This English translation is offered for information purposes only. In the event of any discrepancy or doubt in interpretation, the original German texts published in the Official Notices of Rhine-Waal University of Applied Sciences take precedence. Only the original German texts are considered legally binding.

HOCHSCHULE RHEIN-WAAL
Rhine-Waal University of Applied Sciences

Examination Regulations

for the bachelor's degree programme

Engineering for Sustainability

Rhine-Waal University of Applied Sciences
from 18 February 2025
(Official Notice 10/2025)

As amended by the first amending statutes
from 14 October 2025
(Official Notice 25/2025)

Contents

Section 1
Scope

These examination regulations apply to the bachelor's degree programme Engineering for Sustainability, offered in English at the Faculty of Technology and Bionics of Rhine-Waal University of Applied Sciences, in conjunction with the General Examination Regulations ("RPO") of Rhine-Waal University of Applied Sciences. They govern the full-time, seven-semester mode of study.

Section 2
Academic objectives; purpose of examination; degree awarded

(1) The bachelor's examination (*Bachelorprüfung*) forms the basis for the professionally qualifying nature of this bachelor's degree. The academic aims and objectives of this degree programme are outlined in Section 3 RPO.

(2) The academic degree "Bachelor of Science", abbreviated as "B.Sc.", is awarded for successfully completing the bachelor's examination.

Section 3
Admission requirements

(1) General admission requirements are defined in Section 4 RPO.

(2) Applicants are ineligible for admission if they failed the final attempt at a mandatory examination in a previous degree programme that was very similar content-wise to this degree programme and offered by a university subject to German Basic Law.

(3) Section 4 (5a) RPO governs English language proficiency requirements.

(4) Proof of completion of an Online Self-Assessment (OSA) is required for enrolment.

Section 4
Basic internship

Proof of completion of a basic internship within the meaning of Section 4 (3) RPO is not required.

Section 5
Programme structure; volume of instruction hours; progression of studies

(1) The total volume of instruction for this degree programme is 134 credit hours (CH, or SWS in German).

(2) The modules of this degree programme comprise a total of 210 credits in accordance with the ECTS framework defined in Section 6 (5) RPO.

(3) Additional information about the breakdown of this degree programme and the type, form and scope of modules is available in the study and examination plan in the annex. Additional information about learning outcomes, qualification aims, contents and types of examinations is available in the module guide, which is available for viewing in the faculty's central office.

(4) As a rule, students may only sit for examinations if all prerequisites for the module have already been successfully completed. For the sequential modules defined in Annex 1, students must have successfully completed the previous module first.

(5) For the elective module Foreign Language, students can generally choose any language course offered, provided the selected course is not in their native language.

(6) Projects must be chosen from the project catalogue from the second semester onwards. The selected projects will become the prerequisites for the choice of projects in later semesters. Students may alter only one of their chosen project paths and only in the third project semester.

Section 6
Internship semester; study abroad semester

(1) Internship semester requirements are defined in Section 21 RPO. Support for students in finding an internship or the option of an applied project at the university in lieu of an internship semester are excluded for this degree programme in accordance with Section 21 (4) sentence 4 RPO.

(2) The study abroad semester is governed by Section 22 RPO. Deviating from Section 22 (5) and (7) RPO, the following conditions also apply to study abroad semesters. Students planning a study abroad semester must complete modules/courses worth a minimum of 20 credits (or the full-time equivalent of the host university). The study abroad semester can only be recognised in full if at least 20 credits (or the full-time equivalent) were successfully earned and this is confirmed by an official certificate from the host university. Students who earn fewer than the minimum of 20 credits, but at least 15 credits, must earn at least 5 additional credits at Rhine-Waal University of Applied Sciences to make up for the difference and receive full recognition for the study abroad semester.

(3) The study abroad semester is considered failed if fewer than 15 credits were obtained.

(4) Students planning a study abroad semester must conclude with an examiner designated by the Examination Board a learning agreement that clearly defines the modules they intend to complete at the host university.

(5) If a student is unable to adhere to the learning agreement for reasons beyond their control, the Examination Board will decide on the recognition of other courses/modules.

Section 7
Scope of examinations

(1) The time allotted to students for a written examination is based on the number of obtainable credits and will not exceed 120 minutes. As a rule, 30 minutes will be scheduled for each credit point.

(2) The length of an oral exam is approximately 30 minutes per person, but should be at least 20 and no more than 45 minutes.

(3) The scope of assignments, term papers and projects will be decided by the examiner, but should generally not exceed 3000 words (approx. 10 pages, DIN A4).

Section 8
Scope and form of the thesis

(1) The main text portion of the thesis should generally be between 15,000 words (approx. 50 pages, DIN A4) and 20000 words (approx. 70 pages, DIN A4) in length. The thesis may also be supplemented with other media, provided the use of said media as additional documentation is appropriate and helpful within the context of the assigned task. In this case, the length of the text portion of the thesis may deviate from the aforementioned minimum requirement.

(2) The thesis can also be submitted as group work if each student's individual contribution fulfils the requirements set forth in Section 23 (1) RPO and is clearly distinguishable (and thus assessable) due to clear and distinct separation by sections, page numbers or other criteria.

Section 9
Admission to the thesis and colloquium

(1) In addition to the thesis admission requirements defined under Section 24 (1) RPO, students must also have obtained at least 180 credits.

(2) In addition to the colloquium admission requirements defined under Section 27 (2) RPO, candidates must have obtained 207 CP.

Section 10
Credit values for the thesis and colloquium

(1) Twelve credits are awarded for passing the thesis.

(2) Three credits are awarded for passing the colloquium.

Section 11
Conferral of the bachelor's degree

The academic degree specified in Section 2 (2) is officially conferred upon issuing the bachelor's degree certificate defined in Section 30 (1) RPO.

Section 12
Entry into force

These examination regulations will enter into force on the day after publication in the Official Notices of Rhine-Waal University of Applied Sciences. They apply to students who first enrolled in the bachelor's degree programme Engineering for Sustainability at the Faculty of Technology and Bionics of Rhine-Waal University of Applied Sciences in or after winter semester 2025-26.

Note: These regulations entered into force in their present version on 13 December 2025.

Annex 1: Curriculum and recommended module progression

Curriculum Engineering for Sustainability

Module Code	Module Name	CP	Type						Examination form		CP							
			V	SL	S	Ü	Pra	Pro	Attestation	Graded		WS1	SS1	WS2	SS2	WS3	SS3	WS4
Orientation Phase (1st semester)																		
2201	Fundamentals in Personal and Social Competencies	9						x	x		6	x						
2202	Working in Laboratories and Technical Centre	9						x	x		6	x						
2203	Onboarding and Orientation	9						x	x		6	x						
2204	Abstraction and logical reasoning	9						x	x		6	x						
2205	Group Project	9						x	x		6	x						
		∑ 45									∑ 30							
Project Phase (2nd - 5th semester) * / ****																		
Project Catalogue 2nd Semester (3 out of the catalogue)																		
2210	Automation Engineering, Project semester 2	9						x		x	6		x					
2211	Biological Transformation, Project semester 2	9						x		x	6		x					
2212	Business & Entrepreneurship, Project Semester 2	9						x		x	6		x					
2213	Digital Product Creation, Project semester 2	9						x		x	6		x					
2214	Engineering Design, Project Semester 2	9						x		x	6		x					
2215	Fundamental Science and Mathematics, Project semester 2	9						x		x	6		x					
2216	Process Cycles of Energy and Matter, Project semester 2	9						x		x	6		x					
2217	Science Communication, Project semester 2	9						x		x	6		x					
2218	Strength and Simulation, Project semester 2	9						x		x	6		x					
		∑ 45									∑ 30							
Project Catalogue 3rd Semester (4 out of the catalogue)																		
2220	Automation Engineering, Project semester 3	12						x		x	7,5			x				
2221	Biological Transformation, Project semester 3	12						x		x	7,5			x				
2222	Business & Entrepreneurship, Project Semester 3	12						x		x	7,5			x				
2223	Digital Product Creation, Project semester 3	12						x		x	7,5			x				
2224	Engineering Design, Project Semester 3	12						x		x	7,5			x				
2225	Fundamental Science and Mathematics, Project semester 3	12						x		x	7,5			x				
2226	Process Cycles of Energy and Matter, Project semester 3	12						x		x	7,5			x				
2227	Science Communication, Project semester 3	12						x		x	7,5			x				
2228	Strength and Simulation, Project semester 3	12						x		x	7,5			x				
		∑ 48									∑ 30							
Project Catalogue 4th Semester (3 out of the catalogue)																		
2230	Automation Engineering, Project semester 4	15						x		x	10				x			
2231	Biological Transformation, Project semester 4	15						x		x	10				x			
2232	Business & Entrepreneurship, Project Semester 4	15						x		x	10				x			
2233	Digital Product Creation, Project semester 4	15						x		x	10				x			
2234	Engineering Design, Project Semester 4	15						x		x	10				x			
2235	Fundamental Science and Mathematics, Project semester 4	15						x		x	10				x			
2236	Process Cycles of Energy and Matter, Project semester 4	15						x		x	10				x			
2237	Science Communication, Project semester 4	15						x		x	10				x			
2238	Strength and Simulation, Project semester 4	15						x		x	10				x			
		∑ 45									∑ 30							
Project Catalogue 5th Semester (2 out of the catalogue)																		
2240	Automation Engineering, Project semester 5	24						x		x	15					x		
2241	Biological Transformation, Project semester 5	24						x		x	15					x		
2242	Business & Entrepreneurship, Project Semester 5	24						x		x	15					x		
2244	Engineering Design, Project Semester 5	24						x		x	15					x		
2245	Fundamental Science and Mathematics, Project semester 5	24						x		x	15					x		
2246	Process Cycles of Energy and Matter, Project semester 5	24						x		x	15					x		
2247	Science Communication, Project semester 5	24						x		x	15					x		
2248	Strength and Simulation, Project semester 5	24						x		x	15					x		
		∑ 48									∑ 30							
Finishing Phase (6th - 7th semester)																		
2250	Internship / Semester abroad								x		30						x	
	Elective(s) (see catalogue individual subjects)***								x		15							x
2251	Bachelor Thesis									x	12							x
2252	Colloquium									x	3							x
											∑ 60							
Electives																		
2260	Foreign Language 1								x		5							x
2261	Foreign Language 2								x		10							x
2262	Applied Research Project 1							x	x		5							x
2263	Applied Research Project 2							x	x		10							x
2264	Applied Research Project 3							x	x		15							x
2265	Supervision and Tutorship 1							x	x		5							x
2266	Supervision and Tutorship 2							x	x		10							x
2267	Free Elective****								x	x	5							x

15 % Noteneinfluss
5% Noteneinfluss

Explanations / Conditions

* Die Fakultät behält sich das Recht vor, sowohl eine Mindestteilnehmerzahl für das Zustandekommen eines Projektes in der Projektphase und eines Faches im Wahlbereich als auch eine Maximalteilnehmerzahl festzulegen. Die Möglichkeit des Erreichens der vorgesehenen Kreditpunktesumme aus dem Bereich bleibt unberührt.

** Die Fakultät behält sich das Recht vor, die Wissensinhalte als auch das Fächerangebot im Wahlbereich zu ändern.

*** Aus den Electivekatalog (Module 2260-2267) des Studiengangs EfS sind ein oder mehrere Module in einem Gesamtumfang von 15 CP zu wählen.

**** Free elective module from any other Bachelor study course HSRW

Abbreviations

CP Credit points
V Lecture
SL Seminar lecture
S Seminar lecture
Ü Exercise
Pra Practical work
Pro Project
WS = Winter semester
SS = Summer semester

Curriculum Engineering for Sustainability

Module Code	Module Name	CP	Type						Examination form		CP							
			V	SL	S	Ü	Pra	Pro	Attestation	Graded		SS1	WS1	SS2	WS2	SS3	WS3	SS4
Orientation Phase (1st semester)																		
2201	Fundamentals in Personal and Social Competencies	9						x	x		6	x						
2202	Working in Laboratories and Technical Centre	9						x	x		6	x						
2203	Onboarding and Orientation	9						x	x		6	x						
2204	Abstraction and logical reasoning	9						x	x		6	x						
2205	Group Project	9						x	x		6	x						
		Σ 45									Σ 30							
**Project Phase (2nd - 5th semester) * / ** **																		
Project Catalogue 2nd Semester (5 out of the catalogue)																		
2210	Automation Engineering, Project semester 2	9						x		x	6		x					
2211	Biological Transformation, Project semester 2	9						x		x	6		x					
2212	Business & Entrepreneurship, Project Semester 2	9						x		x	6		x					
2213	Digital Product Creation, Project semester 2	9						x		x	6		x					
2214	Engineering Design, Project Semester 2	9						x		x	6		x					
2215	Fundamental Science and Mathematics, Project semester 2	9						x		x	6		x					
2216	Process Cycles of Energy and Matter, Project semester 2	9						x		x	6		x					
2217	Science Communication, Project semester 2	9						x		x	6		x					
2218	Strength and Simulation, Project semester 2	9						x		x	6		x					
		Σ 45									Σ 30							
Project Catalogue 3rd Semester (4 out of the catalogue)																		
2220	Automation Engineering, Project semester 3	12						x		x	7,5			x				
2221	Biological Transformation, Project semester 3	12						x		x	7,5			x				
2222	Business & Entrepreneurship, Project Semester 3	12						x		x	7,5			x				
2223	Digital Product Creation, Project semester 3	12						x		x	7,5			x				
2224	Engineering Design, Project Semester 3	12						x		x	7,5			x				
2225	Fundamental Science and Mathematics, Project semester 3	12						x		x	7,5			x				
2226	Process Cycles of Energy and Matter, Project semester 3	12						x		x	7,5			x				
2227	Science Communication, Project semester 3	12						x		x	7,5			x				
2228	Strength and Simulation, Project semester 3	12						x		x	7,5			x				
		Σ 48									Σ 30							
Project Catalogue 4th Semester (3 out of the catalogue)																		
2230	Automation Engineering, Project semester 4	15						x		x	10				x			
2231	Biological Transformation, Project semester 4	15						x		x	10				x			
2232	Business & Entrepreneurship, Project Semester 4	15						x		x	10				x			
2233	Digital Product Creation, Project semester 4	15						x		x	10				x			
2234	Engineering Design, Project Semester 4	15						x		x	10				x			
2235	Fundamental Science and Mathematics, Project semester 4	15						x		x	10				x			
2236	Process Cycles of Energy and Matter, Project semester 4	15						x		x	10				x			
2237	Science Communication, Project semester 4	15						x		x	10				x			
2238	Strength and Simulation, Project semester 4	15						x		x	10				x			
		Σ 45									Σ 30							
Project Catalogue 5th Semester (2 out of the catalogue)																		
2240	Automation Engineering, Project semester 5	24						x		x	15					x		
2241	Biological Transformation, Project semester 5	24						x		x	15					x		
2242	Business & Entrepreneurship, Project Semester 5	24						x		x	15					x		
2244	Engineering Design, Project Semester 5	24						x		x	15					x		
2245	Fundamental Science and Mathematics, Project semester 5	24						x		x	15					x		
2246	Process Cycles of Energy and Matter, Project semester 5	24						x		x	15					x		
2247	Science Communication, Project semester 5	24						x		x	15					x		
2248	Strength and Simulation, Project semester 5	24						x		x	15					x		
		Σ 48									Σ 30							
Finishing Phase (6th - 7th semester)																		
2250	Internship / Semester abroad								x		30						x	
	Elective(s) (see catalogue individual subjects)***								x		15							x
2251	Bachelor Thesis									x	12							x 15 % Noteneinfluss
2252	Colloquium									x	3							x 5% Noteneinfluss
											Σ 60							
Electives																		
2260	Foreign Language 1								x		5							x
2261	Foreign Language 2								x		10							x
2262	Applied Research Project 1							x	x		5							x
2263	Applied Research Project 2							x	x		10							x
2264	Applied Research Project 3							x	x		15							x
2265	Supervision and Tutorship 1							x	x		5							x
2266	Supervision and Tutorship 2							x	x		10							x
2267	Free Elective****								x	x	5							

Explanations / Conditions

* Die Fakultät behält sich das Recht vor, sowohl eine Mindestteilnehmerzahl für das Zustandekommen eines Projektes in der Projektphase und eines Faches im Wahlbereich als auch eine Maximalteilnehmerzahl festzulegen. Die Möglichkeit des Erreichens der vorgeschriebenen Kreditpunktezahl aus dem Bereich bleibt unberührt.

** Die Fakultät behält sich das Recht vor, die Wissenszentren als auch das Fächerangebot im Wahlbereich zu ändern.

*** aus dem elective-catalog (module 2260-2267) des studiengangs efs sind ein oder mehrere module in einem gesamtumfang von 15 CP zu wählen

**** Free elective module from any other Bachelor study course HSRW

Abbreviations

CP Credit points
V Lecture
SL Seminar lecture
S Seminar lecture
Ü Exercise
Pra Practical work
Pro Project
WS x Winter semester
SS x Summer semester