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Programme and Examination Regulations for the bachelor's degree programme in "International Engineering" at Kempten University of Applied Sciences (SPO IE-Ba/HKE)

dated 30 January 2025

On the basis of Art. 9 sentence 1, Art. 80 para. 1, Art. 84 para. 2 sentence 1 and Art. 96 para. 1 of the Bavarian Higher Education Innovation Act (BayHIG), dated 5 August 2022 (GVBL p. 414, BayRS 2210-1-3-WK), Kempten University of Applied Sciences issues the following

S t a t u t e :

§ 1
Scope of applicability, aim of the Programme and Examination Regulations

These programme and examination regulations are issued in fulfilment of Art. 84 paragraphs 2 and 3 BayHIG and serve to complete and supplement the University Examination Regulations ("APO") for Kempten University of Applied Sciences dated 26 July 2023 and the Statute on Practical Study Semesters at Kempten University of Applied Sciences ("PrS") dated 15 February 2023, in their respectively applicable versions.

§ 2
Degree programme objectives

(1) [1]The aim of this degree programme is to enable students to apply scientific findings and methods independently and autonomously, based on a profound understanding of the underlying principles and broad methodical knowledge. [2]Comprehensive training in the modules covering the basic principles of natural sciences, technology and specialist subjects in an international context enables students to recognise vital correlations and to achieve the flexibility required to meet the demands placed on engineers in a globalised world. [3]Great importance is placed on a practical focus in teaching the subject matter. [4]Graduates from this degree programme are flexible and can work in an interdisciplinary manner. [5]Their primary skillset includes:

- Analysing technical and specialist systems and refining them in a team
- Project management and working in international and interdisciplinary teams
- Using cutting-edge information technologies for precise analyses or as planning tools
- Acquiring relevant knowledge independently and using it to solve problems that arise, also including international aspects
- Implementing the integration, communication and leadership skills that they have acquired to ample effect throughout their subsequent career.

(2) 1The specialist training encourages systematic thinking, in particular, and is complemented by conveying knowledge of engineering and foreign languages. 2Special classes are offered to develop teamwork skills.

(3) 1The didactic concept of this degree programme is based on project-based learning, 2which specifically promotes transferrable and teamwork skills.

(4) Whichever specialisations are chosen, this degree programme equips students with the skills to perform engineering activities in any of the following fields of work:

1. Developing new technologies, systems and products
2. Managing and coordinating international projects
3. Optimising production processes in global production plants
4. Offering technical advice for international customers
5. Procuring materials and components from global markets
6. Maintaining and repairing complex technical systems worldwide
7. Training international teams or customers in handling machinery and equipment

(5) This bachelor's degree programme leads to a first, professional entry-level qualification. It provides the basis and eligibility for admission to second-level master's degree programmes.

(6) 1The bachelor's degree programme in "International Engineering" can also be studied in a dual format, as either a "degree programme with extended practice" or a "combined degree programme". 2These formats include significantly longer practical work placements, many modules that link topics with tasks in the partner companies, and special modules specifically tailored to the requirements of dual study programmes, which means that students develop highly refined general practical skills, but also specific to their company, specialist subject and industry (Appendix 1, 2.3 Modules for dual study formats).

§ 3

Eligibility criteria

(1) 1Applicants must provide evidence of English at level B1 and German A1 in accordance with the Common European Reference Framework for Languages (CEFR) at the time of applying. 2University entrance qualifications ("HZB") attained in German count as suitable evidence. 3Academic Registry shall check the evidence provided upon receipt of the application.

§ 4

Standard duration of studies and structure of the degree programme

(1) 1The standard duration of studies is seven semesters including the final bachelor's thesis. 2Besides six semesters spent studying theory, the fifth semester of study is conducted as a practical study semester. 3The bachelor's degree programme is worth a total of 210 Credit Points (in accordance with the European Credit Transfer System – ECTS). 4In accordance with the European Credit Transfer System (ECTS), the students' workload is determined as 60 Credit Points (CP) per year of study. 5One Credit Point corresponds to an average student workload of 25–30 hours.

(2) [1]The degree programme is structured according to the applicants' level of German when they start studying on the programme. [2]Students who can prove that they have completed level B1 of the Common European Framework of Reference for Languages (CEFR) when they apply shall be placed in Track B and must select general elective study modules worth 15 Credit Points from the module catalogue stipulated for Track B (see module handbook). [3]Students who do not provide this proof shall be placed in Track A and complete the corresponding compulsory modules in "German as a foreign language" (module numbers IE25A, IE35A, IE45A detailed in the Appendix).

(3) [1]The foundation course spans the first and second semesters of theoretical studies, teaching the basic principles of engineering sciences, mathematics, natural sciences, information technology and international studies. [2]The foundation course serves the purpose of guiding students towards the right choice in their degree programme. [3]Details are stipulated in § 8 para. 1.

(4) [1]The advanced course initially spans two further semesters of theoretical studies and the practical semester of study, which is conducted in the fifth semester in close collaboration with industry. [2]The practical semester of study lasts for 24 weeks in total, which includes a three-week block of teaching relating to practice.

(5) [1]Starting in semester six, students are offered subject-specific compulsory elective modules worth 30 Credit Points (CPs). [2]If modules worth 15 Credit Points are selected in relation to a specific major, this will be stated explicitly in their official academic record. [3]Every student can choose modules to suit their personal inclinations and professional aims. [5]Students on a dual-format bachelor's degree programme in "International Engineering", whether studied as a "degree programme with extended practice" or a "combined degree programme", shall select subject-specific compulsory elective modules worth 25 Credit Points.

(6) [1]The bachelor's thesis that completes the degree programme is a means for students to demonstrate their ability to conduct scientific work independently. [2]In the final colloquium, students must demonstrate their ability to explain complex technical subject matter in an understandable manner.

§ 5

Modules, certificates of attendance, and assessed performances

(1) All modules are either compulsory modules, major modules, general or subject-specific compulsory elective modules or elective modules.

1. Compulsory modules must be completed by all students.
2. [1]Major modules and general / subject-specific compulsory elective modules are offered either individually or in groups. [2]All students must complete a specific amount of major modules and general and subject-specific compulsory elective modules. [3]Details are stipulated in the Appendix to these Programme and Examination Regulations. [4]All selected modules are treated as compulsory modules.
3. [1]Elective modules are those that are not essential for achieving the learning objective. [2]Students can choose these additionally from the entire range of modules offered by Kempten University of Applied Sciences, and they will be stated in the bachelor's academic record.

(2) [1]The compulsory modules, contact hours per week during the semester, Credit Points, types of classes and examinations, and assessed performances accompanying studies are stipulated in the Appendix to these Programme and Examination Regulations.
[2]The major modules and general and subject-specific compulsory elective modules can

be selected from a catalogue of modules, which is published by the Faculties and can be adapted to reflect current circumstances. [3]The compulsory elective modules currently on offer are published in the module handbook in accordance with § 6 paras 1 and 2. [4] There is no entitlement to the majors and compulsory elective modules envisaged for the degree programme actually being offered. In the same way, there is no entitlement to such courses being offered in the case of insufficient numbers of participants.

(3) [1]The following majors are offered to create profiles:

- Electrical Engineering and Information Technology
- Mechanical Engineering
- International Studies

[2]Examination performances in the major modules shall amount to 15 Credit Points.

[3]The modules for the major in International Studies are to be completed at foreign universities.

§ 6
Module handbook

(1) [1]The Faculties of Electrical Engineering and Mechanical Engineering compile a module handbook to secure the range of courses on offer and to provide information to students, which is available for students to download. [2]The module handbook does not form part of these Programme and Examination Regulations.

(2) [1]The module handbook is passed by the Faculty Councils. [2]It contains important information about the procedure of studies in the current semester, e.g. the catalogue of subject-specific compulsory elective modules passed by each Faculty Council.

(3) The module handbook serves the purpose of informing students about the learning objectives and the contents of the individual modules; in particular, it contains regulations and information regarding:

1. Learning objectives, subject matter to be studied, and prior knowledge required for modules,
2. Language of instruction and examination,
3. Number of contact hours per week during the semester (h/w) and Credit Points per module,
4. Majors offered and the component modules,
5. Subject-specific compulsory elective modules on the advanced course,
6. Details of assessed performances and examinations, in particular the permitted aids in examinations,
7. Information about the practical semester,
8. Information about how work on studies and the bachelor's thesis are conducted.

(4) Any changes to the module handbook relating to examinations shall be published no later than the start of the lecturing period of the semester in which they first apply.

(5) The language of instruction and examination is principally English. [2]In exceptional cases with good grounds, German can also be used to teach and/or examine. [3]Specific details are stipulated in the module handbook.

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§ 7

Practical studies semester, further practical placements (for students on a dual / cooperative programme)

(1) [1]The practical studies semester last a total of 24 weeks, of which 21 weeks are spent on an industrial internship including a practical report and the practical seminar with a presentation and further classes accompanying practice in accordance with the Appendix (Appendix 1, 2.2 Practical studies semester) to these Programme and Examination Regulations ("SPO"). [2]This generally takes place in the 5th semester of study. Further details are stipulated in the module handbook.

(2) [1]The aims and content of the training undertaken during the semester of practical study derive from the module handbook. [2]As a general rule, the practical semester should be spent in a company or other professional practice outside the university of applied sciences. [3]An exception to this rule can be made in the form of suitable research projects at the university of applied sciences conducted in collaboration with other companies or facilities.

(3) In other respects, the Statute on Practical Study Semesters at Kempten University of Applied Sciences (PrS) applies.

(4) [1]In the dual formats "combined degree programme" and "degree programme with extended practice", additional practical internships are conducted during lecture-free periods. [2]A practical internship can be completed prior to commencing studies on this degree programme. [3]The duration, objectives and content of training derive from the training plan issued by the Faculties of Electrical Engineering and Mechanical Engineering. [4]Practical internships are completed in the various partner companies.

§ 8

Advancement criteria, admission requirements, progression with studies

(1) [1]The examinations in Applied Mathematics for Engineers I, Electrical Engineering I and Engineering Mechanics are deemed basic grounding and orientation examinations. [2]These examinations must be attempted at least once by the end of the second semester of study (end of the foundation course). [3]If a student misses this deadline, then the examination is considered to have been attempted once and failed.

(2) [1]In order to be entitled to take examinations in the third semester and above (advanced course), a student must have attained final grades of "sufficient" or better in modules on the foundation course worth at least 40 Credit Points. [2]Students who have not earned at least 40 Credit Points upon completion of the second semester of study must contact an academic advisor.

(3) [1]In order to be entitled to embark upon the semester of practical study, a student must have successfully completed all modules on the foundation course. [2]The admission criteria for the industrial internship and the practical seminar additionally include having earned at least 25 Credit Points on the advanced course. Students on Track A must also have completed and passed module IE35A.

(4) [1]If all examination performances apart from one – other than the bachelor's thesis – have been completed, then a second, or third (if applicable) repeat examination can be taken orally in that case, if this shortens the duration of study. [2]An application citing the reason(s) for taking that second or third (if applicable) repeat examination orally must be submitted in writing to the Examinations Committee. [3]Any such application must be submitted within two weeks of being informed that the first or second repeat examination has been failed. [4]The oral examination shall be conducted promptly, during the first four weeks of the semester following the failed examination.

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§ 9

Semester abroad

1 At least one semester of study is to be spent abroad in a foreign-language country earning credits towards the degree. 2This can also be during practical study semester. 3The semester abroad can cover the modules for the major in International Studies (cf. § 5 para. 3 sentence 3). 3The decision on accreditation according to sentence 1 or 2 is taken by the responsible Examinations Committee. 4 If, after admission to the degree programme, circumstances beyond the student's control occur, which make it unreasonable for them to complete a semester abroad, then the Examinations Committee can make different arrangements. 5An application to this effect in accordance with sentence 6 is to be submitted to the responsible Examinations Committee.

§ 10

Crediting skills gained outside higher education

The rules stipulated in Art. 17 para. 2 of the University Examination Regulations for Kempten University of Applied Sciences ("APO") regulate the crediting of examination performances and practical industrial experience gained outside higher education.

§ 11

Examinations Committee, announcement of grades, duty to cooperate

(1) 1The Examinations Committee is appointed by the Faculties of Electrical Engineering and Mechanical Engineering, 2It consists of the chairing member and at least two further full-time professors in the Faculties of Electrical Engineering or Mechanical Engineering who teach on the degree programme.

(2) Grades shall be announced in accordance with the rules in force at Kempten University of Applied Sciences (§ 11 of the University Examination Regulations for Kempten University of Applied Sciences – "APO").

(3) Part of students' duty to cooperate with the examinations process involves continuously independently monitoring announcements made by the University of Applied Sciences, the Faculties, the Examination Committees and Academic Registry.

§ 12
Bachelor's thesis

(1) [1]The topic for the bachelor's thesis can be assigned once a student has successfully completed the practical studies semester and earned at least 150 Credit Points. [2]Exceptions can only be granted by the Examinations Committee.

(2) [1]The topic of the bachelor's thesis must be suitable for completion in a full-time, uninterrupted effort generally lasting ten weeks. [2]The maximum time allowed for producing the bachelor's thesis is governed by § 18 no. 7 of the University Examination Regulations for Kempten University of Applied Sciences ("APO"). The Examinations Committee can allow an appropriate extension upon application if the student cannot meet the deadline for producing the thesis due to illness or other reasons beyond the student's control. [3]The existence of a reason beyond the student's control must be plausibly substantiated. [4]In case of ill health, a medical certificate must be presented.

(3) Pursuant to § 18 no. 9 sentence 2 of the University Examination Regulations for Kempten University of Applied Sciences ("APO"), the written presentation of the completed final thesis must be submitted to Academic Registry in the form of an electronically legible PDF file.

(4) Students on a dual-format degree programme, whether a "combined degree programme" or a "degree programme with extended practice", complete their bachelor's thesis in collaboration with their partner company.

§ 13
Assessment of examination performances and overall examination grade

(1) Examination performances can be awarded the following grades:

1.0; 1.3	= very good
1.7; 2.0; 2.3	= good
2.7; 3.0; 3.3	= satisfactory
3.7; 4.0	= sufficient
5.0	= insufficient

(2) [1]The overall examination grade is calculated based on the final grades for all examination performances that count towards the final grade, which are weighted according to their Credit Points. [2]The final grades for examination performances during the first two semesters (foundation course) are weighted with a factor of 0.5. [3]The overall examination grade is calculated based on the arithmetic mean of all weighted final grades rounded to one decimal place.

(3) The bachelor's examination is passed if the study and examination performances in all compulsory and compulsory elective modules were at least sufficient and at least 210 Credit Points were achieved.

(4) The bachelor's academic record shows the final grades and also, in parentheses, the constituent grades, rounded to one decimal place, on which these were based.

§ 14

Bachelor's academic record, academic degree

(1) [1]An official academic record is issued for passing the bachelor's examination in the format shown in the Appendix to the University Examination Regulations for Kempten University of Applied Sciences ("APO"). [2]The official academic record contains all individual grades and Credit Points awarded for each module. [3]The bachelor's academic record shows the final grades and also, in parentheses, the constituent grades, rounded to one decimal place, on which these were based.

(2) In addition, a Diploma Supplement is issued, describing the degree programme.

(3) Graduates from this bachelor's degree programme are awarded the academic degree "Bachelor of Engineering", with the abbreviated form "B.Eng.".

(4) A certificate is issued for the award of this bachelor's degree in the format shown in the Appendix to the University Examination Regulations for Kempten University of Applied Sciences ("APO").

§ 15

Entry into force

[1]These Programme and Examination Regulations come into force on 1 October 2025. [2]They apply to students on the bachelor's degree programme in "International Engineering", who shall commence their studies as of Winter Semester 2025/26.

Issued on the basis of the resolution passed by the Senate and the University Council of Kempten University of Applied Sciences on 21 January 2025 and the approval of the President of Kempten University of Applied Sciences on 21 January 2025.

Kempten, 30 January 2025

Signature (illegible)
- President -

This Statute was deposited at Kempten University of Applied Sciences on 3 February 2025. The university announced this act by notice on 3 February 2025. The date of the announcement is 3 February 2025.

Appendix: Table of modules and assessed performances for the bachelor's degree programme in "International Engineering" at Kempten University of Applied Sciences

1. Foundation course (Semesters 1 & 2)

No.	Modules (M) and part-modules (PM) (German)	M-CP	PM-CP	h/w	Course format	Assessment type
IE11	Applied Mathematics for Engineers I (Ingenieurmathematik I)	5				
IE111	Applied Mathematics for Engineers I[1)] (Ingenieurmathematik I[1)])		4	4	TS/e	ME
IE112	Basic Mathematics Test (Basistest Mathematik)		1			CoP
IE12	Physics (Physik)	5				
IE121	Physics (Physik)		4	3	TS	ME
IE122	Physics Practical (Physik Praktikum)		1	1	Pr	CoP
IE13	Electrical Engineering I[1)] (Elektrotechnik I[1)])	5		4	TS/e/Pr	ME
IE14	Engineering Mechanics [1)] (Technische Mechanik [1)])	5		4	TS/e	ME
IEI5	Materials Engineering (Werkstofftechnik)	5		4	TS/e	ME
IE16	Intercultural Competence	5		4	TS/e	ME
IE21	Applied Mathematics for Engineers II (Ingenieurmathematik II)	5		4	TS/e	ME
IE22	Mechanical Design & CAD (Konstruktion & CAD)	5		4	TS/e	ME
IE23	Electrical Engineering II (Elektrotechnik II)	5		4	TS/e/Pr	ME
IE24	Computer Science I (Informatik I)	5				
IE241	Computer Science I (Informatik I)		3	2	TS	ME
IE242	Computer Science I Practical (Informatik I Praktikum)		2	2	Pr	CoP
IE25A	German as a Foreign Language A2 (Deutsch als Fremdsprache A2)	5		6	TS/e	ME
IE25B	General Compulsory Elective Modules, Track B (Allgemeinwissenschaftliche Wahlpflichtmodule (AWPM) Track B)	5		4	TS/e	ME
IE26	Project Work I (Projektarbeit I)	5				ME
IE261	Project Management		2	2	TS/S	

	(Projektmanagement)					
IE262	Project I (Projekt I)		3	1	e/Pr.	
	Total CP foundation course	**60**				

1) Basic grounding and orientation examination

2. Advanced course

2.1 Theoretical semesters (Semesters 3, 4, 6 & 7)

No.	Modules (M) and part-modules (PM) (German)	M-CP	PM-CP	h/w	Course format	Assess-ment type
IE31	Measurement Technology (Messtechnik)	5		4	TS/Pr.	ME
IE32	Mathematical Modelling and Simulation (Mathematische Modellbildung und Simulation)	5				
IE321	Mathematical Modelling and Simulation (Mathematische Modellbildung und Simulation)		4	3		ME
IE322	Mathematical Modelling and Simulation Practical (Mathematische Modellbildung und Simulation Praktikum)		1	1	Pr	CoP
IE33	Production Engineering (Fertigungstechnik/ -verfahren)	5		4	TS/e	ME
IE34	Computer Science II (Informatik II)	5				
IE341	Computer Science II (Informatik II)		3	2	TS	ME
IE342	Computer Science II Practical (Informatik II Praktikum)		2	2	Pr	CoP
IE35A	German as a Foreign Language B1.1 (Deutsch als Fremdsprache B1.1)	5		6	TS/e	ME
IE35B	General Compulsory Elective Modules, Track B (Allgemeinwissenschaftliche Wahlpflichtmodule (AWPM), Track B)	5		4	TS/e	ME
IE36	Project Work II (Projektarbeit II)	5				ME
IE361	Quality Management (Qualitätsmanagement)		2	2	TS/S	
IE362	Project II (Projekt II)		3	1	e/Pr.	
IE41	Feedback Control Systems (Regelungstechnik)	5		4	TS/e	ME
IE42	Energy and Drive Technology (Energie- und Antriebstechnik)	5		4	TS/e	ME
IE43	Design Methodology (Konstruktionsmethodik)	5		4	TS/e	ME

IE44	Intercultural Management	5		4	TS	AC
IE4SA	German as a Foreign Language B1.2 (Deutsch als Fremdsprache B1.2)	5		6	TS/e	ME
IE45B	General Compulsory Elective Modules, Track B (Allgemeinwissenschaftliche Wahlpflichtmodule (AWPM) Track B)	5		4	TS/e	ME
IE46	Project Work III (Projektarbeit III)	5				ME
IE461	Mechatronics Systems (Mechatronische Systeme)		2	2	TS/S	
IE462	Project III (Projekt III)		3	1	e/Pr.	
IE61	Systems Engineering	5		4	TS/S	ME
IE62	Data Science	5		4	TS/e	ME
IE63x	Subject-Specific Compulsory Elective Modules (Fachwissenschaftliche Wahlpflichtmodule (FWPM))	30		24	TS/e	ME
IE64	Project IV: International Project (Projekt IV: Internationales Projekt)	5		4	Pr	ME
IE71	Bachelor's Thesis (Bachelorarbeit)	12				BT
IE72	Colloquium (Kolloquium)	3			S	AC
	Total CP	**120**				

2.2 Practical studies semester (5th semester)

Internship and accompanying classes

No.	**Modules (M) and part-modules (PM)** (German)	**M-CP**	**PM-CP**	**h/w**	**Course format**	**Assess-ment type**
IESO	Internship (Praktische Tätigkeit)	25				
IE501	Internship – 21 weeks (Praktische Tätigkeit - 21 Wochen)		23			PR
IE502	Internship Seminar (Praxisseminar)		2	2	S	CoP
IE51	Intercultural Self- and Team Competence (Interkulturelle Selbst- und Teamkompetenz)	5				
IE511	Intercultural Self- and Team Competence Seminar (Interkulturelle Selbst- und Teamkompetenz - Seminar)		2	2	S	CoP
IE512	Reflection Diary + World Café (Reflexionstagebuch + World Café)		3	2		AC
	Total CP	**30**				

2.3 Modules for dual study formats (degree programme with extended practice or combined degree programme)

Students on dual-format degree programmes must earn a total of only 10 CP instead of 15 CP in the subject-specific compulsory elective modules IE63x.

The following supplementary modules (conducted only in German) are also compulsory for students on dual-format degree programmes.

No.	Modules (M) and part-modules (PM)	M-CP	PM-CP	h/w	Course format	Assess-ment type
IE81	Internship 1					PR
IE82	Internship 2					PR
IE83	Internship 3					PR
IE84	Internship 4					PR
IE855	Colloquium Dual Internship	5				s
IE851	Colloquium Dual Internship 1		1.25	1	S	ME[1) 2)]
IE852	Colloquium Dual Internship 2		1.25	1	S	ME[1) 2)]
IE853	Colloquium Dual Internship 3		1.25	1	S	ME[1) 2)]
IE854	Colloquium Dual Internship 4		1.25	1	S	ME[1) 2)]

1) Simplified evaluation: “pass” / “fail”
2) Course can be conducted as a block of classes.

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List of abbreviations

h/w	=	Contact hours per week
CP	=	Credit Point according to European Credit Transfer System (ECTS)
M-CP	=	Credit Points for a module
PM-CP	=	Credit Points for a part-module
TS	=	Taught seminars
e	=	Exercises
Pr	=	Practical
S	=	Seminars
PR	=	Practical report
AC	=	Assessed coursework: This might be written work, presentations, working on computers or on tasks in a project and/or a final report. Workload approx. 60 hours.
ME	=	Module examination, in one of the following formats: - Oral examination: duration 15-45 min. - Written examination: duration 90-120 min. - Assessed coursework - Portfolio examination: Consisting of several part-examinations (written examination, oral examination or assessed coursework) Composite examination – details stipulated in the module handbook.
CoP	=	Certificate of participation
BT	=	Bachelor's thesis