

**Study and Examination Regulations
of Karlsruhe University of Applied Sciences**

B. Special Section

and

C. Final Stipulations

for the degree program

Electrical Engineering and Information Technology

Degree awarded: Bachelor of Engineering

as of 01.03.2021

Version 6001

Valid as of September 1, 2021

On the basis of § 8 para. 5 clause 1 in conjunction with § 19 para. 1 clause 2 no. 9 and § 32 para. 3 and 4 of the Act pertaining to Institutions of Higher Education in Baden-Württemberg (the State University Law, LHG) in its current version, the Senate of Karlsruhe University of Applied Sciences resolved the following revised version dated of its study and examination regulations, Part B and C, for the degree program “Electrical Engineering and Information Technology”, with the degree awarded being “Bachelor of Engineering”, on February 9, 2021.
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B. Special Section

I. General

§ 40-EEIB Pre-Study Work Experience

Admission to the study program does not require a pre-study work experience

§ 41-EEIB Structure of the Study Program

- (1) The standard period of study in the Electrical Engineering and Information Technology degree program is seven semesters. It shall comprise six theory semesters, the integrated internship semester, and all examinations including the Bachelor's thesis. The basic studies period lasts two semesters and is completed when the examinations for the courses of the basic studies period have been successfully completed. The advanced studies period lasts five semesters.
- (2) The courses, both compulsory and elective, required for the successful completion of the degree program amount to 210 credit points (according to the European Credit Transfer System ECTS).
- (3) All courses and examinations are held in English.

§ 42-EEIB Internship Semester

- (1) The admission to the internship semester requires that the basic studies have been successfully completed.
- (2) The internship semester can be completed from the fourth to the fifth semester. As a rule, it is the fifth semester. The Head of the Internship Board may approve exceptions.
- (3) The practical training in the internship semester lasts up to six months, but at least 95 days of attendance.



(4) The internship semester can only be taken up if in the advanced studies period courses from the third semester have been completed to the extent of at least 22 credit points. The Head of the Internship Board may approve exceptions.

(5) The internship semester has the following educational content:

The students are to apply the knowledge and skills acquired in the course of their studies while working on engineering tasks. Guided by a supervisor, the students are to work on specific sub-tasks on their own responsibility.

(6) The practical semester shall be deemed to have been successfully completed if the prerequisites of § 4 Para. 6 Part A of the present Study and Examination Regulations have been fulfilled and the students have successfully attended the accompanying courses. The internship placements and the agreed contents of the internship must be approved by the Head of the Internship Board before the start of the internship semester.

§ 43-EEIB Courses, Study and Examination Plan

(1) The course modules, both compulsory and, if applicable, elective, that are required for the successful completion of the degree program, as well as the respective attendance requirements, study credits, pre-examination, and examination credits are shown in the Tables 1 (basic studies) and 3 (advanced studies).

(2) The subject examinations of the preliminary Bachelor's examination and the associated study credits as well as the weighting of the grades of the individual study credits for the determination of the subject examination grades are shown in Table 2. The subject examinations of the Bachelor's examination and the associated study credits as well as the weighting of the grades of the individual study credits for the determination of the subject examination grades are shown in Table 4.

(3) Elective subjects are chosen by the students from a separate elective subjects list of the Electrical Engineering and Information Technology program. All elective subjects may also be selected from other courses of study, including those of other faculties, with the approval of the Program Director. The modalities of study, pre-examination, and examination credits for the elective subjects shall be determined by the organizing institutions in accordance with Paragraph 5 and § 46-EEIB and shall be announced at the beginning of the lectures.

(4) If a subject examination or a course module consists of several examinations, each of the examinations must be passed with a grade of at least "sufficient" (4.0).

(5) The course credits (SL) assigned to the subject examinations must be completed as part of the subject examinations. The pre-examination credits (PV) are the prerequisite for the participation in the associated examinations. The type and requirements of study and pre-examination prerequisites respectively, which are marked with "XS" or "XP" in Tables 1 and 3, will be announced by the lecturer at the beginning of the lecture.

(6) If in a field of the tables in § 46-EEIB study, pre-examination, or examination credits are listed as being open to selection, identifiable by the link "o.", the lecturer shall announce the specific credits to be achieved at the beginning of the course.



(7) In the modules "German as a Foreign Language", non-native speakers of German shall choose German classes from the courses offered by the Foreign Language Institute (IFS). For the successful completion of the study program, at least level B1 (CEFR) must be demonstrated. The registration at the IFS for language courses required for graduation is the students' own responsibility.

(8) German native speakers choose another foreign language, except English. The modules chosen must all cover the same foreign language in a consecutive manner. If no consecutive course at the next level is offered, another foreign language may be chosen with the approval of the Program Director. Registration at the IFS for the language courses required is the students' own responsibility.

§ 44-EEIB Bachelor's Thesis

(1) The time frame for the Bachelor's thesis is 4 months. The time frame may be shorter.

(2) The Bachelor's thesis can only be started if, apart from the "Bachelor's thesis" subject examination, no more than six advanced studies credits are still missing.

§ 45-EEIB Certificate and Diploma

The Bachelor's certificate and the Bachelor's diploma shall state the course of study in which the degree program was successfully completed. This is: "Electrical Engineering and Information Technology."

§ 46-EEIB Tables on the degree program

Explanation of column contents and abbreviations in tables 1 and 3:

1st column: course ID (EDV-Bez.)

2nd column: name of the course module (Lehrveranstaltungsmodul)

3rd column: semester in which the course is offered (Sem.)

4th column: contact hours per week (SWS)

5th column: ECTS credits (CP)

6th column: type of course (Art):

V = Lecture

Ü = Exercise

L = Laboratory

S = Seminar

Pr = Project

IPS = Engineering Pedagogical Seminar



If an examination relates to several courses within the course module, these courses are mentioned in brackets. Examples:

(V+Ü) = joint examination on a lecture and an exercise

(V+Ü+V) = joint examination on two lectures and one exercise

If there are several courses in one line, to which examinations are assigned in column 8, 9 or 10, the assignment results from the numbering. The numbering has no temporal meaning.

Example:

1.Ü+2.(V+S) in column 6 and 1.PA+2.Re/30 in column 10 means that a practical work is assigned to the exercise as an examination and that a 30-minute presentation is assigned to the lecture and the seminar .

7th column: Prerequisite for admission to the examination procedure (Prerequ.)

8th column: Type of study credits with indication of duration in minutes, if no other unit is specified (SL/Duration). For "XS" see § 43 para. 5 sentence 3-EEIB.

9th column: Type of pre-examination credits with indication of the duration in minutes, if no other unit is specified (PV/Duration).

For "XP" see § 43 para. 5 sentence 3-EEIB.

10th column: Type of examination credits with indication of duration in minutes, if no other unit is specified (PL/duration)

8th, 9th and 10th column and § 43 para. 5 sentence 3-EEIB

The following can be provided for study credits (SL), pre-examination credits (PV), or examination credits (PL):

MP = oral examination	Re = presentation
KI = Written exam	La = Laboratory work
St = Student research project	En = Draft
Ue = Exercises	PA = Practical work
THE = Take-Home Exam	T(n)= Test (n = number per semester)

Only for study credits (PL): BT = Bachelor's thesis

With regard to duration:

S = Semester M = Month(s) W = Week(s) T = Day(s)

If several exams are required they are linked with "+"; alternative exams are linked with "o.", e.g.:

"MP+KI" means that both a written exam and an oral exam are required.

"MPo.KI" means that a written or an oral exam is required.



11th column: GFN = weighting of the study credits for the grade within the course module

12th column: Assignment of the study credits to the subject examination (FP)

13th column: Remark

In columns 7 and 13, the following abbreviations are used:

Block = Block course

Tf = Examination scheduled for a specific semester

FP = subject examination

Wpf = elective subject

üPL = study credits for more than one course

bPL = additional study credits

PS = internship semester

LV = course

BV = Preliminary Bachelor's examination



Bachelor's degree program Electrical Engineering and Information Technology EEIB – Basic studies								Degree awarded: Bachelor of Engineering			Table 1a	
Basic studies / Semester 1												
1	2	3	4	5	6	7	8	9	10	11	12	13
Course ID	Name of the course module	Sem.	SWS	CP	Type of course	Prerequ.	SL/Duration	PV/Duration	PL/Duration	GFN	FP	Remark
EEIB110 EEIB111	Mathematics 1 Mathematics 1	1 1	6 6	7 7	V				KI/120		1	
EEIB120 EEIB121 EEIB122	Circuit Analysis 1 Circuit Analysis 1 (DC) Circuit Analysis Project 1	1 1 1	4 3 1	5 3 2	1.V 2.L		2.La/1S		1.KI/120		2	
EEIB130 EEIB131 EEIB132	Physics Physics Physics Lab	1 1 1	6 4 2	6 4 2	1.V 2.L		2.La/1S		1.KI/120		3	
EEIB140 EEIB141 EEIB142	Programming 1 Computer Programming Computer Programming Lab	1 1 1	4 2 2	6 2 2	1.V 2.Ü		2.Ue/1S		1.KI/120		4	
EEIB150 EEIB151 EEIB152	Language 1 Fremdsprache 1 Intercultural Communication	1 1 1	6 4 2	6 4 2	The examination modalities are determined by the IFS.					2 1	5	§43 (7) & (8)
			26	30					2. PA/1S			



Bachelor's degree program Electrical Engineering and Information Technology EEIB – Basic studies					Degree awarded: Bachelor of Engineering		Table 2
Basic studies							
EDV-Bez.	Examination title	Examination Number	Assigned modules/examinations	Sem.	Weighting within the examination	Weighting of the examination für the overall grade	Remark
EEIBF01	Mathematics 1	FP1	Mathematics 1	1	1	1	
EEIBF02	Circuit Analysis 1	FP2	Circuit Analysis 1	1	1	1	
EEIBF03	Physics	FP3	Physics	1	1	1	
EEIBF04	Programming	FP4	Programming	1	1	1	
EEIBF05	Language 1	FP5	Language 1	1	1	1	§43 (7) & (8)
EEIBF06	Mathematics 2	FP6	Mathematics 2	2	1	1	
EEIBF07	Circuit Analysis 2	FP7	Circuit Analysis 2	2	1	1	
EEIBF08	Electromagnetic Fields	FP8	Electromagnetic Fields	2	1	1	
EEIBF09	Digital Electronics	FP9	Digital Electronics	2	1	1	
EEIBF10	Language 2	FP10	Language 2	2	1	1	§43 (7) & (8)



Bachelor's degree program Electrical Engineering and Information Technology EEIB – advanced studies					Degree awarded: Bachelor of Engineering		Table 4
Advanced studies							
EDV-Bez.	Examination title	Examination number	Assigned modules/examinations	Sem.	Weighting within the examination	Weighting of the examination for the overall degree	Remark
EEIBF11	Mathematics 3	FP11	Mathematics 3	3	1	1	
EEIBF12	Instrumentation and Measurement	FP12	Instrumentation and Measurement	3	1	1	
EEIBF13	Programming 2	FP13	Programming 2	3	1	1	
EEIBF14	Signals and Systems	FP14	Signals and Systems	3	1	1	
EEIBF15	Language 3	FP15	Language 3	3	1	1	
EEIBF16	Focal Subjects 1	FP16	Focal Subjects 1	4	1	1	
EEIBF17	Advanced Electronics	FP17	Advanced Electronics	4	1	1	
EEIBF18	Microcontroller Systems	FP18	Microcontroller Systems	4	1	1	
EEIBF19	Control Systems	FP19	Control Systems	4	1	1	
EEIBF20	Management	FP20	Management	4	1	1	
EEIBF21	Focal Subjects 2	FP21	Focal Subjects 2	6	1	4	
EEIBF22	Digital Systems	FP22	Digital Systems	6	1	1	
EEIBF23	Focal Subjects 3	FP23	Focal Subjects 3	7	1	2	
EEIBF24	Project	FP24	Project	7	1	1	
EEIBF25	Bachelor-Thesis	FP25	Bachelor Thesis Final Presentation	7	2 1	3	



§ 47-EEIB n/a

§ 48-EEIB n/a

§ 49-EEIB n/a

C. Final Stipulations

§ 50-EEIB Coming into Effect

These study and examination regulations come into effect on September 1, 2021.

Karlsruhe, March 1, 2021

The President

signed

Prof. Dr.-Ing. Frank Artinger

Date of announcement: March 3, 2021