

Programme and Examination Regulations for the master's degree programme “International Automotive Engineering” at Technische Hochschule Ingolstadt dated 27.06.2011

in the version including the amendment dated 12.06.2017

Based on Art. 13 Para. 1 Clause 2, Art. 58 Para. 1 Clause 1 and Art. 61 Para. 2 Clause 1 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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Section 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.

Section 2

Programme objective

- (1) ¹The master's degree programme International Automotive Engineering aims to enable students to acquire scientifically informed, multidisciplinary specialist expertise as a basis for the innovative and strategic development of systems in the field of vehicle electronics and vehicle safety. ²The programme content is geared towards the various tasks involved in these two system areas; students pursue an individual specialisation. ³Importance is also attached to pursuing the theoretical scientific fundamentals in greater depth, enabling students to embark on a doctorate programme or a career in the scientific field. ⁴In addition, students' analytical expertise, methodological competence and key qualifications are strengthened.
- (2) ¹The skills and knowledge acquired on the master's degree programme International Automotive Engineering enable graduates to take up qualified specialist and leadership positions in the development and production of automobile systems and to collaborate on or manage complex projects. ²Graduates meet international requirements and are adequately prepared to take on responsibility and managerial tasks.

Section 3

Qualification requirements

- (1) ¹The qualification requirements for admission to the master's degree programme are as follows:
 - a) a bachelor's degree in the field of engineering, general computer science or computer engineering from a German university with at least 210 ECTS credits or an equivalent qualification acquired in Germany or abroad. ²A certificate must be submitted as proof. ³The Examinations Committee decides on equivalence and conversion based on the principles set out in Art. 63 Para. 1 Bavarian Higher Education Act (BayHSchG)
 - b) successful participation in a qualification assessment process for the master's degree programme International Automotive Engineering according to Section 4and
 - c) evidence of sufficient proficiency in English (Level B2 of the Common European Framework of Reference).

²The above requirements are to be met cumulatively.

- (2) ¹In 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. ²If no hours are documented, 30 ECTS credits are recognised per theory semester. ³30 credits are also recognised per internship semesters provided they correspond to the type and scope of practical semesters offered at Technische Hochschule Ingolstadt.
- (3) ¹Documentation according to Para. 1 is to be submitted no later than the day of enrolment. ²If the documentation according to Para. 1 (a) Clause 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 (a) Clause 1 by the end of the enrolment period; the obligation according to Clause 1 still applies.

(4) ¹Applicants with less than 210 but at least 180 ECTS credits are admitted if the other requirements according to Para. 1 are met and the application for admission demonstrates the missing competencies. ²Proof 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. ³The 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 study which is equivalent in substance and scope to an internship semester of a bachelor's degree programme in the field of engineering, computer science or computer engineering such as is offered at Technische Hochschule Ingolstadt, insofar as the qualification submitted in the area of the practical competencies to be demonstrated exhibits deficits in relation to the qualification requirements according to Para. 1 Clause 1, or
- b) by providing evidence of a 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 the field of engineering, computer science or computer engineering such as is offered at Technische Hochschule Ingolstadt, insofar as the qualification submitted in the area of the theoretical or practical competencies to be demonstrated exhibits deficits in relation to the qualification requirements according to Para. 1 Clause 1.

⁴The Examinations Committee decides on equivalence based on the principles set out in Art. 63 Para. 1 Bavarian Higher Education Act (BayHSchG) ⁵Para. 2 applies accordingly.

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

Section 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 and demonstration of the qualification requirements according to Section 3.

(2) ¹A committee of two full-time professors is formed in order to implement the qualification assessment process. ²The committee is appointed by the Faculty Council.

(3) ¹The criterion for passing the qualification assessment process is a grade calculated as follows:

- a. the grade of the initial qualification weighted at 0.6

- b. a grade weighted at 0.4 for subject-specific aptitude, independent work in engineering science and experience in the area of designing mechatronic systems for vehicles, assessed based on the following criteria:
- aa) knowledge in the areas of vehicle engineering, control engineering, signal processing, sensor/actuator technology, simulation of mechatronic systems, electronics, microcomputer technology, programming (max. 10 credits)
 - bb) practical experience (comparable to an internship semester) in the area of construction/design or testing of mechatronic systems for vehicles (0.5 credits per week, max. 10 credits)
 - cc) project work undertaken in the course of the initial qualification which is thematically related to motor vehicles and requiring knowledge in the areas of construction or design of mechatronic vehicle components, control engineering, electronics, modelling/simulation, control units and their programming (max. 10 credits)
 - dd) final thesis for the initial qualification with a thematic link to vehicle engineering, completed independently based on the principles of engineering science (max. 10 credits)

²Subject-specific aptitude, experience and independent work in the field of engineering science are assessed based on the following:

- 40 - 31 credits: Grade 1.0
- 30 - 21 credits: Grade 2.0
- 20 - 11 credits: Grade 3.0
- 10 - 1 credits: Grade 4.0
- 0 credits: Grade 5.0

³Qualifications are assessed as meeting requirements if a total grade of “good” (2.5) is scored in the qualification assessment process. ⁴The assessment is based on the grade levels set out in Section 7 Para. 5 Framework Examination Regulations for Universities of Applied Science (RaPO).

- (4) ¹The applicant is notified of the result of the qualification assessment process no later than two weeks prior to the start of the degree programme.. ²A 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.

Section 5

Standard duration of studies, programme structure

- (1) ¹The programme is offered as a full-time course; the standard period of study is three semesters.. ²The course consists of three theory semesters, whereby the third semester is mainly dedicated to writing the master's dissertation. ³Students pursue specialisations in the first two semesters. ⁴One specialisation is to be selected at the beginning of the programme.
- (2) In the event of an insufficient number of qualified students applying, there is no entitlement to the master's degree programme being offered.

Section 6

Credits

¹Credits are awarded for examinations passed and credit certificates acquired in the course of each module, as well as for internships that have been successfully completed. ²60 credits are awarded on average per academic year under the European Credit Transfer System (ECTS). ³One credit is equivalent to a workload of 25 hours. ⁴For details of the number of credits, see Appendix 1 of the Programme and Examination Regulations.

Section 7

Modules and credit certificates

- (1) ¹Details of the modules and the number of hours they involve, the type of classes, examinations, credit certificates acquired during the programme and ECTS credits are set out in the appendix to these Programme and Examination Regulations. ²As far as the elective compulsory modules are concerned, these regulations are supplemented by the relevant Technische Hochschule Ingolstadt study plan.
- (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. ¹Elective compulsory modules are programme modules which can be offered individually or in groups. ²Every student must make a specific choice according to these Programme and Examination Regulations ³The modules selected are treated as compulsory modules.
 3. ¹Modules are classes which are grouped together. ²Modules can be compulsory modules or elective compulsory modules.

Section 8 Study plan

- (1) ¹The faculty responsible compiles a study plan to establish the courses offered and for student's information; this sets out the structure of the degree programme in detail. ²The study plan is adopted by the Faculty Council and is to be published within the university. ³New 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. ⁴The study plan specifically contains regulations and details pertaining to the following:
- breakdown of semester hours per week for each module and semester,
 - the class type of the individual modules insofar as this is not conclusively specified in the appendix to these Programme and Examination Regulations,
 - the programme outcomes and content of the individual modules,
 - detailed requirements relating to credit certificates and attendance certificates,
 - the type and organisation of classes,
 - the catalogue of specialist elective compulsory modules with the name of the modules, the number of weekly hours per semester, the type of class, the programme outcomes and the content of the modules,
 - the language of instruction and examination used in the various modules insofar as this is not English.
- (2) ¹There is no entitlement to all planned elective compulsory modules being offered in every semester. ²Likewise, there is no entitlement to the associated classes being offered if there is an insufficient number of participants.

Section 9 Master's thesis

- (1) ¹The topic of the master's thesis is issued no earlier than at the start of the second semester. ²In 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.
- (2) The master's thesis is to be completed within six months.
- (3) Otherwise the regulations for issue of the master's thesis apply as set out in the General Examination Regulations of Technische Hochschule Ingolstadt.

Section 10 Final examination grade

The weighting of the final examination grade is derived from the appendix to these statutes.

Section 11 Certificates

- (1) ¹A master's degree examination certificate is issued according to the model contained in the appendix to the General Examination Regulations of Technische Hochschule Ingolstadt. ²The 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 the General Examination Regulations of Technische Hochschule Ingolstadt.

Section 12 Academic degree

- (1) The academic degree "Master of Engineering", abbreviation "M.Eng", is awarded on passing the master's degree examination.
- (2) A degree certificate is issued according to the model contained in the appendix to the General Examination Regulations of Technische Hochschule Ingolstadt.

Section 13 Entry into force

¹These Programme and Examination Regulations become effective as of 01.10.2011 .
²They apply to all students who commence studies in the first semester of this programme from the winter semester 2011/2012. ³The Programme and Examination Regulations of 1. April 2008 continue to apply for students who commenced studies prior to the winter semester 2011/2012. ⁴Otherwise these Programme and Examination Regulations become effective as of 30.09.2011 .

Issued based on the resolution of the Senate of Technische Hochschule Ingolstadt dated 27 June 2011 and approved by the President.

Ingolstadt, 27 June 2011

Prof. Dr. Gunter Schweiger
President

The statutes were established at Technische Hochschule Ingolstadt on 28 June 2011. This act was published by posting on 28 June 2011. The date of publication is therefore 28 June 2011.