Important note: The International Energy Engineering master programme is legally regulated by the "Studien- und Prüfungsordnung" (Study and Examination Regulations). This document is a legally non-binding translation of the study and examination regulations.

Study and Examination Regulations for the Master's programme International Energy Engineering at the University of Applied Sciences Amberg-Weiden

from

(the General Study and Examination Regulations (ASPO) of the Eastern Bavarian University of Applied Sciences Amberg-Weiden dated 27.05.2020 apply to these study and examination regulations).

On the basis of Art. 13 Para. 1 Sentence 2, Art. 43 Para. 5, Art. 58 Para. 1 Sentence 1, Art. 61 Para. 2 Sentence 1 and Para. 8 of the Bavarian Higher Education Act of 23 May 2006 (GVBl p. 245, BayRS 2210-1-1-WK), as amended, the East Bavarian University of Applied Sciences Amberg-Weiden issues the following statutes:

§ 1
Purpose of the study and examination regulations

These study and examination regulations serve to complete and supplement the Framework Examination Regulations for Universities of Applied Sciences in Bavaria (RaPO) of 17 October 2001 (GVBl p. 686) and the General Study and Examination Regulations of the Eastern Bavarian University of Applied Sciences Amberg-Weiden of 27 May 2020, in their current version.

§ 2
Aim of the study programme

(1) [1]The aim of the degree programme is to train engineers for national and international specialist and management tasks in all areas of energy technology with application-oriented teaching on a scientific basis. [2]They are able to independently comprehend new, complex tasks and problems, to analyse them, to develop innovative solutions and to critically reflect on them. [3]They have acquired the competences to define goals independently, to develop knowledge and to apply it in a problem- and goal-oriented manner.

(2) [1]Building on a first university degree qualifying for a profession in the field of technology, students receive an interdisciplinary education in an international environment. [2]In addition to technical/scientific skills, students are also taught analytical, creative as well as methodical, communicative and intercultural skills.

(3) [1]The technical content reflects the entire range of renewable, but also conventional energy technologies as well as energy efficiency technologies, with a special focus on innovative technologies and approaches. [2]In addition, there is interdisciplinary content such as energy law and economics. [3]In many teaching modules, students can choose from an extensive range of elective modules and thus set individual focus in which they can expand competences and in particular deepen subject-specific knowledge.

(4) [1]The graduates have an in-depth understanding of energy systems and energy technology challenges. [2]They are able to develop, dimension, build and operate energy systems and to optimise them. [3]They are also able to work in areas such as consulting, advisory, strategic planning, product/process development, simulation, in the national, but especially also in an international environment. [4]In addition to the subject-specific competences, the study programme should impart joy in learning and in the creative application of knowledge, promote the ability to criticise and reflect and encourage an attitude of responsibility in the profession and in society.

(5) The competences in the field of scientific work and procedures acquired in this Master's degree programme open up the possibility of a scientific career with activities in global energy research and/or a doctorate.

§ 3
Programme profile

The International Energy Engineering degree programme is a consecutive Master's degree programme with an application-oriented profile.

§ 4
Standard period of study, start, language and structure of the degree programme

(1) The degree programme is offered as a full-time degree programme and comprises a standard period of study of three semesters with a total of 90 ECTS credits.

(2) The Master's thesis is written in the last semester of full-time study.

(3) [1]Students with a first degree with 210 ECTS credits may begin their studies in the summer semester as well as in the winter semester, starting in the summer semester 2022. [2]In the winter semester 2021/2022, it is not possible for students with an initial degree with 210 ECTS credits to begin their studies. [3]Students with less than 210 ECTS credits in their first degree can only begin their studies in the winter semester. [4]In justified individual cases, the examination board of the degree programme may also permit deviations from sentence 2.

(4) As an international degree programme, the degree programme is taught in English.

(5) Detailed information on the structure of the degree programme and the timetable (study plan) can be found in the module overview.

§ 5
Qualification requirements

(1) Qualification requirements for admission to the Master's degree programme in International Energy Engineering are:

1. [1]A successfully completed university degree programme comprising at least six theoretical semesters of study or an equivalent degree, the scope of which usually comprises 210 ECTS credits, but at least 180 ECTS credits. [2]Graduates of a Bachelor's degree programme with less than 210 (but at least 180) ECTS points can provide missing practical competences by means of practical professional activities which correspond to the requirements of the practical study semester in the undergraduate degree programmes at our university. [3]In addition, graduates of a Bachelor's degree programme with less than 210 (but at least 180) ECTS credit points are given the opportunity to prove missing theoretical competences by successfully completing modules from an undergraduate degree programme at the

university. [4]The modules to be completed are usually part of the study and examination regulations of the undergraduate technical Bachelor's degree programmes of the faculties MB/UT, EMI or WIG in the respective valid version. [5]In relation to the failure of modules and their repetition options, the General Study and Examination Regulations (ASPO) of the East Bavarian University of Applied Sciences Amberg-Weiden shall apply. [6]The examination board determines the modules to be taken in detail. [7]If the missing competences are not proven by the end of the second semester, exmatriculation takes place at the end of this semester.

2. [1]The university degree according to No. 1 must have been completed with an overall examination grade of 2.5 or better. [2]If a conversion of the overall grade is necessary due to deviating grading systems, this is carried out according to the so-called "modified Bavarian formula" in accordance with the specifications of the general study and examination regulations of the OTH Amberg-Weiden (ASPO). [3]An applicant with a degree from a foreign university is recommended to submit a certificate of recognition of the degree issued by a certified institution (e.g. uni-assist) by the end of the application period. [4]The decision on admission to the degree programme shall be made by the examination board. [5]The examination board may decide that the grade criterion mentioned in sentence 1 shall be deemed to be fulfilled if the applicants concerned prove in writing that they belong to the best 40% of the graduates of their degree programme in their final year; the criterion of comparison shall be the overall grade achieved in the final examination.
3. proof of suitability for the degree programme in accordance with § 6.

(2) [1]Engineering courses of study such as energy technology, renewable energies, environmental technology, mechanical engineering, electrical engineering, process engineering, supply engineering, civil engineering, industrial engineering with a corresponding technical focus or equivalent courses of study shall be considered relevant. In addition, competences amounting to at least 20 ECTS credits from the following fields of competence must be proven:

Mathematics, fundamentals of electrical engineering, fundamentals of thermodynamics, fundamentals of fluid mechanics, fundamentals of chemistry, fundamentals of physics, computer science/programming.

[2]The examination board shall decide on the relevance of the course of study and the competences acquired.

(3) [1]Applications for admission to the Master's degree programme for a course of study beginning in the summer semester shall be submitted to the university by 15 January, for a course of study beginning in the winter semester by 15 July of the year in question. [2]The university may extend these deadlines if necessary.

(4) [1]Applicants for the Master's degree programme who, at the time of the application deadline for the Master's degree programme, do not yet have an overall examination result, but who can demonstrate that they have successfully completed their first degree by the start of the Master's degree programme, shall be admitted to the programme on condition that they provide the necessary evidence within one semester after commencing the Master's degree programme. [2]The credible proof of graduation shall be provided by submitting proof of grades (e.g. Transcript of Records), which certifies that all the academic achievements required for the successful completion of studies have been achieved. [3]If the required evidence (transcript of records or corresponding evidence of the overall examination result) is not available by the end of the first semester, exmatriculation shall take place at the end of that semester.

(5) [1]A sufficient knowledge of the English language must be proven by a language certificate corresponding to level B2 according to the Common European Framework of Reference for Languages. [2]This proof can be provided by a valid/current IBT (Internet-Based Test) Test of English as a Foreign Language (TOEFL) with a score of at least 81, IELTS Cambridge Test with a score of 6, the Test of English for International Communication (TOEIC) with a score of at least 780, or equivalent proof, e.g. through corresponding modules in the degree certificate.[3] Proof is not required if the higher education entrance qualification or the higher education entrance qualification was acquired in English.

(6) Applicants who have acquired neither a first degree nor the higher education entrance qualification in German must provide proof of sufficient knowledge of the German language in accordance with § 3 Para. 3 or Para. 5 of the statutes on the matriculation procedure of the East Bavarian University of Applied Sciences.

(7) [1]If applicants are not admitted, they shall be informed of this in writing with a statement of reasons. [2]A new application is only possible once and at the earliest in the following application period.

§ 6
Proof of suitability for the specific degree programme

(1) The prerequisite for participation in the aptitude test is the submission of the required application documents in due form and time and in a complete form.

(2) The application for participation in the aptitude test takes place at the same time as the application for admission to the degree programme and must be submitted to the OTH Amberg-Weiden by the application deadlines specified in the study and examination regulations.

(3) A commission consisting of two full-time professors shall be formed to conduct the aptitude test. The appointment of the commission is made by the faculty council.

(4) [1]Criteria for passing the aptitude test are:

a. 60% grade of the first degree. Insofar as a conversion of the overall grade is necessary due to deviating grading systems, this shall be carried out according to the so-called "modified Bavarian formula" in accordance with the specifications of the General Study and Examination Regulations of the OTH Amberg-Weiden (ASPO).
b. 40 % evaluation of specific aptitude and experience in the competence field of energy technology, which is measured using the following criteria:
    i. scientific papers/project work in the first degree in the subjects of energy technology, energy efficiency and energy economics (max. 10 points; up to 5 points per project).
    ii. practical experience (which corresponds at least to the level of a practical study semester at a German university) in the field of energy technology or fields related to energy technology (max. 10 points; 0.5 points per week).

[2]The assessment of specific aptitude and experience in the field of competence energy technology is based on the following:
- 20-16 points: Grade 1.0
- 15-11 points: Grade 2.0
- 10-6 points: Grade 3.0
- 5-1 points: Score 4.0
- 0 points: Grade 5.0

(5) Suitability shall be deemed to have been established if the suitability procedure is assessed with at least the overall grade (weighted average of para. 4 letters a and b) "good" (2.5).

(6) [1]A record shall be made of the procedure for determining the degree programme-specific aptitude, which shall include the following information:
- the name of the applicant,
- date and place,
- the names of the members of the selection committee involved
- the evaluation of the criteria mentioned in Paragraph 4,
- the result of the selection interview.

[2]The record shall be signed by the members of the selection committee.

(7) [1]The applicant shall be notified in writing of admission or non-admission no later than two weeks before the start of studies. [2]Admission shall only be valid for the next possible enrolment date after the aptitude test.

(8) Applicants who have completed their relevant first degree with an overall grade of "better than 1.3" or who demonstrably belong to the top 10 % in the percentage rank of the degrees of their degree programme shall be deemed to have provided proof of suitability for the degree programme.

(9) [1]If the applicant achieves the result "not passed" in the aptitude test, application is possible for a further deadline. [2]A third application is excluded.

§ 7
Teaching modules and credits

(1) Annex 1 to these Study and Examination Regulations contains an overview of the teaching modules, the type of courses, the credits to be achieved and the weighting of the modules for the formation of the overall grade as well as an overview of the types of courses and forms of examination used.

(2) The modules are divided into compulsory and elective modules.
a) Compulsory modules are obligatory for all students.
b) Elective modules are to be selected from a given range. They are treated like compulsory modules.

(3) The learning objectives and contents of the teaching modules shall be specified in the module overview.

(4) [1]There is no entitlement to all compulsory elective modules being offered. [2]In addition, there is no entitlement to courses being held if there are not enough participants.

(5) One ECTS point usually corresponds to a workload of 30 hours.

§ 8
Study plan and module overview

(1) [1]In addition to these study and examination regulations, the Faculty of Mechanical Engineering/Environmental Engineering prepares a module overview and a study plan, which are adopted by the Faculty Council and published by the university. [2]The announcement of new regulations takes place at the latest at the beginning of the lecture period of the semester which they affect for the first time.

(2) [1]The teaching modules as well as the associated course and examination achievements shall be described in the module overview. [2]The module overview shall contain in particular the following information on the individual modules:

a) Name/description of the module (German/English)
b) Frequency of offer
c) ECTS points (incl. distribution of workload)
d) Teachers/module leaders
e) Admission requirements
f) Learning objectives
g) Course contents
h) Course and examination achievements
i) the language of instruction and examination in the individual modules (English or German)
j) applicability in the further course of study or university-wide.

(3) [1]The course of study shall be described in the curriculum. [2]The study plan shall contain the following information:
a) Time schedule of the programme, chronological sequence of the modules
b) number of attendance hours (SWS) per module
c) ECTS credits per module

§ 9
Master's thesis

(1) The prerequisite for registering for the Master's thesis and issuing a topic is that the student has achieved at least 50 ECTS points.

(2) Registration for the Master's thesis and issue of the topic can take place at the beginning of the second semester at the earliest and should take place in the first month of the third semester at the latest.

(3) [1]The processing time for the Master's thesis shall be six months. [2]It may be extended by two months by the examination board if the reasons for the extension are not the responsibility of the respective student.

(4) The Master's thesis must be written in English.

§ 10
Assessment of examination achievements and overall examination grade

(1) For each module that has been assessed with at least the grade "sufficient" and for the Master's thesis that has been assessed with at least the grade "sufficient", the ECTS credits according to Annex 1 shall be awarded in full.

(2) The degree programme is successfully completed when all coursework and examinations have been successfully completed.

(3) The weighting of grades in the formation of the overall grade results from the weighting according to the ECTS points of the modules according to Annex. The grade of the Master's thesis shall be weighted twice.

§ 11
Academic Degree

On successful completion of the degree programme, the academic degree "Master of Engineering", abbreviated to "M.Eng.” shall be awarded.

§ 12
Examination Board

The examination board responsible for the degree programme is the examination board of the Faculty of Mechanical Engineering/Environmental Engineering with one chairing member and two further members appointed by the Faculty Council.

§ 13
Entry into force

These study and examination regulations shall come into force with effect from 01.102021 and shall apply to students who commence their studies in the winter semester 2021/2022 or later.

Amberg, Juli 2021

Annex 1 to the study and examination regulations for the Master's degree programme International Energy Engineering

1	2	3	4	5	6
Nr.	Module name	ECTS-Points	SWS	Type of Teaching event	Module examination[1)]
1	**Compulsory modules**	**25**	**20**		
1.1	Simulation of Energy Systems	5	4	SU, Ü	ModA
1.2	Scientific Research and Methods	5	4	Sem	ModA
1.3	Innovation Management and Communication	5	4	SU	Kl 90
1.4	International Energy Law and Energy Economics	5	4	SU, Ü	Kl 90
1.5	Project with Seminar	5	4	Proj, Sem	ModA
2	**Elective modules[3)]**	**35**	**28**		
2.1-2.7	7 modules from the elective module catalogue[2)]	5 each	4 each	SU, Sem, Ü, Pr, Proj, Exk	Kl or mdlP or Präs or ModA or praP
3	**Master Thesis**	**30**	**24**	MA	MA
	Sum ECTS / SWS	**90**	**72**		

[1)] The module examinations can be supplemented on a voluntary basis via a bonus system (see General Study and Examination Regulations (ASPO) of the OTH Amberg-Weiden).

[2)] Elective modules specific to the degree programme:

In total, the ECTS points shown in column 3 must be acquired from the entire range of elective modules. The type of course as well as the module examination result from the respective module descriptions, which are published in a module overview by the faculty. They are shown in the module catalogue, which is integrated in the module overview and must be decided by the Faculty Council.

Abbreviations:

SU	Seminar based teaching
Sem	Seminar
Ü	Exercises
Pr	Practical training
Proj	Project
Exk	Excursions
MA	Mater Thesis

ModA	Module Work
Kl	Written exam
mdlP	Oral exam
Präs	Presentation
praP	Practical exam