

**Statutes on the aptitude test  
for the master programme of the Faculty of Computer  
Science M.Sc. Artificial Intelligence  
at the Technische Hochschule Ingolstadt from  
06.11.2023**

**Preamble**

Based on Art. 9 sentence 1 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, Technische Hochschule Ingolstadt issues the following statutes:

**Preliminary remark on the use of language**

For reasons of readability and clarity, all references to persons and functions are in masculine form and apply equally to all genders.

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**§ 1**

**Purpose of the aptitude test**

- (1) In addition to the requirements listed in the current version of the Study and Examination Regulations for the M.Sc. Artificial Intelligence master programme at the Faculty of Computer Science at Technische Hochschule Ingolstadt dated 07.02.2022 (SPO), admission to the Artificial Intelligence master programme at THI requires proof of the relevant aptitude in accordance with these statutes.

(2) <sup>1</sup>In the aptitude test, the applicant should prove whether, in addition to the qualification proven by the completion of an academic study in the field of Artificial Intelligence, Data Science, Computer Science, Mathematics, Engineering Sciences, Computational Linguistics or a related field, the applicant has the aptitude for the special qualitative knowledge and requirements of the Artificial Intelligence master programme, which can be expected to lead to a successful course of study. <sup>2</sup>For this study course, the following aptitude requirements must be met in addition to the completion of an academic study programme mentioned in sentence 1:

1. Strong knowledge of mathematics, statistics and programming and
2. Expertise in machine learning, deep learning, computer vision, speech and text comprehension and big data technologies.

## **§ 2**

### **Selection committee**

The aptitude test is carried out by a selection committee consisting of at least two professors appointed by the Faculty Council of the Faculty of Computer Science.

## **§ 3**

### **Aptitude test**

(1) The aptitude test takes place in the summer semester for the following winter semester and in the winter semester for the following summer semester.

(2) <sup>1</sup>The documents for the aptitude test must be added to the application for admission by the application deadlines specified in the statutes for admission to academic study, the Enrollment, academic leave of absence, re-registration and exmatriculation procedure at Technische Hochschule Ingolstadt (THI Enrollment Statutes) dated 8 February 2007 in the currently valid version in the online application procedure to Technische Hochschule Ingolstadt. <sup>2</sup>In justified exceptional cases, an extension of the application deadline is possible.

(3) The following documents must be enclosed with the application

- a. a completed form including proof of prior knowledge in the field of artificial intelligence (curricular analysis), which is provided by the Faculty of Computer Science and made available via the online application procedure,
- b. if already available, a copy of the degree certificate from the first degree according to § 3 para. 1 lit. a) SPO, alternatively a current grade sheet and
- c. proof of practical experience in the development of artificial intelligence applications, e.g. a copy of the cover sheet, an abstract and an outline of the thesis, or a certificate of employment in the above-mentioned field in a company.

#### **§ 4**

#### **Admission requirements**

<sup>1</sup>All applicants who have applied for admission to the programme in accordance with Section 3 (2) and (3) in due form and time and who fulfil the general qualification requirements according to Section 3 SPO will be admitted to the aptitude test. <sup>2</sup>If this is not the case, admission to the aptitude test will not be granted.

#### **§ 5**

#### **Content of the aptitude test**

(1) The aptitude test is carried out by the selection committee by evaluating the submitted documents with regard to the following criteria:

- a. Grade of the first degree from an academic study programme in Artificial Intelligence, Data Science, Computer Science, Mathematics, Engineering Sciences, Computational Linguistics or a related field or an equivalent domestic or foreign degree,
- b. Expertise in mathematics, statistics, programming, machine learning, deep learning and deep learning frameworks, computer vision, speech and text comprehension and big data technologies, and
- c. independent scientific work and practical experience in the development of artificial intelligence applications.

(2) <sup>1</sup>For the assessment of suitability, a grade is formed from two weighted partial grades:

- a. the grade of the first degree with a weighting of 0.6
- b. a grade with a weighting of 0.4, which assesses subject-specific aptitude, independent scientific work and experience in the design and implementation of artificial intelligence applications and is determined on the basis of the following criteria:
  - aa. Knowledge of object-oriented programming, probability theory and statistics, analysis and linear algebra, optimisation methods, machine learning, deep learning and deep learning frameworks, computer vision, speech and text comprehension, big data technologies (max. 60 points),
  - bb. practical experience (comparable to a practical study semester, project work or thesis involving the implementation of an AI application) in the development of artificial intelligence applications (max. 20 points).

<sup>2</sup>The grading of subject-specific aptitude and experience is based on the following:

- 0 - 9 points: Grade 5.0
- 70 - 80 points: Grade 1.0
- For points between 10 and 69, the grade is calculated using the following formula

$$\text{Grade} = (70 - \text{points achieved}) \cdot \frac{1}{20} + 1.0$$

<sup>3</sup>The grade levels of § 24 APO THI are used for this assessment. <sup>4</sup>This includes, among other things, rounding the grade to one decimal place.

(3) <sup>1</sup>Aptitude is deemed to have been established if the overall grade in the aptitude test is at least "good" (2.5). <sup>2</sup>Applicants with an overall grade of less than "good" (2.5) cannot be considered suitable for the Artificial Intelligence master programme. <sup>3</sup>A new application is possible at the earliest for the next application procedure.

## **§ 6 Transcript**

Minutes must be kept of the aptitude test, showing the date and place of the aptitude test, the names of the applicants and the assessments made by the selection committee in accordance with § 5.

## **§ 7 Determination and announcement of the result**

The result of the aptitude test for the Artificial Intelligence master programme is communicated by the Service Center Study Affairs.

## **§ 8 Entry into force**

The Articles of Association enter into force on 1 March 2023.

Issued on the basis of the resolution of the Senate of Technische Hochschule Ingolstadt dated 6 November 2023, the resolution of the University Council dated 16 November 2023 and approved by the President.

Ingolstadt, 08.01.2024

signed. Prof Dr Walter Schober  
President

These statutes were filed at Technische Hochschule Ingolstadt on 11 January 2024. The relinquishment was publicly announced digitally on 11 January 2024 by posting it on the homepage of Technische Hochschule Ingolstadt. The date of publication is therefore 11 January 2024.