

**English language reading version of the Study and Examination Regulations for the master's degree in Sustainable Building Systems at Ansbach University of Applied Sciences  
(SPO SBS/HSAN-20232)**

**from 25 April 2023**

Based on Art. 9 Sentence 1 of the Bavarian University Innovation Act – BayHiG – (BayRS 2210-1-3-WK) of 05 August, 2022 (GVBl p. 414) as amended by §3 of the Sct of December 23, 2022, the Ansbach University of Applied Sciences enacts the following statutes:

**§ 1**

**Purpose of the study and examination regulations**

These study and examination regulations serve to fill out and supplement the General Examination Regulations of the Ansbach University of Applied Sciences (APO/HSAN-20231) as amended.

**§ 2**

**Study objectives and contents**

- (1)<sup>1</sup>The master's degree program „Sustainable Building Systems“ builds on a successfully completed university degree. <sup>2</sup>The aim of the study concept is to provide a broad-based education in the essential fields of building technology based on scientific knowledge and methods through practice-oriented teaching. <sup>3</sup>Through appropriate training in the basic and advanced subjects, students will be able to recognize the determining interrelationships and acquire the flexibility needed to cope with the rapidly progressing technical development. <sup>4</sup>Graduates of this master's program recognize and respond to the constantly changing technical requirements of building technology and develop solution strategies with a view to economic, ecological, social and societal aspects.
- (2)<sup>1</sup>Increased efficiency and the use of renewable energies are a new global challenge that graduates of the program can help shape. <sup>2</sup>Building technology is one of the most innovative areas of the construction industry and is inextricably linked to requirements such as energy efficiency and environmentally conscious construction. <sup>3</sup>Tailored to this, graduates learn to plan and implement heating, ventilation, air conditioning and electrical components as an overall system to low-energy building equipment with renewable heating, ventilation, and air conditioning technology, control engineering and building automation for energy-optimized operation of systems. <sup>4</sup>In addition to cross-trade subjects, simulation tools and building information modeling (BIM) are taught, among other competencies.
- (3)<sup>1</sup>The professional fields of the graduates lie in the classical planning of building services systems as well as in the development of sustainable products, plants, systems of supply engineering and technical building equipment. <sup>2</sup>The dynamic and innovative environment also offers opportunities for start-up companies. <sup>3</sup>Graduates can be employed as

managers, project leaders and experts in the technical field, as well as in the areas of business field development, sales and development of innovative products.

### § 3

#### Study program profile

<sup>1</sup>The English-language master's degree program "Sustainable Building Systems" is a consecutive master's program. <sup>2</sup>It has an application-oriented profile that is aligned with current developments in the educational sector of engineering. <sup>3</sup>The program leads to the degree Master of Engineering (M.Eng.).

### § 4

#### Qualification requirements, admission to studies

(1) Qualification requirements for admission to the master's program are:

1. <sup>1</sup>A completed bachelor's degree comprising at least six academic semesters of study in a relevant course of study, or an equivalent degree, from Germany or abroad, the scope of which generally comprises 210 credit points but at least 180 credit points. <sup>2</sup>Relevant courses of study are, for example, those in engineering, electrical engineering, mechanical engineering, physics, computer science, supply engineering or comparable. <sup>3</sup>The examination board shall decide on the relevance and/or equivalence of the degree.
2. Proof of a specific qualification must be provided by a degree according to No. 1 with an overall examination result of at least 2.5.
3. <sup>1</sup>For degrees that do not have credit points, the documented time hours (workload) are converted into credit points, whereby one credit point corresponds to an hourly load of 30 time hours. <sup>2</sup>If no time hours are verified, 30 credit points are recognized per theoretical semester of study. <sup>3</sup>Practical semesters are recognized with a further 30 credit points insofar as these correspond to the practical study semester at the Ansbach University of Applied Sciences in terms of type and scope.
4. Degrees from other grading systems or degrees without credit points are converted according to the so-called "Bavarian formula" as follows:  
$$N = 1 + 3 \times (P_{\max} - P) \div (P_{\max} - P_{\min})$$

N = grade sought (average grade)  
P = total points/grade shown on the report card  
P<sub>max</sub> = upper benchmark (best possible score/grade)  
P<sub>min</sub> = lower benchmark  
N = 1.0 (for P > P<sub>max</sub>)
5. <sup>1</sup>If applicants can prove that they have completed a university degree or an equivalent degree for which less than 210 credit points but at least 180 credit points were awarded, the prerequisite for passing the master's examination is

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*The English text in this document only provides information on the contents of the corresponding German text. Only the German text is legally binding.*

proof of the missing credit points from the range of courses offered by the Ansbach University of Applied Sciences and under the examination regulations of the Ansbach University of Applied Sciences. <sup>2</sup>The admission is made under the resolute condition that the proof of the missing credit points is provided within one year after the commencement of studies (Art. 43 Para. 5 Sentence 3 BayHSchG). Otherwise, the enrollment expires.

6. Applicants for the master's program who do not yet have an overall examination result at the time of the application deadline for the master's program must submit an official certificate from the previous university by 30 September for the winter semester, showing the successful completion and grade point average with the credit points earned in the previous program.

7. <sup>1</sup>The study program is offered in English, so applicants must prove knowledge of the English language at level B2 of the Common European Framework of Reference of the Council of Europe.

<sup>2</sup>The following certificates are accepted as proof of language proficiency:

- a.) TOEFL (Test of English as a Foreign Language) with 85 points or better.
- b.) University Cambridge First Certificate in English (FCE) Grade C.
- c.) TOEIC Listening/Reading 785 points; Speaking 160 points; Writing 150 points.
- d.) A grade of at least "good" in the Technical English module or comparable English module from the previous degree.
- e.) Applicants whose native language is English are not required from demonstrate sufficient English proficiency.
- f.) IELTS (International English Language Testing System) with a 6.5 or better.

8. If German is not the applicant's native language, sufficient knowledge of the German language must be proven by passing German courses GER A2 through the following certificates:

- a.) German language diploma DSD level 1 (level GER A1)
- b.) Goethe-Institut certificate of level A1
- c.) Test DaF level TDN 3
- d.) DSH certificate DSH-1
- e.) Online German Course at Ansbach University Level CEFR A1

9. <sup>1</sup>Proof of above-average motivation demonstrated in a letter of motivation (minimum 200 words, maximum 500 words) in German or English. <sup>2</sup>The examination board decides on the successful proof of above-average motivation.

(2) There is no entitlement that the master's program will be offered in case of insufficient applicants.

## § 5 Application

(1) <sup>1</sup>Admission to the master's program is only possible in the winter semester. <sup>2</sup>Application must be made in due from 1 May to 31 May.

- (2) The application is only possible online via the Ansbach University of Applied Sciences website.

## **§ 6**

### **Standard period of study and structure of the program**

<sup>1</sup>The Master's degree program "Sustainable Building Systems" is offered as a full-time program at the study site „Campus Feuchtwangen“ of the Ansbach University of Applied Sciences.

<sup>2</sup>The standard study period is three semesters with a total volume of 90 credit points.

## **§ 7**

### **Modules and examinations**

- (1) <sup>1</sup>Per module, credit points are awarded according to the European Credit Transfer System (ECTS) for examinations passed and course-related certificates of achievement. <sup>2</sup>One credit point corresponds to a study load of 30 hours. <sup>3</sup>The number of credit points is specified in Appendix 1 to these study and examination regulations. <sup>4</sup>The compulsory modules, the type of course, the examinations, and the credit points are specified in Appendix 1 to these regulations.

## **§ 8**

### **Study plan, module manual**

- (1) <sup>1</sup>The faculty responsible must draw up a study plan and a module handbook detailing the course of study to ensure that courses are offered and provide information to students. <sup>2</sup>The curriculum shall be adopted by the faculty council and shall be made public at the university. <sup>3</sup> The announcement of new regulations must be made at the latest at the beginning of the lecture period of the semester in which these regulations are to be applied for the first time.

- (2) <sup>1</sup>The curriculum shall contain, in particular, sufficiently specific information.

1. the compulsory modules offered and the compulsory elective modules;
2. the distribution of the semester hours per module and semester;
3. the duration and type of examinations;
4. more detailed regulations on performance and participation certificates.

<sup>2</sup>In addition, the module handbook shall contain sufficiently specific information on

5. the distribution of the workload;
6. the person(s) responsible for the module;
7. the intended learning outcomes, i.e. the knowledge, skills and competencies the students should have acquired after completing the compulsory and elective modules.

- (3) There is no obligation or claim to modules being carried out if there are insufficient participants.

## **§ 9 Examination board**

An examination board is established for the study program under the relevant legal provisions.

## **§ 10 Master thesis**

- (1) Through the master thesis, students should demonstrate that they can systematically and scientifically work on a problem from the field of engineering and solve it in a practice-oriented manner.
- (2) Agreeing on a topic of the master thesis requires that at least 50 credit points of the Master's program have been earned.
- (3) <sup>1</sup>The topic of the master thesis is issued by a full-time professor of the Ansbach University of Applied Sciences. <sup>2</sup>The examination board decides on exceptions.
- (4) The period from the issue of the topic to the submission of the master thesis shall be six months.

## **§ 11 Crediting/recognition of acquired competencies**

<sup>1</sup>Recognition of competencies is only granted upon application. <sup>2</sup>The application must be made in due form using the forms of Ansbach University of Applied Sciences and must be submitted by the end of the first semester of study at the latest. <sup>3</sup>This deadline applies exclusively to crediting/recognizing competencies acquired before enrollment.

## **§ 12 Overall examination grade**

The weighting of the grades of the modules for the calculation of the overall examination grade results from the credit points of the modules as specified in Appendix 1.

## **§ 13 Academic degree**

Based on the successful completion of the program, the University of Applied Sciences Ansbach awards the academic degree Master of Engineering, short form: M.Eng.

**§ 14**  
**Entry into force**

- (1) These study and examination regulations come into effect on the day after they are published.
- (2) The regulations of these study and examination regulations apply for the first time to students who start their studies in the winter semester 2023/24.

Issued on the basis of the resolution of the Senate of Ansbach University of Applied Sciences of April, 19 2023 and the legal supervisory approval by the President of 25 April 2023.

Ansbach, April 25, 2023

Prof. Dr.-Ing. Sascha Müller-Feuerstein  
President

These regulations were approved and announced by public posting in the university on 25 April 2023. Therefore, the day of the announcement is 25 April 2023.