



Faculty of Electrical Engineering and Information Technology



Program-Specific Study & Examination Regulations
for the Master's Program in
Electrical Engineering and Information Technology
(M-EEIT)

**This document is only for information.
The German version is legally binding.**

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On the basis of § 13 paragraph 1 clause 1 of the Higher Education Act of the state of Saxony-Anhalt as published in the announcement dated 01 July 2021 (Law & Ordinance Gazette LSA p. 368, 369), Otto von Guericke University Magdeburg has enacted the following statute:

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I. General Section

§ 1 Scope

- (1) These program-specific Study & Examination Regulations for the Master's program in Electrical Engineering and Information Technology add further binding detail to and clarification of the General Study and Examination Regulations (ASPO) for the Master's degree programs offered by the faculties that make up the Engineering Campus at Otto von Guericke University with the points mentioned in the table of contents.
- (2) The Master's degree program is offered in English and is organized by the Faculty of Electrical Engineering and Information Technology.

§ 2 Objectives of the Course of Study

- (1) The Master's program in *Electrical Engineering and Information Technology* covers the subjects of Electronics, Energy Technology, Information Technology, Systems Engineering and Theoretical Electrical Engineering. Graduates are in a position to analyze complex relationships and situations in these subject areas, to identify interrelationships with other fields and to generate models. They can utilize engineering methods and other non-technical principles to analyze and design electronics and information technology systems, devices and processes. They are able to design and implement electronics and information technology systems, devices and processes in a precise manner in order to provide solutions in different areas.

Graduates

- are enabled to communicate with regard to topics and issues in electronics and information technology, including in an international environment.
- are enabled to work individually and as members of international groups.
- are prepared, through the practical orientation of the program, for a professional career in industry as well as through their scientific skills for academic research.
- can record complex planning relationships in a structured manner and implement them professionally.
- are familiar with good scientific practice.
- are able to understand the societal, social and ethical impacts of the technical solutions to ensure that they act with an awareness of their responsibilities in their professional engineering practice.
- are able to express their technical and scientific knowledge in expert, industry and state committees and panels in order to positively influence technical and societal developments.

By offering a wide range of compulsory elective modules, this Master's degree program enables students to consolidate their skills in the fields of Automation Technology, Electrical Energy Technology and Information and Communication Technology.

II. Scope and Progression of Program

§ 4

Admission Requirements

- (2) a) The requirement for admission to the Master's program is a completed degree course in accordance with §4(2) ASPO in Electrical Engineering, Information Technology or a related course of study.
- b) The completed degree must include
- at least 15 CP (in accordance with the ECTS) in Mathematics
 - at least 20 CP (in accordance with the ECTS) in Electronics and Information Technology, Information Technology or Electronics
 - at least 5 CP (in accordance with the ECTS) in Physics.
- The relevant Board of Examiners is responsible for determining if the admission requirements are met in the corresponding subject area.
- (3) The candidate's specific suitability will be determined on the basis of the results of the degree examination in accordance with §4 para 1 ASPO and requires the previous course of studies to have been completed with an overall grade of at least 2.0.
- (4) Applicants whose degree certificate is not yet available during the application process may apply with a preliminary qualification and/or their transcript of records, which must also include the results of the most recent Bachelor's degree semester, provided that the average grade calculated satisfies the admission requirements. In this case, the final degree certificate must be provided by no later than enrollment on the Master's program.
- (5) German language skills are not required.
- (6) The program will be delivered in English. Applicants must be able to demonstrate adequate knowledge of the English language (level B2 of the Common European Framework of Reference (CEFR)). One of the following certificates will be accepted as proof:
- TOEFL iBT (Test of English as a Foreign Language) minimum of 80 points
 - IELTS (International English Language Testing System, academic training), minimum points score 6.0
 - Cambridge First Certificate (B2) oder besser
 - Cambridge Advanced Certificate (C1)
 - Cambridge Proficiency Certificate (C2)
 - In principle holders of a certificate of secondary education after at least 4 ascending school years from Antigua & Barbuda, Australia, Bahamas, Barbados, Belize, Grenada, United Kingdom (incl. overseas territories), Guyana, Ireland, Jamaica, Canada, New Zealand, St. Kitts & Nevis, St. Vincent & the Grenadines, Suriname, Trinidad & Tobago and the USA (incl. overseas territories) are excluded from this requirement. Master's applicants who completed the entirety of their Bachelor's degree studies in one of these countries are also excluded.
- (8) Conditional admission is not possible.
- (12) Certificates and other evidence of qualifications must be presented in either German or English. Original copies of translations by a sworn translator must be provided for certificates in other languages.

§ 5

Commencement and Duration of Studies

- (1) The teaching offer is arranged so that studies should commence in the winter semester.
- (2) The course of study is designed in such a way that it can be completed, including the Master's thesis and colloquium, within the standard course duration of 4 semesters.

§ 6

Organization and Scope of Studies

- (5) To successfully complete the course of studies, a total of 120 credit points must be obtained. The modules, the forms of assessment and allocation of credit points to the individual modules can be found in the examination schedule contained in the appendix.

§ 7

Program Structure

- (2) The list of compulsory modules can be found in the standard curriculum (see appendix).
- (3) Details of the organization of the compulsory elective modules can be found in the standard curriculum (see appendix). The list of compulsory elective modules by specialization can be found in the compulsory elective module catalog.

Upon application by the student to the Board of Examiners and in agreement with the academic advisor, other modules offered by all of the faculties at Otto von Guericke University Magdeburg may be recognized as compulsory elective subjects.

- (7) The dates mentioned in the standard curriculum and examination schedule (appendix) for the completion of modules and examinations should be seen as a recommendation for the completion of the study program within the standard course duration, subject to the provisions of §17 (3) ASPO. Further information about the study program can be obtained from the Board of Examiners of the Faculty of Electrical Engineering and Information Technology as well as from the academic advisors for the program.

III. Examinations

§ 11

Board of Examiners

- (1) The Board of Examiners consists of five members. The Chair, Deputy Chair and one further member are elected from among the professors, assistant professors and university lecturers, one member is appointed from the group of research associates and one member from the student body.

IV. Master's Degree

§ 22

Admission to the Master's Thesis and Issuing of the Topic

- (1) Only students who have obtained at least 80 CP from the range of compulsory and compulsory elective modules and have successfully completed the Project module will be permitted to commence their Master's thesis.

§ 23

Submission of Master's Thesis

- (5) The Master's thesis must be written in English.

V. Final Provisions

§ 35

Entry into Force

These program-specific Study and Examination Regulations will enter into force for the 2022/2023 winter semester after publication in the official announcements of Otto von Guericke University in conjunction with the currently applicable General Study and Examination Regulations for the Master's degree programs of the three Engineering Campus faculties (Faculty of Mechanical Engineering, Faculty of Process and Systems Engineering and Faculty of Electrical Engineering and Information Technology).

Issued by virtue of the resolutions of the Faculty Council of the Faculty of Electrical Engineering and Information Technology dated 6 April 2022 and the Senate of Otto von Guericke University dated 27 April 2022.

Magdeburg, 09 May 2022

Prof. Dr.-Ing. Jens Strackeljan
President of
Otto-von-Guericke-Universität Magdeburg

Appendix: Study and Examination Schedule

Appendix: Study and Examination Schedule of the Master's Degree Program in Electrical Engineering and Information Technology

Legend for the study and examination schedule

SWS = Semester hour per week (time required for the course per week)	SoSe = Summer semester
V = Lecture	WiSe = Winter semester
Ü = Exercise / Tutorial	K = Written examination (stated duration in minutes)
P = Laboratory	M = Oral examination
S = Seminar	ÜS = Exercise / Tutorial certificate
CP = Credit Points	PRO = Research Project
VL = Type of examinations prerequisite	* = Dependence on the choice of module
PL = Examination type	

Module overview

The distribution of credit points within a semester may change depending on the choice of modules. The total load remains the same. Details about the Elective modules and specializations Please refer to the catalog Of elective modules. Detailed descriptions of all modules can be found in the Module Handbook.

Allocation: Technical and non-technical compulsory modules must all be taken.

In the case of the technical and non-technical elective modules, the modules are selected or taken from the "Catalog of Elective Modules" according to the overview.

Master Electrical Engineering and Information Technology	SWS		Semester												CP Σ	
			1.			2.			3.			4.				
	V Ü P S	V Ü P S	CP	VL	PL	CP	VL	PL	CP	VL	PL	CP	VL	PL		
Technical compulsory modules															35	
Digital Communication Systems	2 1 0 0					5			K120							5
Digital Information Processing	2 1 0 0		5	ÜS	K120											5
Electromagnetic Field Theory	2 1 0 0		5		K120											5
Electronic Circuits	2 1 0 0		5		M											5
Power Electronics	2 1 0 0		5		K120											5
Power Network Planning and Operation	2 1 0 0		5		K120											5
Systems and Control	2 1 0 0		5		K120											5
Total credit points by semester			30			5										

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