

**Study and Examination Regulations for the  
Master's Degree Course in  
Healthy and sustainable Buildings (HSB)  
at Deggendorf Institute of Technology  
of 01.10.2019**

Based on Art. 13(2) sentence 2, Art. 58(1), Art. 61(2) sentence 1 of the Bavarian Higher Education Act (BayHSchG) of 23 May 2006 (BayRS 2210-1-1-K), last amended by § 1 of the Act of 19 July 2017 (Law and Ordinance Gazette pp. 566ff.), Deggendorf Institute of Technology issues the following statutes:

**§ 1  
Study objective**

- (1)<sup>1</sup>The Master's degree course in HSB enables students to obtain a second degree qualification based on a first degree qualifying them for a profession. <sup>2</sup>The aim of this degree course to qualify students to work with methods and technologies in the fields of healthy and sustainable buildings combined with applications in various areas of the construction and real estate industry, and to familiarise them with different areas of application in the engineering profession. <sup>3</sup>It takes into account the experience that the students gained from their undergraduate degree courses and their professional experience, and contributes to its consolidation.
- (2)<sup>1</sup>The Master's degree course in HSB is intended to enable graduates of "Diplom" or Bachelor's degree courses to reinforce the insights they have gained so far with theoretical knowledge in order to satisfy the requirements of modern research and development tasks appropriately. <sup>2</sup>The qualification is offered by the Faculty of European Campus Rottal-Inn (in foundation).
- (3)<sup>1</sup>The study programme constitutes an in-depth supplement to Bachelor's or "Diplom" studies. <sup>2</sup>The graduates, thus, have the skills to work creatively in Research and Development departments. <sup>3</sup>Furthermore, specially qualified students should receive the theoretical principles to be able to do a doctorate or work in the academic field. <sup>4</sup>It is particularly geared towards providing students with the skills to be able to independently process specific tasks related to development and application in the practice of engineering in connection with work in a globalised economy.

(4)<sup>1</sup>The Master's degree course is intended to prepare the students for tasks in an international field. <sup>2</sup>The courses and examinations in this study programme will, therefore, predominantly be held in English.

## **§ 2 Programme structure**

The standard period of study is four semesters.

The study programme encompasses three theoretical study semesters and concludes with a Master's thesis.

## **§ 3 Qualification for the study programme**

- (1) <sup>1</sup>The qualification for the Master's degree course in HSB is proven by the completion of an undergraduate study programme at a university in Germany or abroad which encompasses at least 180 ECTS credits in the fields of civil or environmental engineering, or architecture, or a qualification equivalent to a university degree of this nature. <sup>2</sup>The examination commission decides whether the qualifications are equivalent.
- (2) Additionally, the following language skills are required for this study program:
1. English language skills at level B2 according to the Common European Framework of Reference for Languages
  2. German language skills at level A1 according to the Common European Framework of Reference for Languages must be proven during the course of studies and can be acquired over the course of studies. Students are encouraged to reach level A2 in German at the end of their Master's program.

<sup>2</sup> Regarding proof of language proficiency, the regulations of §3 of the General examination regulations for additional qualifications in foreign languages and compulsory elective subjects of a general academic nature (AWP) of the Deggendorf University of Technology in the currently valid version apply.

## § 4

### **Modules and assessments**

- (1) <sup>1</sup>The study programme consists of modules which can be a combination of related courses from the same subject. <sup>2</sup>Each module is assigned ECTS credits which take into account the time outlay required of the students.
- (2) <sup>1</sup>The core and elective modules, the number of hours they take, the form in which they are taught, the examinations and the ECTS credits are set down in the Appendix to these statutes.
- (3) <sup>1</sup>All courses consist of core, elective or optional modules:
  1. Core modules are obligatory for all students.
  2. Elective modules are offered as alternatives. The students have to choose a specific number of these modules in accordance with the Study and Examination Regulations. The modules chosen are treated as core modules.
  3. Optional modules are modules which are not required in order to achieve the study objective. Students may choose them from the university's course offering in addition.
- (4) <sup>1</sup>There is no entitlement to elective modules and optional modules actually being offered. <sup>2</sup>Neither is there any entitlement to the associated courses being held if there is not a sufficient number of participants.

## § 5

### **Degree programme**

<sup>1</sup>To guarantee the course offering and to provide information for the students, the relevant faculty draws up a degree programme showing the course of the study programme in detail. <sup>2</sup>The degree course is decided on by the faculty council and is to be announced publicly at the university before the beginning of the semester. <sup>3</sup>Changes or new regulations must be announced no later than the start of the university session in the semester when these changes are to be applied for the first time. The degree programme particularly contains regulations and information on

1. how the hours per week are distributed per module and study semester, including ECTS credits.
2. the description of the core and elective modules plus the hours per week, the form in which they are taught, the study objectives and the content of these modules,
3. the compulsory elective modules and number of hours, the type of course in the individual modules if not conclusively established in the Appendix.

## **§ 6**

### **Assessment of examinations taken, overall examination grade**

- (1) <sup>1</sup>One examination is assigned for each module. <sup>2</sup>If a module examination consists of the results of several examinations, the module grade is calculated based on the arithmetic mean of the grades from the individual examinations rounded to one decimal place. <sup>3</sup>In this calculation, the individual examination grades are weighted according to the ECTS credits assigned.
- (2) <sup>1</sup>If a module examination consists of the results of several examinations, the grade of "not sufficient" in one part of an examination cannot be balanced out by a better grade in another part of an examination.
- (3) <sup>1</sup>The overall examination grade is calculated by forming the weighted arithmetic mean of the individual grades. <sup>2</sup>Here, the weighting of one individual grade is equivalent to the number of ECTS credits assigned to the subject for which the grade was awarded.
- (4) <sup>1</sup>In addition to the overall examination grade according to (3), a relative grade in accordance with the ECTS Users' Guide will be declared based on the numerical value pursuant to the regulations of § 8(6) of the General Examination Regulations of Deggendorf Institute of Technology.

## **§ 7**

### **Master's thesis**

- (1) <sup>1</sup>In order to obtain a Master's degree, students must complete a Master's thesis, <sup>2</sup> in which they are to demonstrate their ability to apply the knowledge they have gained during their studies to projects from the field of engineering in a scientific paper they have written themselves.
- (2) <sup>1</sup>The time period between deciding on the topic and submitting the thesis must be proportionate to the scope of the topic and is set at six months.
- (3) <sup>1</sup>The Master's thesis may be written in English or German with the consent of the examination commission. <sup>2</sup>Finally, it is to be presented as a public lecture before the university; the presentation is included in the assessment of the Master's thesis.
- (4) In order to register to do a Master's thesis, students must have obtained at least 60 ECTS credits.

## **§ 8**

### **Certificate**

If the student passes the Master's examination, a certificate will be issued according to the respective model from the Appendix to the General Examination Regulations of the Deggendorf Institute of Technology.

## **§ 9**

### **Academic degree and diploma supplement**

- (1) When a student passes the Master's examination, he or she is awarded the academic degree Master of Engineering, abbreviated as "M.Eng."
- (2) A certificate confirming the award of the academic degree will be issued according to the respective model from the Appendix to the General Examination Regulations of Deggendorf Institute of Technology.
- (3) A diploma supplement is attached to the certificate which particularly describes the essential course content forming the basis of the degree, the course of studies and the qualification obtained as a result of the degree.

## **§ 10**

### **Effective date**

These Study and Examination Regulations come into effect on 01.10.2019.

**Appendix 1  
to the Study and Examination Regulations for the Master's degree course Healthy  
and Sustainable Buildings at the Deggendorf Institute of Technology / European  
Campus Rottal Inn**

**Appendix 2  
to the Study and Examination Regulations for the Master's degree course Healthy  
and Sustainable Buildings at the Deggendorf Institute of Technology / European  
Campus Rottal Inn**

## Appendix 1: Overview of the modules for the Master's degree course Healthy and Sustainable Buildings at the Deggendorf Institute of Technology / European Campus Rottal Inn

Master Healthy and sustainable Buildings		SWS					ECTS	Course Type	Examination
		SWS	1. Sem.	2. Sem.	3. Sem.	4. Sem.			
Overview Module Numbers, Module Titles, SWS and ECTS									
Module Nr.	Module								
HSB-1	<b>Environmental Psychology</b> Umweltpsychologie	4	4				5	SU/Ü Wr. Ex. 90 min.	
HSB-2	<b>Sustainable Buildings</b> Nachhaltige Gebäude	8	8				10	SU/Ü Wr. Ex. 120 min.	
HSB-3	<b>Smart Buildings</b> Intelligente Gebäude	8	8				10	SU/Ü Wr. Ex. 120 min.	
HSB-4	<b>Advanced Quantitative and Qualitative Research Methods</b> Fortgeschrittene quantitative und qualitative Forschungsmethoden	4	4				5	SU/Ü RP*	
HSB-5	<b>Environmental Hygiene and Medicine</b> Umwelthygiene und Medizin	4		4			5	SU Wr. Ex. 90 min.	
HSB-6	<b>Analytical Methods</b> Analytische Methoden	4		4			5	SU/Ü Wr. Ex. 90 min.	
HSB-7	<b>Evidence-Based Design 1 (Building envelope)</b> Evidenzbasiertes Design 1 (Gebäudehülle)	4		4			5	SU/Ü RP*	
HSB-8	<b>Ambient Assisted Living</b> Umgebungsunterstütztes Wohnen	4		4			5	SU/Ü Wr. Ex. 90 min.	
HSB-9	<b>Building Safety and Security</b> Gebäudesicherheit und -schutz	4		4			5	SU/Ü Wr. Ex. 90 min.	
HSB-10	<b>Project Management and Implementation</b> Projektmanagement und -durchführung	4		4			5	SU/Ü RP*	
HSB-11	<b>Standards and Legal Frameworks</b> Normen und rechtliche Rahmenbedingungen	4			4		5	SU Wr. Ex. 90 min.	
HSB-12	<b>Simulation-Based Design</b> Simulationsbasiertes Design	4			4		5	SU/Ü RP*	
HSB-13	<b>Evidence-Based Design 2 (Interior design)</b> Evidenzbasiertes Design 2 (Innenraumgestaltung)	4			4		5	SU/Ü RP*	
HSB-14	<b>Refurbishment, Renovation</b> Sanierung, Renovierung	4			4		5	SU/Ü Wr. Ex. 90 min.	
HSB-15	<b>Sustainable and Smart Building Systems</b> Nachhaltige und intelligente Gebäudesysteme	4			4		5	SU/Ü Wr. Ex. 90 min.	
HSB-16	<b>R&amp;D Project</b> F&E Projekt	6			6		5	Ü RP*	
HSB-17	<b>Master's Thesis incl. Presentation</b> Masterarbeit mit Präsentation						30	MA	
<b>Gesamt SWS</b>		<b>74</b>	<b>24</b>	<b>24</b>	<b>26</b>	<b>0</b>	<b>74</b>		
<b>Gesamt ECTS</b>		<b>120</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>120</b>		

### Abbreviations:

Wr. Ex.	Written Examination
RP	Research Paper, during semester *limit: 20 DIN A 4 pages, time to edit 6 weeks
MA	Master thesis
SU	course teaching/exercises/tutorials
Ü	exercise
SWS	semester periods per week
ECTS	European Credit Transfer System

## Appendix 2

### Compulsory attendance for the Master's degree course Healthy and Sustainable Buildings at Deggendorf Institute of Technology / European Campus Rottal Inn

Module	Course	Reason for compulsory attendance	Required attendance	Consequences
HSB-7 HSB-13	Evidence-Based Design 1 Evidence-Based Design 2	Projects and practical designs can only be carried out if active participation is ensured.	At least 75 % of the events offered. Substitute tasks are possible in cases of justified absence.	Student will not receive a pass for project work
HSB-12	Simulation-Based Design	Projects and practical case studies can only be carried out if continuous, active participation is ensured. Knowledge that is built up continually will be compiled using customary software.	At least 75 % of the events offered. Substitute tasks are possible in cases of justified absence.	Student will not receive a pass for project work
HSB-16	R&D project	Research or development projects can only be carried out if continuous, active participation is ensured.	At least 75 % of the events offered. Substitute tasks are possible in cases of justified absence.  If the project is carried out in cooperation with other partners (industry or research institutes, other universities), the regulations agreed between the lecturer and the partners in each case apply.	Student will not receive a pass for project work