurt of 11 May 2026 and based on the legal supervision and approval of the President of the Technical University of Applied Sciences Würzburg-Schweinfurt in accordance with Section 9 Sentence 3 and Section 84 (2) Sentence 1 BayHIG of 12 May 2026.

Würzburg, on 12 May 2026

Professor Dr. Jean Meyer
President

These study and examination regulations for the bachelor's degree programme engineering science were set down on 12 May 2026 at the Technical University of Applied Sciences Würzburg-Schweinfurt. This was communicated on 12 May 2026 by notice. The date of publication is 12 May 2026.

Abbreviations:

APO THWS	General Examination Regulations of the Technical University of Applied Sciences Würzburg-Schweinfurt
AWPF	General elective course
AWPM	General elective module
BA	Bachelor's Thesis
BayHIG	Bavarian Higher Education Act
BEEG	Federal Parental Benefit Act
B. Sc.	Bachelor of Science
BGBI	Federal Law Gazette
bZv	Particular conditions for admission (to an examination)
d	German (as language of examination)
e	English (as language of examination)
ECTS	European Credit Transfer and Accumulation System
Ex	Field trip
Core Electives	Core elective module
(FWPM)	
GVBl	Bavarian Law Gazette
HSST	Department of Student Affairs
m.E./o.E.	passed successfully/failed
mP	Oral examination
MuSchG	Maternity Protection Act
PflegeZG	Family Caregiver Leave Act
P	Internship
Pro	Project
S	Seminar
SGB XI	Social Security Code Volume 11
soP	Other types of assessment: The actual type of assessment is laid down in the study plan and announced at the start of the semester by the responsible lecturers. Only one type of assessment per module is to be completed.
sP	Written examination
SPO	Study and examination regulations
SU	Seminar-like lecture
SWS	Semester hours per week
THWS	Technical University of Applied Sciences Würzburg-Schweinfurt
Tpf	In accordance with Section 22 (1) APO THWS, attendance is mandatory. Attendance is documented through attendance lists. The module manager is responsible for the attendance list.
Ü	Practical course/exercise course
V	Lecture

Abbreviations for assessment types:

A	Research project
B	Presentation
C	Multimedia presentation
D	Documentation report
E	Colloquium
F	Written assignment / term paper
G	Portfolio assignment
H	Practical assignment

This appendix shall apply to all students who commence their studies in the bachelor's programme Engineering Science on 01 October 2026 or thereafter.

Appendix to the study and examination regulations of the bachelor's degree programme Engineering Science online) - area of specialisation Industrial and Systems Engineering at the Technical University of Applied Sciences Würzburg-Schweinfurt, valid from 01 October 2026

This appendix shall apply to all students who commence their studies on 01 October 2026 or thereafter or who are allocated to this period by credit transfer or recognition.

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
No.	Exam number/module ID	Module name	Semester	Credit hours / s/w	ECTS credits	Course type	Condition	Exam				Weight		
								Type	Duration / format	Language	bzV	Final grade	Factor	Act. weighting
		Semester 1												
1	MTH1	Mathematics 1	1	4	5	SU, S		sP	90 Min.	e		yes	1	5
2	BUA1	Business Administration 1		4		SU, S								
2.1		- Marketing-Basics	1	(2)	5	SU, S		sP	90 Min.	e		yes	1	5
2.2		- Financial Accounting		(2)		SU, S								
3	EME1	Engineering Mechanics 1	1	4	5	SU, S		sP	90 Min.	e		yes	1	5
		Semester 2												
4	CSC1	Computer Science 1	2	4	5	SU, S		sP	90 Min.	e		yes	1	5
5	PMSW	Project Management and Scientific Working	2	4	5	SU, S		sP (m.E./o.E.)	90 Min.	e		no	0	0
6	ELEN	Fundamentals of Electrical Engineering	2	4	5	SU, S		sP	90 Min.	e		yes	1	5
		Semester 3												
7	MTH2	Mathematics 2	3	4	5	SU, S		sP	90 Min.	e		yes	1	5
8	BUA2	Business Administration 2		4		SU, S								
8.1		- Trade Law	3	(2)	5	SU, S		sP	90 Min.	e		yes	1	5
8.2		- Cost Accounting		(2)		SU, S								
9	EME2	Engineering Mechanics 2	3	4	5	SU, S		sP	90 Min.	e		yes	1	5
		Semester 4												
10	CSC2	Computer Science 2	4	4	5	SU, S		sP	90 Min.	e		yes	1	5
11	PHYC	Physics	4	4	5	SU, S		sP	90 Min.	e		yes	1	5
12	ELE1	Electrical Engineering 1	4	4	5	SU, S		sP	90 Min.	e		yes	1	5
		Semester 5												
13	MTH3	Mathematics 3	5	4	5	SU, S		sP	90 Min.	e		yes	1	5
14	BUA3	Business Administration 3		4		SU, S								
14.1		- Investment Decisions	5	(2)	5	SU, S		sP	90 Min.	e		yes	1	5
14.2		- Operations Management		(2)		SU, S								
15	DMEL	Design and Machine Elements	5	4	5	SU, S		sP	90 Min.	e		yes	1	5
		Semester 6												
16	MATT	Materials Technology	6	4	5	SU, S		sP	90 Min.	e		yes	1	5
17	MICS	Microcomputer Systems	6	4	5	SU, S		sP	90 Min.	e		yes	1	5
18	ELE2	Electrical Engineering 2	6	4	5	SU, S		sP	90 Min.	e		yes	1	5
		Semester 7												
19	OPRE	Operations Research	7	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
20	SMSI	Systems Modeling and Simulation	7	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
21	MTPP	Manufacturing Techniques and Production Processes	7	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
		Semester 8												
22	ERPE	ERP Systems and Digital Transformation	8	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
23	LEPR	Lean Production and CIP	8	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
24	CSYS	Control Systems	8	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
		Semester 9												
25	PREN	Process Engineering	9	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
26	TECP	Technology Project	9	6	10	S, Pro		soP	A or G or H	e		yes	1	10
		Semester 10												
27	AUDR	Automated Driving	10	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
28	ELM1	Elective Module 1	10	4	5	S		sP or soP	*	e		yes	1	5
29	ELM2	Elective Module 2	10	4	5	S		sP or soP	*	e		yes	1	5
		Semester 11												
30	STCM	Strategies and Technologies for Climate Change Mitigation	11	4	5	S		sP or soP	90 min. or A or G	e		yes	1	5
31	ELM3	Elective Module 3	11	4	5	S		sP or soP	*	e		yes	1	5
32	ELM4	Elective Module 4	11	4	5	S		sP or soP	*	e		yes	1	5
		Semester 12												
33	INTM	Internship Module			30		90 ECTS credits							
33.1	INTS	Internship	12	0	(28)	P		(m.E./o.E.)				no	0	0
33.2	PRIN	Preparation and Reflection of Internship	12	2	(2)	S		soP (m.E./ o.E.)	C or D	e				
		Semester 13												
34	GENE	General Elective	13	4	5	**		**	**	e		yes***	1	5
35	BCTH	Bachelor's Thesis	13	0	10		150 ECTS credits + Module 33	BA		e/d****		yes	1,5	15
		Total:		136	210									180

* Either an sP (duration 90 minutes) or an soP (A-H) is required. The exact determination for each course of the WPM (core elective modules) is subject to the study plan of the relevant semester.

** Depends on the module(s) chosen from the catalogue of general electives (AWPM); details are laid down by the Faculty of Applied Natural Sciences and Humanities.

*** The final grade might comprise of two equally weighted individual grades (depending on the choice the AWPM).

**** As selected by student