Study and Examination Regulations (SPO) for the Master’s Degree Course of Studies in

Electrical Engineering

at Kempten University of Applied Sciences

(Hochschule für angewandte Wissenschaften Kempten)

(SPO EE-Ma/HKE)

dated 08th July 2016

On the basis of Article 13 Paragraph 1 Sentence 2, Article 57 Paragraph 2 Sentence 4, Article 58 Paragraph 1 Sentence 1, Article 61 Paragraph 2 Sentence 1 and Article 66 Paragraph 1 of the Bavarian Law on Higher Education (Bayerisches Hochschulgesetz, BayHSchG) dated 23rd May 2006 (Bavarian Law and Ordinance Gazette [GVBl] p. 245, Bavarian Compilation of Laws [BayRS] 2210-1-1-WFK), Kempten University of Applied Sciences (Hochschule für angewandte Wissenschaften) adopts the following

STATUTES:

§ 1

Purpose of the Study and Examination Regulations (SPO)

These Study and Examination Regulations are meant to implement and supplement the General Examination Regulations for Universities of Applied Sciences (Rahmenprüfungsordnung, RaPO) dated 17th October 2001 (Bavarian Law and Ordinance Gazette [GVBl] p. 686) and the General Examination Rules of Kempten University of Applied Sciences (APO) dated 04th October 2013 as amended.

§ 2

Purpose of the Course of Studies

The Master’s degree course of studies “Electrical Engineering” has been designed as an application-oriented consecutive course of studies taught in the English language. It is intended to qualify graduates from Bachelor courses of studies of Electrical and Information Engineering as well as from comparable areas for pre-eminent activities in planning, development and operation of electrical, electronic and information-technology systems as well as for application-oriented research. Accordingly, the course contents aim at the thorough improving of methodological competences and the acquisition of practice-oriented specialized knowledge in various subdomains of Electrical and Information Engineering. Moreover, independent scientific work and interdisciplinary thinking as well as teamwork and leadership competences in an international setting will be specifically practised.
§ 3
Standard Period of Study and Structure of the Course of Studies, Part-Time Studies

(1) The standard period of study is three (3) six-month semesters. The course of studies is offered as a full-time course. The first two (2) semesters include lectures, exercises and work placement offered in modules of at least four (4) semester hours per week / credit hours (SWS) and five (5) credit points (CP) according to the European Credit Transfer System (ECTS). The third semester is aimed for the preparation of the Master’s thesis, which can also be elaborated in cooperation with a company in the interest of rapid integration of the students into practical working life. The Master’s thesis is accompanied by a seminar. The Master's Degree Course of Studies can begin in the summer semester or the winter semester.

(2) Alternatively, the course of studies can also be done on a part-time basis. In this case the course of studies encompasses six (6) six-month semesters. The first four (4) semesters include lectures, exercises and work placement offered in modules of at least four (4) semester hours per week / credit hours (SWS) and five (5) credit points (CP) according to the European Credit Transfer System (ECTS). The fifth and sixth semesters are aimed for the preparation of the Master’s thesis. The admission requirements are the same as those of the full-time course of studies. Participation in the part-time course of studies has to be registered with the Student Office at the beginning of the studies. A switch from the full-time course of studies to the part-time course of studies at a later point in time is not possible.

§ 4
Qualification for the Course of Studies

(1) A Bachelor or Diploma course of studies of Electrical and Information Engineering completed at a German university or an equivalent degree is the admission requirement. If the student collected at least 180 CP but less than 210 CP in his / her Bachelor course of studies, he / she has to collect the remaining CP missing to obtain the competence level of 300 CP from the modules offered in the university’s basic programme no later than by his / her Master’s Degree; the Examination Board will decide which additional modules have to be taken by the student. The final mark obtained in the initial course of studies has to be at least 2.5.

(2) Qualified graduates from comparable courses of studies abroad will also be considered. In each individual case, a decision on the admission of applicants for the course of studies will be made by the Examination Board on the basis of the certificates submitted.

(3) Moreover, the student has to prove sufficient command of written and spoken English. For this purpose, the following minimum results have to be obtained in the TOEFL Test (Test of English as a Foreign Language) mentioned below or in the IELTS Test (International English Language Testing System):

- Internet-based TOEFL Test (IBT): 75.0 points
- IELTS Test: 5.5 points
This requirement is deemed as having been fulfilled for all graduates of an English-speaking course of studies. The same applies to all students who have obtained a mark of at least 2.5 in English as a regular compulsory or elective module taken during their course of studies.

(4) Applicants for admission to the course of studies who are neither Germans within the meaning of the German Basic Law (Grundgesetz) nor persons who are treated as Germans according to legal provisions but who are nationals of another member country of the European Union or of a third country and who did not complete their initial course of studies or acquire their university-entrance qualification in Germany have to prove their basic knowledge of German of the reference level A1 of the Common European Framework of Reference for Languages (CEFR) no later than during their first year of studies pursuant to Article 42 Paragraph 1 of the Bavarian Law on Higher Education (BayHSchG) in combination with the Framework for German Language Tests for Studies at German Universities (Rahmenordnung über Deutsche Sprachprüfungen für das Studium an deutschen Hochschulen [RO-DT]).

(5) Should the Syllabus provide for students to be sent to a partner university abroad for a study period, the applicants for admission to the course of studies also have to fulfil the respective relevant admission and entry requirements of the partner university in question.

(6) Study and examination results can be credited to the Master’s degree course for graduates of courses of studies set forth in Paragraph 1 above; Article 63 Paragraph 1 of the Bavarian Law on Higher Education (BayHSchG) shall remain unaffected. The decision about this will be made by the Examination Board.

§ 5

Modules

(1) The modules, the corresponding numbers of CP and the semester hours per week / credit hours (SWS), the types of courses, examinations and any possible academic assessments during the course are defined in the Enclosure to these Statutes.

(2) All modules are either compulsory modules, elective modules or optional modules.

1. Compulsory modules are those modules of the Master’s degree course of studies that are binding for all students.

2. Elective modules are those modules of the programme that are offered as an alternative. Every student must select a certain number of these modules in accordance with these Study and Examination Regulations. A total of five (5) elective modules have to be selected. The modules selected are treated as compulsory modules.

3. Optional modules are modules that are not mandatory for achieving the objectives of the course of studies. They can be selected additionally by students from the entire range of courses of the Master’s degree courses of studies offered by the universities involved. Upon successful completion, the optional
modules with their CP and the respective marks are listed in the certificate. However, they do not count towards the overall examination mark.

(3) The Master's degree course of studies comprises a total of 90 CP, of which 35 CP are awarded for compulsory modules, 25 CP are awarded for elective modules and 30 are awarded for the Master's thesis.

§ 6
Syllabus and Module Handbook

(1) A Syllabus detailing the course of studies is drawn up by the respective faculty to guarantee courses offered and to provide up-to-date information for the students. The Syllabus is adopted and published in the university by the Faculty Board. New regulations must be published in the university no later than before the beginning of the semester in which the regulations become effective for the first time. The Syllabus provides concrete details of the terms of this Study and Examination Regulations, especially as regards:

1. The distribution of semester hours per week / credit hours (SWS) and CP for each module and each study semester as well as the type of course.

2. The scientific elective modules offered, indicating the number of semester hours per week / credit hours (SWS), the CP and the type of course.

(2) The following details are documented in the Module Handbook:

1. The study objectives, the study contents, any knowledge requirements and the literature of the individual modules.

2. Module-specific information concerning academic assessments and examinations as well as aids which are admissible in each case.

(3) The university is under no obligation to actually offer all elective modules and optional modules available. Likewise, there is no obligation to hold such scheduled courses when enrolment is insufficient.

(4) A registration process will be implemented for the elective modules and the optional modules to guarantee courses offered and to provide information for the students. Opting out of an elective module or the optional module already signed up for is possible once on request.

§ 7
Registration Process for Elective Modules and Optional Modules

(1) Besides ensuring high-quality studies, the objective of the registration process is to enable all students studying according to the guidelines set forth in the relevant Study and Examination Regulations to complete their course of studies within the standard period of studies.

(2) A binding registration process will be carried out in order to ensure equal opportunities for the students even in the case of a limitation of the admission capacity of individual modules or courses.
(3) If there is a maximum number of participants stipulated by the Faculty Board, the choice will be made from among the students
  - who are enrolled in the course of studies and
  - who have registered in time for the elective modules and the optional modules until the deadlines stipulated by the Faculty

as follows:

1. Those students whose academic progress requires attendance of an elective module will be given first priority.

2. As a second priority, the remaining places for elective modules will be allocated according to academic progress with the number of CP so far obtained by the student being decisive.

3. The remaining places for optional modules will be allocated as a third priority.

4. Should the admission priority be the same, the academic progress will also be decisive in accordance with the criteria mentioned in Number 2 above. In the case of identical requirements, a decision by lots will be made.

§ 8

Studying Abroad, Partner Universities

(1) Students can apply in advance for the crediting of academic achievements planned to be obtained abroad. For that purpose the Learning Agreement has to be filled in within the scope of the Erasmus exchange programme of the European Union. The decision about the creditability of compulsory modules and elective modules will be made by the Examination Board.

(2) Conversion of the marks given for academic achievements obtained abroad will be made upon application of the student according to the guidelines set by the Examination Board.

(3) Equivalent compulsory modules and elective modules taught at partner universities in Germany and abroad which are stipulated in the respective cooperation agreement can be recognised without examination of the individual case upon application of the student.

§ 9

Standard deadlines, Retaking module examinations

(1) With regard to standard deadlines and time-limits, the regulations outlined in Article 11 of the General Examination Rules (APO) of Kempten University of Applied Sciences shall apply.

(2) If an examination is assessed with the mark “nicht ausreichend (fail)”, it can be retaken once. A second retake is possible in no more than three (3) modules. For the retake examinations the deadlines outlined in Article 10 Paragraph 1 Sentences 4 and 5 of the RaPO (General Examination Regulations for Universities of Applied Sciences) shall apply.
§ 10

Post-exam review

(1) A post-exam review is offered for the individual examinations of the preceding semester within the first four (4) weeks of the semester following the publication of marks. The examiner will determine the place and time of the review.

(2) Should the date fall within a practical semester or a semester spent abroad, a prolongation of the period allowed for post-exam review by one semester can be granted provided that proof of the stay abroad was produced.

(3) The application for post-exam review according to Paragraph 2 above has to be made with the examiner in question within the first four (4) weeks of the semester following the publication of marks; he will determine the place and time of the review within the first four (4) weeks of the semester following the practical semester or a semester spent abroad.

§ 11

Examination Board

(1) For the Master’s degree course of studies “Electrical Engineering” an Examination Board will be formed, which consists of a chairman and at least two full-time professors of the faculty “Electrical Engineering” who teach in the course of studies.

(2) The Faculty Board will appoint the chairman and the other members of the Examination Board.

§ 12

Master’s Thesis

(1) Students have to prepare a Master’s thesis in order to obtain the Master’s Degree. The Master’s thesis is intended to show that the student is in a position to apply the knowledge, skills and abilities acquired during the course of studies to complex application-oriented tasks in an academic paper written independently by the student.

(2) The Master’s thesis is either prepared at Kempten University of Applied Sciences, at one of the partner universities or in cooperation with a company.

(3) Once a student has obtained at least 40 credit points, he / she can register for the Master’s thesis provided that the Scientific Project has been passed.

(4) The time allowed for the preparation of the Master’s thesis is six (6) months in the full-time course of studies and twelve (12) months in the part-time course of studies. In case of special circumstances beyond the student’s control, this time limit can be extended by no more than three (3) months in the full-time course of studies and by no more than six (6) months in the part-time course of studies. An informal application to that effect has to be addressed to the Student Office.

(5) The Master’s thesis has to be prepared in English, and it has to be submitted to the Student Office in two (2) bound copies.
(6) The results of the Master’s thesis have to be presented by the student during a seminar. Said seminar will be taken into consideration in the assessment of the Master’s thesis.

(7) Should it be assessed with the mark “nicht ausreichend (fail)”, it is regarded as failed. The Master’s thesis can be repeated once. In the Examination Certificate the underlying numerical mark with one decimal place will be added as a figure in brackets to the mark of the Master’s thesis.

§ 13
Assessment of Examinations and Overall Examination Mark

(1) Examination results are assessed using the following figures and marks (approximate English equivalents in brackets):

1.0; 1.3 = sehr gut (very good)
1.7; 2.0; 2.3 = gut (good)
2.7; 3.0; 3.3 = befriedigend (satisfactory)
3.7; 4.0 = ausreichend (sufficient)
5.0 = nicht ausreichend (fail)

(2) The overall examination mark of the Master’s Degree Course of Studies is calculated by weighting the final marks of all examination results according to their respective numbers of CP. The overall examination result is the arithmetic mean of the weighted final marks rounded off to one decimal place.

(3) The Master’s examination is deemed as being passed if all study results to the amount of 90 CP were completed with a mark of at least “ausreichend (sufficient)”. 

(4) In the Master’s Certificate the underlying numerical marks with one decimal place will be added as a figure in brackets to the final marks.

§ 14
Master’s Degree Examination Certificate, Academic Degree

(1) If the student has passed the Master’s Degree Course of Studies, a certificate according to the valid Enclosure to the General Examination Rules of Kempten University of Applied Science (APO) is issued which contains all individual marks and credit points of the individual modules as well as of the Master’s thesis.

(2) In addition, a Diploma Supplement describing the course of studies and the study results is issued. The Transcript of Records documents the examination results in the English language.

(3) Together with the overall examination mark (the so-called “absolute mark”) the actual percentage figure of all the graduates per “absolute mark” is shown in the Diploma Supplement with the six (6) previous semesters having to be taken as the basis of the cohort. The requirement for this is that sufficient statistical data are available for such a cohort to be formed.
(4) On the basis of a passed Master’s Course of Studies, Kempten University of Applied Science awards the academic degree of “Master of Engineering”, abbreviated as “M.Eng.”

(5) A document certifying the academic degree based on the respective template in the Enclosure to the General Examination Rules (APO) of Kempten University of Applied Science is issued with due consideration for these Study and Examination Regulations.

§ 15
Effective Date

These Study and Examination Regulations shall come into force on the day of publication.
They shall apply to students of the Master’s Degree Course of Studies in Electrical Engineering commencing their course of studies from the winter semester 2016/2017.

§ 16
Prevailing Version

This is a translation of Study and Examination Regulations worded in German. In case of doubt the German version shall be binding.
Issued based on the resolutions of the senate of Kempen University of Applied Sciences of 14th June 2016 as well as on the approval of the President of Kempen University of Applied Sciences of 14th June 2016.

Kempten, 08th July 2016

sgd. Robert F. Schmidt
Prof. Dr. Robert F. Schmidt
- President -

These Statutes were set down at Kempen University of Applied Sciences on 12th July 2016. Their establishment was posted and published in the University on 12th July 2016. Hence the day of publication is 12th July 2016.
Enclosure 1: Overview of Courses and Academic Assessments of the Postgraduate Master's Degree Course “Electrical Engineering” at Kempten University of Applied Sciences

<table>
<thead>
<tr>
<th>No.</th>
<th>Course, Module</th>
<th>CP</th>
<th>SWS</th>
<th>Type of Course</th>
<th>Written Examination Duration in Minutes</th>
<th>Admission Requirements</th>
<th>Academic Assessment during the Course</th>
<th>Additional Regulations</th>
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<tr>
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<td>Advanced Control Systems</td>
<td>5</td>
<td>4</td>
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<td>Microelectronics</td>
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<td>4</td>
<td>V/Ü/Pr</td>
<td>90</td>
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<td>Telecommunications Systems</td>
<td>5</td>
<td>4</td>
<td>V/Ü/Pr</td>
<td>90</td>
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<td>5</td>
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<td>90</td>
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<td>V/Ü/Pr</td>
<td>90</td>
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<td></td>
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<td>EC2xx</td>
<td>Five (5) elective modules 2)</td>
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<td>V/Ü/Pr</td>
<td>90</td>
<td>1)</td>
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</table>

1) Successful participation in the accompanying work placement is the requirement for the admission to the written exam.

2) Five (5) elective modules with 5 CP each have to be selected. Among others, the elective modules cover the following areas: Sensors, Electronics, Telecommunications, Control Systems, Power Systems, Renewable Energy, Human Resource Management and Leadership. The modules that are currently offered can be seen in the syllabus.

3) The seminar has the following tasks:
   - instruction in scientific work,
   - practising scientific presentations,
   - professional exchange of information,
   - coordination of the next procedural steps.

The presentation of the project work or Master’s thesis, respectively, contributes 15 percent to the calculation of the module mark of the Master’s thesis.
**List of Abbreviations used:**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>APO</td>
<td>General Examination Rules of Kempten University of Applied Sciences (<em>Allgemeine Prüfungsordnung der Hochschule Kempten</em>)</td>
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<tr>
<td>CP</td>
<td>Credit Points according to the European Credit Transfer System (ECTS)</td>
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<td>LN</td>
<td>academic assessment</td>
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<td>project work</td>
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<td>Pr</td>
<td>work placement</td>
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<td>RaPO</td>
<td>General Examination Regulations for Universities of Applied Sciences (<em>Rahmenprüfungsordnung für die Fachhochschulen</em>)</td>
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<td>seminar</td>
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<td>SWS</td>
<td>semester hours per week / credit hours</td>
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