

**Academic study and examination regulations
for the master programme of the Faculty of Electrical Engineering and
Information Technology M.Eng. AI Engineering of Autonomous Systems
at the Technische Hochschule Ingolstadt from
13/02/2023**

in the version of the amended articles of association dated 29 April 2024

Preamble

On the basis of Art. 9 sentence 1, Art. 80 para. 1 sentence 1, Art. 84 para. 2 and 3 and Art. 90 para. 1 sentence 2 of the Bavarian Higher Education Innovation Act (BayHiG) of 5 August 2022 (GVBl. p. 414, BayRS 2210-1-3-WK), as amended, the Technische Hochschule Ingolstadt issues the following statutes:

Table of contents

§ 1	Purpose of the academic study and examination regulations	2
§ 2	Study objective	2
§ 3	Qualification for academic study	2
§ 4	Type and duration of the study course	4
§ 5	Credit points	4
§ 6	Modules and evidence of academic achievement	4
§ 7	Curriculum	5
§ 8	Master's Thesis	5
§ 9	Assessment of performance, overall examination grade	6
§ 10	Master's examination certificate	6
§ 11	Academic degree	6
§ 12	Entry into force	6

§ 1

Purpose of the academic study and examination regulations

These academic study and examination regulations serve to complete and supplement the General Examination Regulations of Technische Hochschule Ingolstadt (APO THI) dated 17 July 2023, as amended.

§ 2

Study objective

- (1) ¹The aim of the AI Engineering of Autonomous Systems master programme is to impart specialist and methodological knowledge for the development of future-oriented, autonomous systems using automation, networking and the associated AI and software skills required in the various phases of the development of such systems. ²On the basis of scientific findings and methods, graduates are prepared for specialist and management tasks in internationally operating companies and organisations. ³The study course promotes independent scientific work with a focus on applied research.
- (2) ¹The study course enables graduates to independently analyse software development problems in the areas of autonomous systems, software engineering and testing in dynamically changing application areas characterised by uncertain knowledge using scientific methods and to make a professional contribution to software engineering solutions to complex engineering problems in the development of autonomous systems that meet high standards of robustness and safety. ²The knowledge acquired qualifies students for work in development and research areas.
- (3) The study course is conducted in English.

§ 3

Qualification for academic study

- (1) Qualification requirements for admission to the Master's programme are
 - a) Proof of successful completion of an academic study programme at an English university with at least 210 ECTS credit points or equivalent in an Electrical Engineering and Information Technology or Mathematics discipline or Computer Science or an equivalent successful degree from Germany or abroad,
 - b) Successful participation in an aptitude test; further details are regulated by the statutes on the aptitude test for the AI Engineering of Autonomous Systems master programme at Technische Hochschule Ingolstadt dated 13 February 2023, as amended, and
 - c) proof of sufficient knowledge of English (language level B2 of the Common European Framework of Reference for Languages).

- (2) ¹For degrees without credit points, the proven time hours (workload) are converted into credit points, whereby one credit point corresponds to 25 hours. ²If no time hours are proven, 30 ECTS are recognised per theoretical study semester. Internships are recognised with a further 30 ECTS credits, provided that they correspond in type and scope to the practical study semester at Technische Hochschule Ingolstadt.
- (3) ¹Proof in accordance with para. 1 must be provided by the day of Enrollment at the latest. ²If the proof according to para. 1 lit. a) is not provided by the end of the application period, a corresponding confirmation from the university must be provided by then, which credibly confirms the fulfilment of the requirement according to para. 1 lit. a) by the end of the enrolment period; the obligation according to sentence 1 remains in force.
- (4) ¹Applicants who can prove that they have completed a university degree or an equivalent degree for which fewer than 210 but at least 180 ECTS credits have been awarded will be admitted if the other requirements in paragraph 1 are met and proof of the missing competences is provided with the application for admission. ²The missing competences according to sentence 1 are proof of compensation of the competence gap of up to 30 ECTS credit points in addition to the qualification requirements to be proven in paragraph 1 at least at Bachelor's level. ³The missing competences must be demonstrated by the end of the application period at the latest and can be demonstrated as follows:
- a) by providing proof of practical professional experience outside the academic study programme, which corresponds in terms of content and scope to the basic internship and/or internship semester of an Engineering Sciences or Natural Sciences degree programme, e.g. at the Technische Hochschule Ingolstadt, provided that the degree submitted shows deficits in the area of the practical competences to be proven compared to the qualification requirement according to para. 1 lit. a), or
 - b) by providing proof of practical or theoretical study and examination achievements in addition to the first degree at a domestic or foreign university, which correspond in terms of content and scope to the requirements of an engineering or natural science study course, e.g. at the Ingolstadt University of Applied Sciences, provided that the degree presented shows deficits in the area of the theoretical or practical competences to be proven compared to the qualification requirements according to paragraph 1.
- (5) ¹The Examination Board decides on the equivalence according to para. 1 lit. a) and para. 4 as well as on the conversion according to para. 2, taking into account the principles of Art. 86 para. 1 BayHIG. ²Para. 2 applies accordingly.
- (6) The requirements listed in para. 1 lit. a) to lit. c) must be met cumulatively.
- (7) If an applicant is not admitted, he or she will be informed in writing, stating the reasons.

§ 4

Type and duration of the study course

- (1) The study course is run as a consecutive degree programme (full-time study).
- (2) ¹The study course comprises a standard period of study of three theoretical semesters with a workload of 90 ECTS. ²The Master's Thesis should also be completed during this standard period of study.
- (3) ¹The university can also offer its courses offered with the support of virtual course types. ²The curriculum regulates the details.
- (4) ¹Parts of the degree programme can be offered in cooperation with partner universities and completed there. ²The curriculum regulates the details.

§ 5

credit points

¹Credit points are awarded in accordance with the European Credit Transfer System (ECTS) for examinations passed and degree-related performance assessments per module. ²As a rule, a maximum of 60 credit points are awarded per academic year. ³One credit point corresponds to a study load of 25 hours, which is made up of attendance courses and distance learning phases. ⁴The number of credit points can be found in Annex 1 to these study and examination regulations.

§ 6

Modules and evidence of academic achievement

- (1) The modules, their number of hours, the type of lectures, the examinations, the evidence of academic achievement and further provisions are set out in Annex 1.
- (2) All modules are either compulsory, compulsory elective or elective modules:
 1. Compulsory modules are the modules of the study course that must be completed by all students.
 2. ¹Elective modules are the modules of the study course that are offered individually or in groups as an alternative. ²Each student must make a specific selection from among them in accordance with these regulations. ³The selected modules are treated as compulsory modules.
 3. ¹Elective modules are modules that are not mandatory for achieving the study objective. ²They can be additionally selected by students from the entire range of courses offered by the university.
- (3) Selected modules, including examinations and/or evidence of academic achievement, may be held in English as specified in the curriculum.

- (4) ¹There is no entitlement to the Master's programme being offered if the number of qualified students is insufficient. ²There is also no entitlement to all modules being offered in every semester.

§ 7 **curriculum**

- (1) ¹In order to ensure the courses offered and to inform students, the responsible faculty draws up a curriculum detailing the academic study programme. ²The curriculum is decided by the responsible faculty council and must be publicised at the university. ³The publication of new regulations must take place at the latest at the beginning of the lecture period of the semester in which the regulations are to be applied for the first time.
- (2) In particular, the curriculum contains regulations and information on
1. the distribution of weekly semester hours per module and study semester,
 2. the catalogue of selectable elective modules with the names of the modules and their number of weekly semester hours,
 3. more detailed provisions on course-related performance and participation certificates,
 4. the form and organisation of lectures,
 5. the course type in the individual modules, insofar as it has not been conclusively defined in Annex 1,
 6. the study objectives (learning outcomes) and content of the individual modules,
 7. more detailed provisions on the type and scope of the module examinations, insofar as these have not been conclusively defined in Annex 1,
 8. more detailed provisions for lectures offered via new media,
 9. more detailed provisions on the final colloquium,
 10. the language of instruction and examination in the individual modules, unless these are held in English.

§ 8 **Master's Thesis**

- (1) In the Master's Thesis, students should demonstrate their ability to apply the knowledge acquired during degree studies to complex practical tasks in an independent scientific work.
- (2) ¹The topic of the Master's Thesis is issued at the beginning of the second semester at the earliest. ²Before the topic of the Master's Thesis can be issued, students must have successfully completed at least 30 ECTS credits in academic studies and examinations.
- (3) The Master's Thesis takes six months to complete.

- (4) In all other respects, the regulations on the thesis in the APO THI apply.

§ 9

Assessment of performance, overall examination grade

- (1) The Master's examination is deemed to have been passed if all prescribed modules and the master's thesis have been passed with a grade of at least "sufficient".
- (2) The overall examination grade is calculated by weighting the individual grades in accordance with Appendix 1.

§ 10

Master's examination certificate

- (1) ¹A certificate of successful completion of the Master's examination will be issued in accordance with the specimen contained in the annex to the APO THI. ²The sample certificate is specified in accordance with these academic study and examination regulations.
- (2) A Diploma Supplement is issued together with the certificate for the passed Master's examination in accordance with the sample contained in the annex to the APO THI.

§ 11

Academic degree

- (1) The academic degree "Master of Engineering", abbreviated to "M.Eng.", is awarded by Technische Hochschule Ingolstadt on successful completion of the Master's examination.
- (2) A certificate is issued for the award of the academic degree in accordance with the sample contained in the annex to the APO THI.

§ 12

entry into force

¹These academic study and examination regulations come into force upon signing. ²They apply to all students who begin their academic studies on this study course from the winter semester 2023/2024.

Issued on the basis of the resolution of the Senate of Technische Hochschule Ingolstadt dated 13 February 2023, the resolution of the University Council dated 2 March 2023 and approved by the President.

Ingolstadt, 29/03/2023

Prof Dr Walter Schober President

The Articles of Association were deposited at Technische Hochschule Ingolstadt on 29 March 2023. The resignation was announced by notice on 29 March 2023. The date of announcement is therefore 29/03/2023.