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First Amendment to the Special Regulations Governing Admission to the Consecutive Master's Programme in Electrical Engineering and Information Technology at the Technical University of Braunschweig

The Faculty Council of the Faculty of Electrical Engineering, Information Technology, Physics at the Technical University of Braunschweig adopted the following regulations on 14 July 2025 in accordance with Section 18, Paragraph (8) of the Lower Saxony Higher Education Act (Niedersächsisches Hochschulgesetz, NHG) and Section 7 of the Lower Saxony Higher Education Admission Act (Niedersächsisches Hochschulzulassungsgesetz, NHZG):

Section 1

Scope

- (1) These regulations supplement the General Admission Regulations for Master's Degree Programmes at the Technical University of Braunschweig (Allg. ZO-MA) and govern access to and admission to the consecutive Master's degree programme in Electrical Engineering and Information Technology.
- (2) The admission requirements are governed by Section 2.
- (3) If admission to the Master's programme in Electrical Engineering and Information Technology is restricted, the following applies: If more applicants meet the admission requirements for a restricted programme than there are places available, the places will be allocated according to the results of the university's own selection process (Section 4). If fewer applicants meet the admission requirements than there are places available, no selection procedure will take place.

Section 2

Admission requirements

- (1) The prerequisite for admission to the consecutive Master's programme in Electrical Engineering and Information Technology is that the applicant
 - a) 1. has obtained a Bachelor's degree or equivalent qualification in Electrical Engineering or Electrical Engineering and Information Technology or in a relevant previous degree programme in accordance with Paragraph (2) from a German university or a university belonging to one of the Bologna signatory states,

or

2. have obtained an equivalent degree in Electrical Engineering or Electrical Engineering and Information Technology or in a relevant previous degree programme in accordance with Paragraph (2) at another foreign university; equivalence is determined in accordance with the assessment proposals of the Central Office for Foreign Education at the Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs (<https://www.anabin.kmk.org>; in German only);

and

b) has acquired the knowledge and skills listed in Appendix 1 to the extent required therein.

- (2) The decision as to whether the previous course of study is academically suitable in accordance with Paragraph (1), Letter a) is made by the selection committee (Section 5). A course of study is considered academically suitable if there are no significant differences with regard to the knowledge and skills acquired in the Bachelor's degree programme "Electrical Engineering and Information Technology" at the TU Braunschweig in the currently valid examination regulations. The degree programme is generally considered to be subject-specific if knowledge and skills in the two subject areas listed in Appendix 1, item 1 have been acquired to the minimum extent specified in each case and to a total extent of 60 credits.
- (3) The determination that knowledge and skills according to Appendix 1, Section 2 are lacking may be accompanied by the additional provision that these must be made up within two semesters after the start of the programme.
- (4) Notwithstanding Paragraph (1), Letter a), applicants whose bachelor's degree (or equivalent) is not yet available at the time of application are also provisionally eligible for admission if they have earned at least 150 credits (83.3%) in the case of a degree programme with a total of 180 credits, or at least 180 credits (85.7%) in the case of a degree programme with a total of 210 credits, and it is expected that the bachelor's degree (or an equivalent degree) will be obtained by 31 March of the respective winter semester or by 30 September of the respective summer semester at the latest. An average grade is to be calculated from the results of the previous degree programme achieved by the end of the application period, which will be taken into account in the selection process in accordance with Section 4, Paragraphs (2) and (3), regardless of whether the result of the Bachelor's examination (or final examination) deviates from this.
- (5) The programme can be completed in either German or English. The additional admission requirements in Paragraphs (6) and (7) apply.
- (6) Applicants who opt for the German-language version in accordance with Paragraph (5) but who do not have a German university entrance qualification or have not obtained their

bachelor's degree at a German university (or an equivalent degree in a German-speaking country) must also have sufficient knowledge of the German language; further details are regulated by the regulations for the German language examination for university admission of foreign applicants (DSH) of the TU Braunschweig, announced on 12 November 2014 (TU announcement sheet No. 1011), last amended by announcement of 18 March 2021 (TU announcement sheet No. 1340) or in the currently valid version.

- (7) Applicants who opt for the English-language version in accordance with Paragraph (5) but do not have an English-language university entrance qualification (or an equivalent English-language qualification) must have sufficient English language skills. Sufficient English language skills must be demonstrated by achieving the minimum scores specified below in the following internationally recognised tests or equivalent tests:

Test of English	Minimum result
Test of English as a Foreign Language (TOEFL), internet-based test/IBT www.ets.org	88 credits
International English Language Testing System (IELTS) www.ielts.org	Band 6,5 or higher
English Language Proficiency Report from TU Braunschweig's Language Centre	At least two skills at B2 level and two skills at C1 level in the Language Centre's English Language Proficiency Report
Equivalent language certificates may be recognised after comparative examination	

Successful completion of one of the tests must not be more than three years prior to receipt of the application for admission to the Master's programme. Applicants who have successfully completed at least two years of study exclusively in English are exempt from the requirement to provide proof of a test upon request.

Section 3

Commencement of studies, application for admission, application deadline

- (1) The Master's programme in Electrical Engineering and Information Technology begins in both the winter and summer semesters. Applications for admission to the Master's programme in Electrical Engineering and Information Technology are subject to the provisions of Sections 3 and 4 of the General Regulations for Master's Programmes (Allg. ZO-MA). The following deadlines apply for the submission of application documents to the university:

- a) for the winter semester by 15 July of each year

and

b) for the summer semester by 15 January of each year.

Applications pursuant to Sentence 2 are only valid for the allocation of study places for the relevant application date. The university is not obliged to officially verify the information provided by applicants.

- (2) If admission to the Master's programme is restricted, the following also applies: For applications for admission outside the study place allocation procedure and the specified admission numbers, the provisions of Section 3, Paragraph (5) of the General ZO-MA and the deadlines of Section 4, Paragraph (2) of the General ZO-MA apply accordingly. These applications also apply only to the allocation of study places for the relevant application date. Here too, the university is not obliged to officially verify the information provided by applicants.
- (3) The following documents must be enclosed with the application in accordance with Paragraph (1), Sentence 2 – in certified German or English translation if the originals are not in English or German:
- a) the degree certificate for the course of study that qualifies the applicant for admission (or other equivalent qualification) in accordance with Section 2, Paragraph (1), Letter a) or, if this is not yet available, a certificate of academic achievement, credits, total credits and average grade,
 - b) a tabular curriculum vitae,
 - c) proof of sufficient knowledge of the German language in accordance with Section 2, Paragraph (6) or the English language in accordance with Section 2, Paragraph (7),
 - d) where applicable, evidence in accordance with Section 2, Paragraph (1), Letter b) of knowledge, skills and credits in accordance with Appendix 1 (e.g. excerpts from module handbooks), provided that the documents enclosed in accordance with Letter a) do not sufficiently provide this evidence.

In the event of admission restrictions, the requirements under Sentence 1 also apply to applications outside the capacity limit, but do not affect the more extensive requirements applicable in these procedures. The prerequisite for an application outside the capacity limit is that the applicant has already applied for a place in the same degree programme within the specified admission quota for the relevant semester in due time and form and has provided evidence of fulfilment of the admission requirements.

In particular, an affidavit must be submitted stating that neither final nor provisional full or partial admission to the Master's programme in Electrical Engineering and Information

Technology or a subject-specific programme at a university in the Federal Republic of Germany or in a member state of the European Union has been obtained to date. The affidavit must state the applicant's nationality.

- (4) Applications that are incomplete or not submitted in the correct form and by the deadline will be excluded from further consideration. The submitted documents will remain at the university.

Section 4

Selection and admission procedure

- (1) If an internal university selection procedure is carried out in accordance with Section 1, Paragraph (3) Sentence 2, this shall be carried out by a selection committee (Section 5) in accordance with Paragraphs (2) and (3).
- (2) The selection decision shall be made by the selection committee (Section 5) as follows: Points shall be awarded and added up for the final grade pursuant to Section 2, Paragraph (1), Letter a) or the average grade pursuant to Section 2, Paragraph (4) and for subject-specific knowledge and skills in accordance with the type and scope of Paragraph (3). A ranking list shall be drawn up based on the total points thus determined. If there is a tie between individual applicants, the ranking on the list shall be determined by lot.
- (3) The following points system shall apply for the awarding of points:

Final/average grade	Technical knowledge and skills (in accordance with the subject areas in Appendix 1; maximum 29 points)
1,0 65 points	1 point per subject area for specialist knowledge in the field of "Mathematics and Physical Fundamentals" in accordance with Appendix 1, amounting to at least 2 credits
1,3 62 points	
1,7 58 points	
2,0 55 points	
2,3 52 points	
2,7 48 points	
3,0 45 points	
3,3 42 points	
3,7 38 points	
4,0 35 points	
	2 points per subject area for specialist knowledge in the field of "Fundamentals and Core Areas of Electrical Engineering and Information Technology" in accordance with Appendix 1, amounting to at least 2 credits

The score P for the final/average grade is calculated using the following formula:

$$P = 10 \cdot (4 - \text{grade}) + 35$$

- (4) In all other respects, the general provisions of the university's enrolment regulations remain unaffected. Applicants who, according to Section 2, Paragraph (3), still have to make up for missing knowledge and skills will be de-registered at the end of the deadline if they have not achieved the required performance within the first two semesters and have not provided proof of this by 1 December or 1 June of the following year and the applicant can prove that they are responsible for this. Applicants whose qualifying degree was not yet available at the time of application in accordance with Section 2, Paragraph (4) will be de-registered upon expiry of the deadline if they have not submitted the relevant degree certificate by 31 March of the respective winter semester if they start in the winter semester, or by 30 September of the respective summer semester, unless the applicant can prove that they are not responsible for this.

Section 5

Selection Committee for the Master's Programme in Electrical Engineering and Information Technology

- (1) The Faculty of Electrical Engineering, Information Technology, Physics shall form a selection committee to make the selection decision and prepare the admission.
- (2) This selection committee shall consist of three voting members, who must belong to the group of university lecturers or research assistants, and one member of the student group with an advisory vote. At least one member must belong to the group of university lecturers. The members and their deputies shall be appointed by the Faculty Council of the Faculty of Electrical Engineering, Information Technology, Physics. The term of office of the members shall be two years, that of the student member one year; reappointment is possible. The selection committee shall constitute a quorum if at least two members with voting rights – including at least one member of the university teaching staff group – are present.
- (3) The tasks of the selection committee are:
- a) to examine the admission requirements in accordance with Section 2, Paragraph (1), Letter a) and, Letter b),
 - b) to decide whether a degree programme is to be regarded as suitable in terms of subject matter in accordance with Section 2, Paragraph (2),
 - c) Deciding on ancillary provisions in accordance with Section 2, Paragraph (3),
 - d) In the event of a necessary selection procedure in accordance with Section 4, communicating the ranking list for the individual applicants to the Admissions Office or the International Office, which issues the applicant with a letter of admission or rejection.

Section 6

Notification, succession procedure, conclusion of the procedure

- (1) Applicants who can be admitted will receive an electronic or written letter of admission from the university. This letter will specify a deadline by which the applicant must declare in writing or electronically whether he or she accepts the place. If this declaration is not submitted in due time and form, the letter of admission shall become invalid. This legal consequence shall be indicated in the letter of admission.
- (2) Applicants who cannot be admitted shall receive a letter of rejection by electronic or written means, including information on their right of appeal. If a selection procedure in accordance with Section 4 has preceded and the applicant has participated in it, the ranking achieved and the ranking of the last applicant admitted must be stated. Eligible applicants who could not be admitted in the previous selection procedure shall participate in a replacement procedure. Further notifications shall only be issued in the event of admission.
- (3) The replacement procedure shall be carried out on the basis of the ranking list formed in accordance with Section 4, Paragraph (2).
- (4) After completion of the admission procedure, any remaining study places shall be allocated by lottery upon application. If the degree programme "Electrical Engineering and Information Technology" is not subject to admission restrictions and if, after completion of enrolment, further study places are available within the specified capacity, the university is free to conduct a lottery. The application must be submitted electronically via the application portal (TUconnect); the admission requirements pursuant to Section 2 must be met. The application period begins four weeks before the start of the semester and ends with the completion of the lottery procedure, but no later than the start of lectures; the university reserves the right to terminate the procedure earlier.

Section 7

Admission to higher semesters

- (1) Applicants for degree programmes with restricted admission must demonstrate that they have the level of achievement required for study in the higher semester.
- (2) The prerequisite for admission to a higher semester is a degree programme completed in accordance with Section 2, Paragraph (1), Letter a) and proof of knowledge and skills in accordance with Section 2, Paragraph (1), Letter b) as well as the prerequisite in accordance with Section 2, Paragraphs (6) or (7). The selection committee (Section 5) may attach the proviso that any knowledge and skills lacking in accordance with Appendix 1, item 2 must be made up to a maximum of 16 credits by the time of registration for the Master's thesis.
- (3) The available study places in a higher semester with restricted admission shall be allocated to applicants:

1. for whom rejection of admission for personal reasons would constitute a particular hardship,
 2. who are or were enrolled in the same or a comparable degree programme
 - a) at another German higher education institution or a higher education institution in another Member State of the European Union or another signatory state to the Agreement on the European Economic Area, or
 - b) who are or were enrolled at a foreign university and have German citizenship or are treated as German citizens in terms of admission law, and for whom rejection of admission for personal reasons would constitute particular hardship, or
 - c) who have been admitted for the first semester and can be classified in a higher semester,
 3. who assert other reasons.
- (4) Within each of the three case groups in Paragraph (3), admission shall be decided on the basis of social, in particular family and economic reasons relevant to the choice of location; in the case of equal ranking, the average grade shall be decisive; in cases where the ranking is still equal, the decision shall ultimately be made by lot. The average grade shall be determined on the basis of the achievements to date.
- (5) Notwithstanding Paragraph (2), Sentence 1, applicants who do not yet have their qualifying degree in accordance with Section 2 Paragraph (4) at the time of application may also be admitted to the second semester if the other admission requirements in accordance with Section 2 are met. The bachelor's or degree certificate must be presented upon enrolment. If the bachelor's degree (or other equivalent degree) has not yet been completed at the time of enrolment, the admission expires.
- (6) If admission to the Master's programme in Electrical Engineering and Information Technology is restricted, students who are relocating may only be admitted to the next higher semester. The requirements of Paragraph (1) must be met accordingly. However, if the standard period of study has already been exhausted, admission is excluded.

Section 8

Entry into force

These regulations shall enter into force on 1 October 2025. They shall govern the admission procedure for the first time for the summer semester 2026.

At the same time, the contents of the regulations on access and admission to the Master's programme in Electrical Engineering and Information Technology – university public

announcement dated 5 March 2025 (TU announcement sheet No. 1630) – upon completion of
the admission procedure for the winter semester 2025/26.

Appendix 1

1. The knowledge and skills required under Section 2, Paragraph (1), Letter b) are generally deemed to have been acquired if knowledge and skills have been acquired in each of the following areas to at least the extent specified:

Area	Subject areas	Scope
Mathematics and physical fundamentals	<p>Applicants are familiar with essential mathematical and physical concepts.</p> <p>They have mastered the most important calculation techniques in the following areas:</p> <ul style="list-style-type: none"> • Ordinary differential equations • Integral calculus in several real and complex variables • Differential calculus in several real and complex variables • Linear algebra and analytical geometry • Statistics and probability theory <p>They have knowledge in the following areas:</p> <ul style="list-style-type: none"> • Mechanics and thermodynamics • Optics and atomic physics 	min. 15 credits
Fundamentals and core areas of electrical engineering and information technology	<p>Applicants have knowledge of the fundamentals and core areas of electrical engineering and information technology.</p> <p>This includes knowledge in the following areas:</p> <ul style="list-style-type: none"> • Fundamentals of electrical engineering (in particular, basic equations for simple field problems and calculations for simple linear electrical networks) • Networks (in particular, network analysis methods such as graph theory and mesh impedance methods, as well as system behaviour of networks) • Materials in electrical engineering (in particular, fundamentals of quantum mechanics and material properties important for electrical engineering) • Measurement technology (in particular, the use and dimensioning of electrical sensors for non-electrical quantities and the most important measuring instruments) • Line theory (in particular, the propagation of electromagnetic waves on lines, the design and dimensioning of line systems) • Electromagnetic field theory (in particular derivation and interpretation of Maxwell's equations, Hertzian dipole, waveguides) • Fundamentals of electronics (in particular principles, modes of operation and electrical properties of various semiconductor devices) • Fundamentals of energy technology (in particular, network calculation relationships relating to network stability and security of supply with electrical energy, 	min. 45 CREDITS

	<p>functions of electromagnetic converters, basic power converter circuits)</p> <ul style="list-style-type: none">• Circuit technology (in particular, elementary integrated CMOS circuits)• Fundamentals of information technology (in particular, fundamentals of communication, information and high-frequency technology)• Fundamentals of control engineering (in particular, modelling of dynamic systems, controller design for linear systems and stability analysis)• Programming• In-depth knowledge in at least one relevant electrical engineering elective area	
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2. If knowledge and skills in the following subject areas cannot be demonstrated to the extent of at least 5 credits each, admission may be subject to the additional condition that this knowledge and these skills must be acquired within two semesters:
 - Fundamentals of Electronics
 - Basics of Electrical Power Engineering
 - Fundamentals of Information Technology
 - Fundamentals of Control Engineering
3. The module descriptions of the Bachelor's programme "Electrical Engineering and Information Technology" at the Technical University of Braunschweig are used to compare the knowledge and skills to be demonstrated.