

**Programme and Examination Regulations  
for the Faculty M master's degree programme  
M.Sc. Renewable Energy Systems  
at Technische Hochschule Ingolstadt  
dated 18.07.2016**

**Preamble**

Based on Art. 13 Para. 1, Art. 58 Para. 1 Clause 1 and Art. 61 Para. 2 and 3 Bavarian Higher Education Act (BayHSchG) dated 23 May 2006 (Gazette of Laws and Ordinances (GVBl) p. 245, BayRS 2210-1-1-WFK), in the amended version, Technische Hochschule Ingolstadt adopts the following statutes:

**Preliminary note on language use**

For reasons of readability and clarity, female and male persons are referred to in the masculine form in this text. Such references always include both genders.

**Only the German study and examination regulation is legally binding.**

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## § 1

### Purpose of the Programme and Examination Regulations

These Programme and Examination Regulations serve to fulfil and supplement the Framework Examination Regulations for Universities of Applied Science (RaPO) dated 17 October 2001 (Gazette of Laws and Ordinances (GVBl) p. 686, Bay RS 2210-4-1-4-1-WFK) and the General Examination Regulations of Technische Hochschule Ingolstadt (APO THI) dated 25.07.2011 in the amended version.

## § 2

### Programme objective

- (1) <sup>1</sup>The master's degree programme Renewable Energy Systems essentially builds on the content of the bachelor's degree programme Energy Systems and Renewable Energies offered by Technische Hochschule Ingolstadt and aims to give the student an in-depth and detailed understanding of energy systems and their development. <sup>2</sup>On this basis, graduates are able to develop and apply their own ideas relating to strategy, construction, planning, development, control and management of energy systems in practice. <sup>3</sup>Graduates possess state-of-the-art knowledge in the areas of renewable and conventional energy technology and system analysis and are capable of expanding their knowledge independently within this complex field. <sup>4</sup>This is achieved by means of well-established, practically oriented methods while at the same time building on a sound theoretical basis and a scientific approach, also enabling students to go on to pursue doctoral studies or to work in research. <sup>5</sup>In addition, they are able to convey their expertise to non-experts in a competent manner and communicate with scientists in the production sector at the specialist level.
- (2) <sup>1</sup>The skills and knowledge acquired on the master's degree programme Renewable Energy System enable graduates to take up qualified specialist and leadership positions in all areas of energy technology and to collaborate on or manage complex projects. <sup>2</sup>Graduates acquire the intercultural and communicative skills required for working in an international context. <sup>3</sup>This means students are able to act based on critical reflection and a sense of responsibility with regard to social processes. <sup>4</sup>The master's degree programme also provides students with the opportunity to take up doctoral studies or to work in research.
- (3) The degree programme is taught through the medium of English.

## § 3

### Qualifications for the degree programme

- (1) <sup>1</sup>The qualification requirements for admission to the master's degree programme are as follows:
  - a. a degree in engineering or natural sciences from a German university with at least 210 ECTS credits or an equivalent scope of studies or else an equivalent qualification acquired in Germany or abroad.

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- b. successful participation in the qualification assessment process for the master's degree programme Renewable Energy Systems according to Section 4

and

- c. evidence of sufficient proficiency in English (Level B2 of the Common European Framework of Reference).

(2) <sup>1</sup>In the case of qualifications without credits, the documented hours (workload) are converted into credits, whereby one credit is equivalent to a workload of 25 hours. <sup>2</sup>If no hours are documented, 30 ECTS credits are recognised per theory semester. <sup>3</sup>30 credits are also recognised for internship semesters provided they correspond to the type and scope of practical semesters offered at Technische Hochschule Ingolstadt.

(3) <sup>1</sup>Documentation according to Para. 1 is to be submitted no later than the day of enrolment. <sup>2</sup>If the documentation according to Para. 1 is not submitted by the end of the application period, written confirmation must be provided by the university that plausibly verifies fulfilment of the requirements according to Para. 1 by the end of the enrolment period; the obligation according to Clause 1 still applies.

(4) <sup>1</sup>Applicants who hold a degree or equivalent qualification with a total of less than 210 ECTS credits but at least 180 ECTS credits can be admitted with the approval of the Examinations Committee if the application for admission includes proof of those competencies that are missing. <sup>2</sup>Proof of missing competencies according to Clause 1 means demonstrating compensation for a competency gap of up to 30 additional ECTS credits to achieve the qualification requirement of at least bachelor's degree level as stated in Para. 1 Clause 1. <sup>3</sup>The missing competencies are to be demonstrated as follows by no later than the end of the application period:

a) by providing evidence of job experience outside university studies that is equivalent in substance and scope to an internship semester of a bachelor's degree programme in energy systems and renewable energies or an equivalent bachelor's degree programme such as is offered at Technische Hochschule Ingolstadt, insofar as the qualification submitted in the area of the practical competencies to be demonstrated in relation to the qualification requirements according to Para. 1 Clause 1 exhibits deficits, or

b) by providing evidence of practical or theoretical course and examination achievements at a German or foreign university, in addition to the initial qualification, which are equivalent in substance and scope to the demands of a bachelor's degree programme in energy systems and renewable energies or another equivalent bachelor's degree programme such as is offered at Technische Hochschule Ingolstadt, insofar as the qualification submitted in the area of the theoretical of practical competencies to be demonstrated in relation to the qualification requirements according to Para. 1 Clause 1 exhibits deficits.

(5) The requirements stated in Para.1 (a) to (c) are to be met cumulatively.

(6) In the event of an applicant not being admitted, notification of the reason is issued to them in writing.

## § 4

### Qualification assessment process

- (1) The requirement for participation in the qualification assessment process is submission of an application within the deadline and in the correct form, as well as demonstration of the qualification requirements according to Section 3.
- (2) <sup>1</sup>A committee of two full-time professors is formed in order to implement the qualification assessment process. <sup>2</sup>The committee is appointed by the Faculty Council.
- (3) <sup>1</sup>The criteria for passing the qualification assessment process are as follows:
  - a) 60 % grade in the initial qualification
  - b) 40 % assessment of the candidate's specific aptitude and experience in the area of energy technology, assessed based on the following criteria:
    - aa) academic work/projects as part of the initial qualification in the subject areas of energy technology and the energy sector (max. 10 credits; up to 5 credits per project)
    - bb) practical experience (at least at the level of an internship semester at a German university) in the field of energy technology or areas related to energy technology (max. 10 credits; 0.5 credits per week)

<sup>2</sup>Specific aptitude and experience in the field of energy technology is assessed as follows:

  - 20-16 credits: Grade 1.0
  - 15-11 credits: Note 2.0
  - 10-6 credits: Note 3.0
  - 5-1 credits: Note 4.0
  - 0 credits: Note 5.0

<sup>3</sup>Qualifications are assessed as meeting the requirements if a total grade of "good" (2.5) is scored in the qualification assessment process. <sup>4</sup>The assessment is based on the grade levels set out in Section 7 Para. 5 Framework Examination Regulations for Universities of Applied Science (RaPO).
- (4) <sup>1</sup>The applicant is notified of the result of the qualification assessment process no later than two weeks prior to the start of the degree programme. <sup>2</sup>A justification is to be provided in the event of a negative decision along with information on legal remedies.
- (5) If the applicant does not pass the qualification assessment process, it is possible to apply again at a later date, though not before the following year.

## **§ 5**

### **Type and duration of the degree programme**

- (1) The degree programme is run as a consecutive programme (full-time degree programme).
- (2) <sup>1</sup>The standard duration of studies is three theory semesters with a workload of 90 ECTS credits. <sup>2</sup>The master's thesis should also be written during this period.
- (3) <sup>1</sup>The university may provide support for its courses using virtual teaching methods. <sup>2</sup>Details are set out in the module handbook.

## **§ 6**

### **Credits**

<sup>1</sup>Credits are awarded under the European Credit Transfer System (ECTS) for examinations passed and certificates of achievement attained in each module. <sup>2</sup>Generally speaking, a maximum of 60 credits are awarded per academic year. <sup>3</sup>One credit corresponds to a workload of 25 hours, made up of contact hours and remote learning phases. <sup>4</sup>For details of the number of credits, see Appendix 1 of the Programme and Examination Regulations.

## **§ 7**

### **Modules and credit certificates**

- (1) Details of the modules and the number of hours they involve, the type of classes, examinations, credit certificates acquired during the programme and other provisions are set out in Appendix 1 of these statutes.
- (2) English is the medium of instruction and the language of the examinations.
- (3) All modules are either compulsory or elective compulsory modules:
  1. Compulsory modules are programme modules which must be taken by all students.
  2. <sup>1</sup>Elective compulsory modules are programme modules which can be offered individually or in groups. <sup>2</sup>Every student must make a specific choice according to these statutes. <sup>3</sup>The modules selected are treated as compulsory modules.
- (4) Selected modules along with the examinations and/or credit certificates can be provided in German, as determined in more detail in the module handbook.
- (5) <sup>1</sup>In the event of an insufficient number of qualified students applying, there is no entitlement to the master's degree programme being offered. <sup>2</sup>Neither is there any entitlement to all modules being offered in every semester.

## **§ 8**

### **Module handbook**

- (1) <sup>1</sup>The faculty responsible compiles a module handbook to establish the courses offered and for students' information; this sets out the structure of the degree programme in detail. <sup>2</sup>The module handbook is adopted by the Faculty Council and is to be published within the university. <sup>3</sup>New regulations must be published no later than the start of the lecture period of the semester in which the regulations come into force for the first time.
- (2) The module handbook specifically contains regulations and details pertaining to the following:
  1. breakdown of semester hours per week for each module and semester,
  2. catalogue of elective compulsory modules available including their title and number of semester periods per week,
  3. detailed requirements relating to credit certificates and attendance certificates,
  4. the type and organisation of classes,
  5. the class types of the individual modules insofar as these are not conclusively specified in Appendix 1,
  6. the programme outcomes (learning outcomes) and content of the individual modules,
  7. detailed provisions regarding the type and scope of module examinations, insofar as these are not conclusively specified in Appendix 1,
  8. detailed provisions regarding classes offered via new media,
  9. detailed provisions regarding the final oral examination,
  10. the language of instruction and examination used in the various modules insofar as this is not German.

## **§ 9**

### **Master's thesis**

- (1) In the master's thesis, students are to demonstrate the ability to apply the skills they have acquired in the degree programme in practice to a complex assignment in the form of an independent academic paper.
- (2) <sup>1</sup>The topic of the master's thesis is issued at the start of the second semester. <sup>2</sup>In order for the topic of the master's thesis to be issued, the student must have obtained at least 30 ECTS credits for course and examination achievements.
- (3) The master's thesis is to be completed within six months.
- (4) Otherwise the regulations for issue of the master's thesis apply as set out in the General Examination Regulations of Technische Hochschule Ingolstadt.

## **§ 10**

### **Assessment of achievements, final examination grade**

The final examination grade is calculated based on the weighting of individual grades according to Appendix 1.

## **§ 11**

### **Master's degree examination certificate**

- (1) <sup>1</sup>A master's degree examination certificate is issued according to the model contained in the amended version of the General Examination Regulations of Technische Hochschule Ingolstadt (APO THI). <sup>2</sup>The concrete details of the certificate model are supplemented based on these Programme and Examination Regulations.
- (2) Together with the master's degree examination certificate, a diploma supplement is issued according to the model contained in APO THI.

## **§ 12**

### **Academic degree**

- (1) The academic degree "Master of Science", abbreviation "M.Sc." is awarded by Technische Hochschule Ingolstadt on passing the master's degree examination.
- (2) A degree certificate is issued according to the model contained in the APO THI appendix.

## **§ 13**

### **Entry into force**

<sup>1</sup>These Programme and Examination Regulations become effective as of 01.03.2017. <sup>2</sup>They apply to all students who commence studies in the first semester of this programme from Winter semester 2017/2018.

Issued based on the resolution of the Senate of Technische Hochschule Ingolstadt dated 18.07.2016, the resolution of the University Council dated 15.11.2016 and authorisation by the Bavarian State Ministry of Science and the Arts (StmBW) dated 24.02.2017, ref.: VIII.5-H3441.IN/43/11 and approved by the President.

Ingolstadt, 13.03.2017

Prof. Walter Schober  
President

The statutes were established at Technische Hochschule Ingolstadt on 14.03.2017. This act was published by posting on 14.03.2017. The date of publication is therefore 14.03.2017.