

Legible version

**Study and Examination Regulations
for the Bachelor's Degree Programme in
Applied Artificial Intelligence
at Rosenheim Technical University of Applied Sciences**

of 14 April 2021

Amended on 14 May 2025

**The provisions of the 1st amendment of 14 May 2025 apply to the application procedure
for the winter semester 2025/2026.**

Pursuant to ~~Art. 13 para. 1 sentence 2, Art. 57 para. 1 sentence 1, Art. 58, Art. 61 para. 2 sentence 1 and para. 8 sentence 2 and Art. 66 para. 1 sentence 1 of the Bavarian Higher Education Act (BayHSchG)~~ Art. 9 sentence 1 in conjunction with Art. 80 para. 1 sentence 1, Art. 84 para. 2 sentence 1 of the Bavarian Higher Education Innovation Act (BayHIG), the Technical University hereby issues the following statutes:

§ 1

Purpose of the Study and Examination Regulations

These study and examination regulations serve to supplement and specify ~~the Framework Examination Regulations for Universities of Applied Sciences in Bavaria (RaPO) of 17 October 2001 and the General Examination Regulations (APO) of the Rosenheim Technical University of Applied Sciences (APO) of 2 August 2016~~ as amended on 9 August 2023.

§ 2

Study Objectives

(1) The aim of the Bachelor's programme in Applied Artificial Intelligence is to provide application-oriented teaching based on scientific findings and methods. Graduates should be qualified to work independently as Bachelor of Science in Applied Artificial Intelligence.

(2) Building on a broad-based education covering the entire spectrum of fundamental subjects, more in-depth specialist knowledge is taught in higher semesters, which is necessary for the planning, development and use of software in application-oriented areas of artificial intelligence and machine learning. Students should be able to recognise key relationships and gain the flexibility needed to keep up with rapid technological developments. By choosing subject-specific modules, students can tailor their studies to their personal interests and career aspirations. This opens up a wide range of career opportunities for graduates, enabling them to work flexibly, particularly in international companies, public administration and self-employment. The international orientation of the programme is reflected in the fact that its courses are taught in English.

(3) The degree programme qualifies graduates to take on specialist and management roles in the field of applied artificial intelligence. This includes training in analytical thinking and responsible behaviour. Students with the appropriate aptitude will also have the opportunity to gain a further advanced qualification by going on to study a relevant Master's degree programme either directly following this degree programme or at a later stage.

§ 3 Admission Requirements

~~(1) The qualification requirement for the programme is English language skills at level B2 of the Common European Framework of Reference for Languages (CEFR). These can be demonstrated in particular by:~~

- ~~1. Internet-based TOEFL with 72 points or more,~~
- ~~2. IELTS with a score of 6.0 or higher,~~
- ~~3. Cambridge CEFR B2 First (FCE) with a grade of C or better,~~
- ~~4. Cambridge CEFR C1 Advanced (CAE) with level B2 or higher,~~
- ~~5. at least 6 years of school English with at least a grade of "sufficient" in the final year, proven by a German university entrance qualification or an equivalent, recognised university entrance qualification from a non-German school.~~

~~Applicants whose native language is English are exempt from providing proof of sufficient English language skills. In cases of doubt or if proof is not available, the TH Rosenheim may require applicants to take a language test comparable to the above-mentioned tests.~~

~~(2) If German is not your native language and you do not have a German university entrance qualification, you must provide proof of German language skills at level A2 or higher in accordance with the CEFR. The following are accepted as proof of the German language skills required for the programme:~~

- ~~1. German Language Diploma DSD Level 1 (CEFR Level A2/B1),~~
- ~~2. Goethe Certificate at level A2,~~
- ~~3. TELC certificate at level A2,~~
- ~~4. Completion of German courses at a university worth at least 4 ECTS credits at level A2 or higher according to the CEFR,~~
- ~~5. at least 3 years of German language instruction at school, proven by an officially certified translation of the certificates.~~

~~(1) The language requirements for admission to English-language degree programmes in accordance with § 3 of the "Rules for regulating language admission requirements for university studies at Rosenheim Technical University of Applied Sciences".~~

~~(3)~~ (2) The Examination Committee shall decide whether the admission requirements have been met.

§ 4 Course Structure

(1) The standard period of study for the Bachelor's degree programme is seven semesters. It comprises six theoretical semesters and one work-related practical semester. The practical study semester takes place in the fifth study semester. ~~It may only be postponed upon application to the Examination Committee for reasons for which the student is not responsible.~~ The allocation of modules to specific study semesters is defined in the study plan.

(2) By the end of the second subject semester, students must have passed the examinations in the modules "Programming Basics", "Computer Science Fundamentals" and "~~Analysis 1~~ Linear Algebra". If students exceed this deadline for reasons for which they are responsible, the corresponding examinations are considered to have been taken for the first time and failed. Only those students who have achieved at least 30 ECTS credits are eligible to enter the third study semester and continue with their further studies.

(3) At least 30 ECTS credits must be obtained by the end of the third subject semester. If students exceed this deadline for reasons for which they are responsible, the module examinations that have not yet been taken are considered to have been taken and irrevocably failed. For deadline extensions, § 8 (4) ~~of the Framework Examination Regulations for Universities of Applied Sciences in Bavaria (-) APO of the Rosenheim Technical University of Applied Sciences ()~~ in its currently valid version shall apply accordingly.

(4) Only students who have obtained at least 80 ECTS credits are entitled to enter the practical study semester and to continue their studies.

(5) The degree programme includes the completion of a Bachelor's thesis.

(6) Admission to the programme is only possible in the winter semester.

§ 5

Modules and Examinations

The modules, their number of hours, the ECTS credits, the type of course and the type and scope of the examinations are specified in the Annex to these regulations. The modules are offered in English. The provisions of these regulations are supplemented by the study plan.

§ 6

Study Plan

(1) The Faculty of Computer Science draws up a study plan to ensure the provision of courses and to inform students, which sets out the details of the course of study. It is approved by the Faculty Council and made public within the university. New regulations must be announced at the latest at the beginning of the semester in which they are to be applied for the first time. The study plan contains, in particular, regulations and information on:

1. The objectives, content, contact hours per week, ECTS credits and types of courses of the individual modules, insofar as this is not conclusively regulated in these statutes, in particular a list of the current elective modules, including conditions and restrictions regarding enrolment.

2. The objectives and contents of the practical study semester and the accompanying lecture course, as well as their form, organisation and number of ECTS credits.

3. More detailed provisions on examinations, proof of participation and admission requirements.

(2) There is no entitlement to the actual offering of all required (compulsory) elective modules and elective modules. Similarly, there is no entitlement to the holding of the corresponding courses if the number of participants is insufficient. The Examination Committee may also specify participation requirements and maximum participant numbers for certain courses.

§ 7

Practical Study Semester

(1) The practical study semester comprises a supervised work experience-based practical period of 18 weeks, which must be completed in relevant companies. The practical study semester is supplemented by practice-oriented courses, which conclude with an examination. Further details are specified in the study plan.

(2) The practical study semester is successfully completed when the individual practical periods with the prescribed content are each verified by a certificate from the training institution, which corresponds to the template provided by Rosenheim Technical University of Applied Sciences, and a proper practical report submitted on time and a seminar presentation have been assessed as passed by a supervisor.

§ 8

Bachelor's Thesis

(1) The prerequisite for a request for a Bachelor's thesis topic is the successful completion of the practical study semester and the achievement of 160 ECTS credits.

(2) The Bachelor's thesis must be submitted no later than five months after the topic has been issued.

(3) The Bachelor's thesis is assessed and graded by two examiners. At least one of these two examiners must be a full-time professor at the Faculty of Computer Science or the Faculty of Applied Natural Sciences and Humanities at Rosenheim Technical University of Applied Sciences.

(4) The Bachelor's thesis can be written in German or English. A summary in German must be included in all cases.

(5) The Bachelor's thesis must be presented and defended orally within 30 minutes. ~~The provisions on oral~~

~~examinations in § 16 of the General Examination Regulations shall apply accordingly to the defence.~~ The presentation takes place as part of the module "Bachelor's Thesis Seminar" (module no. 27).

§ 9

Subject-specific Academic Advising

~~If a student~~ If students have not obtained at least 30 ECTS credits after two subject semesters, they are obliged to seek assistance from subject-specific Academic Advising.

§ 10

Examination Committee

The examination Committee consists of at least three professors from the Faculty of Computer Science.

§ 11

Overall Examination Grade

The overall examination grade is the arithmetic mean, rounded down to one decimal place, of the individual grades weighted by the corresponding ECTS credits. Modules 1 to 10 count towards the final grade with only half of their ECTS credits. Ungraded practical periods are not taken into account.

§ 12

Academic Degree

Upon successful completion of the Bachelor's examination, the academic degree "Bachelor of Science" is awarded, abbreviated as "B.Sc.".

§ 13

Entry into Force*), Transitional Provisions

These study and examination regulations shall enter into force on 1 October 2021. They apply to students who commence their studies in the 2021/22 winter semester.

*This provision concerns the entry into force of the statutes in their original version dated 14 April 2021. The date of entry into force of the amendments is specified in the amendment statute. The provisions of the 1st amendment statute apply to the application procedure for studies beginning in the winter semester 2025/2026.

Anlage zur Studien- und Prüfungsordnung für den Bachelorstudiengang Applied Artificial Intelligence an der Technischen Hochschule Rosenheim

Annex to the study and examination regulations for the Bachelor's degree programme in Applied Artificial Intelligence at Rosenheim Technical University of Applied Sciences.

1. Theoretische Studiensemester

(theoretical study semester)

Modul Nr. No	Modulbezeichnung Modules	SWS <i>contact hours per week</i>	Leistung s- punkte ECTS	Art der Lehrver- anstaltung 1) Form of Course	Prüfungen Examination 1) 2)		Ergänzende Regelungen 1) Supplementary regulations
					Art, u. Dauer in- Minuten, Bearbeitungsumfang Type, duration, scope of editing	ZV admission requirements	
1	Programming Basics <i>Grundlagen der Programmierung</i>	6	7	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
2	Computer Science Fundamentals <i>Grundlagen der Informatik</i>	6	7	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
3	IT Systems <i>IT-Systeme</i>	4	5	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
4	Introduction to Artificial Intelligence <i>Einführung in die künstliche Intelli- genz</i>	6 4	7 5	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
5	Analysis 1 <i>Analysis 1</i>	8 6	10 7	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
6	Object-Oriented Programming <i>Objektorientierte Programmierung</i>	4	5	SU, und Ü	schrP-60-120, PstA schrP 60-120 Min oder mdIP 15-30 Min	-	3, 6)
7	Theoretical Computer Science <i>Theoretische Informatik</i>	4	5	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
8	Linear Algebra <i>Lineare Algebra</i>	6	7	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
9	Analysis 2 <i>Analysis 2</i>	4 6	5 7	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
10	Digital Business Models <i>Digitale Geschäftsmodelle</i>	4	5	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
11	Database Systems <i>Datenbanken</i>	6	7	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
12	Unsupervised and Reinforcement Learning <i>Unüberwachtes und verstärkendes Lernen</i>	4	5	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
13	Supervised Learning <i>Überwachtes Lernen</i>	4	5	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
14	Stochastics <i>Stochastik</i>	4 6	5 7	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
15	Numerical Methods and Optimization <i>Numerische Methoden und Optimie- rung</i>	4	5	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-
16	Software Engineering <i>Software-Engineering</i>	4	5	SU, und Ü	schrP-60-120 schrP 60-120 Min oder mdIP 15-30 Min	-	-

17	IT Security <i>IT-Sicherheit</i>	4	5	SU, und Ü	schrP 60-120 Min oder mdIP 15-30 Min	-	-
18	Neural Networks and Deep Learning <i>Neuronale Netze und Deep Learning</i>	4	5	SU, und Ü	schrP 60-120 Min oder mdIP 15-30 Min	-	-
19	Data Science <i>Data Science</i>	4	5	SU, und Ü	schrP 60-120 Min oder mdIP 15-30 Min	-	-
20	Project Management <i>Projektmanagement</i>	4	5	SU, und Ü	schrP 60-120 oder PStA-schrP 60-120 Min oder mdIP 15-30 Min oder PStA 3-6 Wo oder PStA 7-14 Wo	-	3)
21	IT Law & Ethics <i>IT-Recht & Ethik</i>	4	5	SU, und Ü	schrP 60-120 Min oder mdIP 15-30 Min	-	-
22	Practical Software Engineering <i>Software-Engineering-Praxis</i>	6	7	SU, Ü, PA, S (SU und Ü) oder (PA und S)	PStA-mdIP 15-30 Min oder PStA 3-6 Wo oder PStA 7-14 Wo	Z1	3)
23	Embedded Artificial Intelligence <i>Eingebettete künstliche Intelligenz</i>	4	5	SU, und Ü	schrP 60-120 oder mdIP 15-45 schrP 60-120 Min oder mdIP 15-30 Min	-	-
24	Speech Recognition and Sequence Learning <i>Spracherkennung und Sequence Learning</i> Natural Language Processing <i>Verarbeitung natürlicher Sprache</i>	6 4	7 5	SU, und Ü	schrP 60-120 oder mdIP 15-45 schrP 60-120 Min oder mdIP 15-30 Min oder PStA 3-6 Wo oder PStA 7-14 Wo	-	3)
25	Computer Vision <i>Computer Vision</i>	6 4	7 5	SU, und Ü	schrP 60-120 oder mdIP 15-45 schrP 60-120 Min oder mdIP 15-30 Min	-	-
26	Specialist Required Elective Courses <i>FWPM</i>	16 20	20 25	SU, Ü, PA, S (SU und Ü) oder (PA und S)	P		4, 5)
27	Bachelor's Thesis Seminar <i>Seminar zur Bachelorarbeit</i>	1	2	S	SV	-	-
28	Bachelor's Thesis <i>Bachelorarbeit</i>	0	12	BA	BA wA (Deutsch: 20.000- 30.000 Wörter) (Englisch: 18.000- 26.000 Wörter)	-	6)
		137	18 0				

2. Praktisches Studiensemester (5. Studiensemester)

(*Practical study semester*)

Modul Nr. No	Modulbezeichnung Modules	SWS hours per week per semester	Leistungs- punkte ECTS	Art der Lehrver- anstaltung 1) Form of Course	Prüfungen Examination 1) 2)		Ergänzende Regelungen 1) Supplementary regulations
					Art, u. Dauer in- Minuten, Bearbeitungsumfang Type, duration, scope of editing	ZV admiss- ion require- ments	
29	Internship Seminar Part 1 Praxisblock 1	2	3	SU ₇ und Ü	TN, SV, Kol-PB und TN	-	-
30	Internship Seminar Part 2 Praxisblock 2	2	3	S ₇ und PB	TN, PB SV und TN	Z3	-
31	Internship Betreute Praxisphase	0	24	Pr	-	Z2	-
		4	30				

3. Erklärung der Fußnoten:

(*explanation of footnotes*)

- 1) Näheres regelt der Fakultätsrat im Studienplan.
Faculty Council regulates details in the curriculum (study plan).
 - 2) Mindestens ausreichende Bewertung aller bestehenserheblichen Prüfungen ist Voraussetzung für das Bestehen.
All relevant exams have to be passed individually in order to pass the whole program.
 - 3) Termingerechte Abgabe ist Bestehensvoraussetzung.
The examination must be submitted on time.
 - 4) Einzelheiten werden mit der Prüfungsankündigung zu Semesterbeginn bekannt gegeben.
Details will be announced with the examination announcement at the beginning of the semester.
 - 5) Der Katalog der fachwissenschaftlichen Wahlpflichtmodule wird nach Maßgabe von § 5 für jedes Semester vom Fakultätsrat beschlossen und jeweils zu Semesterbeginn im Studienplan niedergelegt.
The catalogue of specialist required elective courses is determined by the Faculty Council for each semester according to the criteria in § 5, and set out in the study plan at the start of each semester.
 - 6) ~~Der Leistungsnachweis geht nicht in die Notenbildung ein, das Bestehen ist jedoch erforderlich. The proof of achievement is not incorporated into the grade, but it is necessary to achieve a pass.~~
 - 6) Bearbeitungsumfang ohne Verzeichnisse, Tabellen und Grafiken; Abweichungen sind nach Absprache möglich.
Scope of processing without directories, tables and graphics; deviations are possible by arrangement.
- Z1) Das Modul „Practical Software Engineering“ (Nr. 22) kann nur ableisten, wer die Prüfung in „Software Engineering“ (Nr. 16) bestanden und die betreute Praxisphase des praktischen Studiensemesters („Internship“, Nr. 31) erfolgreich absolviert hat.
Only students who have passed the examination in “Software Engineering” (Module No. 16) and have successfully completed the internship (Module No. 31) may participate in the module “Practical Software Engineering” (Module No. 22).
- Z2) Zum Eintritt in die betreute Praxisphase („Internship“, Nr. 31) ist nur berechtigt, wer das „Internship Seminar Part 1“ (Nr. 29) besucht hat.
Only students who have attended the module “Internship Seminar Part 1” (Module No. 29) may enter the supervised practical phase (“Internship”, Module No. 31).
- Z3) Zur Teilnahme am „Internship Seminar Part 2“ (Nr. 30) ist nur berechtigt, wer das „Internship Seminar Part 1“ (Nr. 29) besucht, die betreute Praxisphase („Internship“, Nr. 31) abgeleistet und den Praxisbericht abgegeben hat.
Only students who have attended the module “Internship Seminar Part 1” (Module No. 29), have completed the “Internship” (Module No. 31) and have submitted the internship report may participate in the module “Internship Seminar Part 2” (Module No. 30).

3- 4. Erklärung der Abkürzungen (~~Abbreviations~~):

(*explanation of abbreviations*)

BA	=	Bachelorarbeit <i>Bachelor's thesis</i>
ECTS	=	European Credit Transfer System
FWPM	=	fachbezogenes / fachwissenschaftliches Wahlpflichtmodul <i>Specialist Required Elective Courses</i>
mdIP	=	mündliche Prüfung <i>oral examination</i>
Min	=	Minuten <i>minutes</i>
P	=	Prüfungen <i>examination</i>
PA	=	Projektarbeit <i>project / course work</i>
PB	=	Praxisbericht <i>practice report</i>
Pr	=	Praktikum <i>work experience</i>
PStA	=	Prüfungsstudienarbeit <i>coursework (such as a work experience report, or a colloquium for group work with an additional, individual examination)</i>
S	=	Seminar <i>seminar</i>
schrP	=	schriftliche Prüfung <i>written examination</i>
SU	=	seminaristischer Unterricht <i>seminar-based lectures</i>
SV	=	Seminarvortrag <i>seminar presentation</i>
SWS	=	Semesterwochenstunden <i>contact hours per week</i>
TN	=	Teilnahmenachweis <i>attendance</i>
Ü	=	Übung <i>practical exercise</i>
V	=	Vorlesung <i>lecture</i>
wA	=	wissenschaftliche Ausarbeitung <i>scientific elaboration</i>
Wo	=	Wochen <i>weeks</i>
ZV	=	Zulassungsvoraussetzung <i>admission requirements</i>