

**Programme Regulations 2018**  
**of the Master's degree programme in**  
**Electrical Engineering and Information Technology**  
**Department of**  
**Information Technology and Electrical Engineering**

31.10.2017<sup>1</sup>

*This English translation is for information purposes only. The original German version is the legally binding version.*

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Version: **15.10.2023 – 1**

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<sup>1</sup> With changes according to the D-ITET department conference resolution of 15.10.2023 (direct doctorate programme). This version of the Programme Regulations (15.10.2023 – 1) replaces the previous version (31.10.2017 – 0).

# **Programme Regulations 2018 of the Master's degree programme in Electrical Engineering and Information Technology**

## **Department of Information Technology and Electrical Engineering**

31.10.2017

(Version: 15.10.2023)

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*The ETH Zurich Executive Board,*

pursuant to Art. 4, Para. 1, Subpara. a of the ETH Zurich Organisational Ordinance  
(*Organisationsverordnung ETH Zürich*) of 16 December 2003<sup>2</sup>,  
*decrees:*

### **Chapter 1:           General regulations**

#### **Part 1:               General**

##### **Art. 1       Subject and scope, Appendix**

<sup>1</sup> These Programme Regulations set out the requirements according to which the Master's degree in Electrical Engineering and Information Technology at the ETH Zurich Department of Information Technology and Electrical Engineering (D-ITET) may be acquired.

<sup>2</sup> The Appendix is a part of these Programme Regulations. Any changes to the Appendix are subject to the approval of the Rector, on the request of or in consultation with D-ITET.

##### **Art. 2       Academic title**

<sup>1</sup> Graduates of the ETH Zurich Master's degree programme in Electrical Engineering and Information Technology (subsequently 'the degree programme') are awarded the academic title

(*German*) Master of Science ETH in Elektrotechnik und Informationstechnologie  
(abbreviation: MSc ETH ETIT)

<sup>2</sup> The English translation of the title is

Master of Science ETH in Electrical Engineering and Information Technology  
(abbreviation: MSc ETH EEIT)

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<sup>2</sup> RSETHZ 201.021en (RSETHZ 201.021)

<sup>3</sup> This title may also be used in the abbreviated form “MSc ETH”.

### **Art. 3**      Legal basis

These Programme Regulations are based upon the stipulations set out in the following legal documents:

- a. Ordinance on Course Units and Performance Assessments at ETH Zurich of 22 May 2012<sup>3</sup> (ETH Zurich Ordinance on Performance Assessments)
- b. Ordinance on Admission to Studying at ETH Zurich of 30 November 2010<sup>4</sup> (*Zulassungsverordnung ETH Zürich*)

## **Part 2:            Credit system**

### **Art. 4**      Policy

<sup>1</sup> The degree programme follows a credit system which is aligned with the European Credit Transfer System (ECTS).

<sup>2</sup> ETH Zurich deploys the ECTS in accordance with the Rector's Credit System Guidelines (*Richtlinien zum Kreditsystem*).<sup>5</sup>

### **Art. 5**      Credits, basis for calculation

<sup>1</sup> Credits describe the average time expenditure required to achieve a learning goal.

<sup>2</sup> One credit corresponds to a workload of 30 hours. This workload comprises all of the study-related activities required to obtain said credit.

<sup>3</sup> The curriculum is designed such that full-time students may obtain an average of 30 credits per semester.

### **Art. 6**      Allocation of credits

<sup>1</sup> D-ITET allocates a certain number of credits to each of the course units it offers.

<sup>2</sup> If an ETH Zurich course unit is found on the curriculum of more than one ETH Zurich degree programme, the department offering the course unit assigns it a standard number of credits in consultation with those integrating it into a programme. The Rector of ETH Zurich settles any cases of disagreement.

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<sup>3</sup> RSETHZ 322.021en (SR 414.135.1)

<sup>4</sup> SR 414.131.52, RSETHZ 310.5

<sup>5</sup> See [www.weisungen.ethz.ch](http://www.weisungen.ethz.ch) (in German only)

<sup>3</sup> If a course unit is offered by another university that university is responsible for allocating it a certain number of credits.

#### **Art. 7** Issuing of credits

<sup>1</sup> Credits are issued for satisfactory performance. Performance is considered satisfactory if it has been awarded a grade of at least a 4, or a 'pass'.

<sup>2</sup> No credits are issued for unsatisfactory performance.

<sup>3</sup> The full number of credits are always issued if the prerequisites of Para. 1 have been satisfied. Partial issue of credits is not permitted.

<sup>4</sup> The number of credits issued is that number published in the Course Catalogue valid at the time the respective performance assessment was undertaken.

#### **Art. 8** Recording, checking, registration

D-ITET records, checks and registers the credits acquired.

### **Chapter 2: Content, structure and scope of the Master's degree programme**

#### **Part 1: Content, structure and scope**

#### **Art. 9** Programme content, structure

<sup>1</sup> The degree programme offers systematic, method-oriented and scientifically based engineering education and training. It covers both mathematical and scientific foundations and knowledge specific to the discipline. Specialisations offer a way to consolidate knowledge according to the highest standards of international research. Specialist education and training are augmented by general electives from the humanities, social and political sciences in particular. Here the programme not only teaches technology and science, but also trains students to implement what they have learned in industry and elsewhere.

<sup>2</sup> Details of the progression of the programme and recommendations thereto are published on the degree programme website.

## **Art. 9a<sup>6</sup>** Direct Doctorate

<sup>1</sup> D-ITET offers a direct doctorate programme in Electrical Engineering and Information Technology.

<sup>2</sup> The provisions for Master's degree studies in the framework of the direct doctorate programme may diverge from the policy set out in these Programme Regulations.

<sup>3</sup> Details of the direct doctorate programme are provided in Appendix 2.

## **Art. 10** Tutoring system, individual study plan

<sup>1</sup> The studies of every student in this degree programme are shaped and coordinated under the guidance of a professor, or 'tutor'. Tutors are exclusively full, associate or assistant professors from D-ITET.

<sup>2</sup> Students select a tutor at the beginning of the Master's degree programme. This is mandatory. If a student does not find a tutor, the director of studies will allocate one. As far as possible, allocation corresponds to the interests of the student.

<sup>3</sup> In consultation with the student, the tutor determines the student's core courses, specialisation courses and electives and lists them in an individual study plan. D-ITET determines deadlines and further modalities for drawing up and adjusting the study plan.

<sup>4</sup> The director of studies settles any disputes between student and tutor regarding course selection.

<sup>5</sup> The individual study plan should guarantee a solid, varied educational foundation and at the same time take into account the student's talents and expectations. The tutor is available for guidance throughout the Master's degree programme.

<sup>6</sup> The study plan is binding. Core courses, specialisation courses and electives may only be counted towards the Master's degree if they are listed in the individual study plan.

<sup>7</sup> Any student who wishes to change his/her tutor should submit a well-grounded request to the Director of Studies. The Director of Studies may, on cogent grounds, deny the request. A change of tutor is also subject to the following:

- a. Changes are only possible at the beginning of a semester.
- b. A change does not entitle the student in question to an extension of the maximum permitted duration of studies.
- c. Disagreements between the Director of Studies and the student are settled by the Rector.

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<sup>6</sup> Version pursuant to the D-ITET department conference resolution of 15.10.2023, in effect since 01.11.2023. It applies to all students who enter the degree programme from Autumn Semester 2024 onwards.

## **Art. 11** Scope, duration, limits on duration of studies

<sup>1</sup> As stipulated in Art. 30, 120 credits are required to obtain a Master's degree.

<sup>2</sup> The normal duration of the degree programme is two years.

<sup>3</sup> The maximum permitted duration of studies is four years. The Rector may extend this if cogent grounds are provided in a request submitted by the specific deadline.

<sup>4</sup> If admission to the degree programme is granted subject to the acquisition of additional credits the maximum permitted duration of studies may be extended by half a year for required extra credits in the range of 21 – 30 and by one year for required extra credits in the range of 31 – 60. For fewer than 21 required extra credits no extension is granted.

## **Art. 12** Course Catalogue

<sup>1</sup> D-ITET lists the course units of the degree programme for each semester in the Course Catalogue. This list is binding.

<sup>2</sup> The details of the entries in the Course Catalogue are set out in Art. 4 of the ETH Zurich Ordinance on Performance Assessments<sup>7</sup> and in the corresponding implementation stipulations<sup>8</sup> of the Rector.

## **Art. 13** Language of instruction

Course units and the corresponding performance assessments are normally conducted in English. The language of instruction of ETH course units is also subject to the pertaining Rector's directives<sup>9</sup>.

## **Art. 14** Admission to course units

Special admission prerequisites may apply to a course unit. If these are not specified in these Programme Regulations, they are specified by that ETH Zurich department or the university which offers the respective course unit.

## **Art. 15** Student exchange (ETH Master's degree students)

<sup>1</sup> During the Master's degree programme credits may be acquired at other universities (mobility credits). Of these mobility credits a maximum of 30 may be recognised towards the Master's degree. The stipulations of Para. 3 and 6 below still apply.

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<sup>7</sup> RSETHZ 322.021en (SR 414.135.1)

<sup>8</sup> See [www.directives.ethz.ch](http://www.directives.ethz.ch)

<sup>9</sup> See [www.directives.ethz.ch](http://www.directives.ethz.ch)

<sup>2</sup> Credits from course units of other universities do not qualify as mobility credits if said course units belong to the degree programme curriculum.

<sup>3</sup> If admission to the degree programme is subject to the acquisition of additional credits (admission with additional requirements) an exchange stay is only possible after all additional requirements have been fulfilled. Mobility credits may not be counted towards fulfilment of additional requirements.

<sup>4</sup> For an exchange stay the student draws up a written study plan in advance with the help of the Tutor and the D-ITET Student Exchange Coordinator. This plan includes the credits to be acquired at the host university. It must be approved by the Director of Studies.

<sup>5</sup> The Director of Studies decides whether mobility credits will be recognised. Art. 16 of the ETH Zurich Ordinance on Performance Assessments<sup>10</sup> and the pertaining implementation stipulations<sup>11</sup> of the Rector set out how proof of academic achievement is handled.

<sup>6</sup> Students who did not complete their preceding (Bachelor's) degree studies at ETH Zurich are also subject to the following stipulations:

- a. Mobility credits may not be recognised in the categories 'core courses', 'specialisation courses', 'electives' and 'Science in Perspective' (Art. 16, Para. 1 (a) – (c) and (f).
- b. The Master's thesis or a semester project may be undertaken at another university and recognised towards the Master's degree, provided that the written agreement of the Director of Studies has been obtained in advance.

<sup>7</sup> Questions regarding student exchange may be referred to the D-ITET Student Exchange Coordinator.

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<sup>10</sup> RSETHZ 322.021en (SR 414.135.1)

<sup>11</sup> See [www.directives.ethz.ch](http://www.directives.ethz.ch)

## **Part 2:                      Grouping by category**

### **Art. 16      Grouping by category**

<sup>1</sup> To obtain a Master's degree, study achievements are required in the following categories. The minimum number of credits required in each category is set out in Art. 30.

- a. Core courses
- b. Specialisation courses
- c. Electives
- d. Semester projects
- e. Industrial Internship
- f. Science in Perspective
- g. Master's thesis

<sup>2</sup> D-ITET assigns course units to the categories in Para. 1 and publishes them in the Course Catalogue.

### **Art. 17      Overview of categories**

#### **<sup>1</sup> Core courses**

Core courses deepen the knowledge covered in the Bachelor's degree programme. They are the foundation of the Master's degree programme. The core courses available for selection are published in the Course Catalogue. Details of performance assessments are set out in Art. 26.

#### **<sup>2</sup> Specialisation courses**

Specialisation courses cover in-depth knowledge from the selected specialisation track. The associated course units build on the foundations of electrical engineering and information technology. In the Course Catalogue the recommended specialisation courses are listed next to each specialisation track. Details of performance assessments are set out in Art. 26.

#### **<sup>3</sup> Electives**

Electives give students the opportunity to attend multidisciplinary course units. A list of recommended electives is published in the Course Catalogue. Details of performance assessments are set out in Art. 26.

#### **<sup>4</sup> Semester projects**

In the semester projects the student deploys the subject and social skills acquired to gain experience of solving a technical or scientific problem independently. Further details, e.g. regarding performance assessments, are set out in Art. 27.



### <sup>5</sup> **Industrial Internship**

Students may complete an industrial internship during their studies. This internship is voluntary and is not required for the Master's degree. The goal of the internship is to familiarise students with the industrial work environment. Here they have the opportunity to get involved in current projects of the respective institution. Further details are set out in Art. 28 below and in the corresponding D-ITET guidelines.

### <sup>6</sup> **Science in Perspective**

Students are required to complete course units from the "Science in Perspective" programme. Details are set out in the pertaining directive<sup>12</sup>; stipulations regarding performance assessments are listed in Art. 26 below.

### <sup>7</sup> **Master's thesis**

The Master's thesis concludes the degree programme. With the Master's thesis students demonstrate their ability to produce independent, structured scientific work. Further details are set out in Art. 29.

## **Chapter 3: Admission to the Master's degree programme**

### **Art. 18 Prerequisites for admission**

<sup>1</sup> The prerequisites for admission to the degree programme are either

- a. A university Bachelor's degree comprising at least 180 credits or an equivalent university degree in Electrical Engineering and Information Technology or in another qualifying discipline
- b. A Bachelor's degree in Electrical Engineering from a Swiss university of applied sciences comprising at least 180 credits

<sup>2</sup> Details of the academic and language admissions prerequisites (profile of requirements) are given in the Appendix.

### **Art. 19 Registration / application, admission procedure and entry to the Master's degree programme**

<sup>1</sup> Students matriculated at ETH Zurich in the Bachelor's degree programme in Electrical Engineering and Information Technology may enrol directly in the Master's degree programme in Electrical Engineering and Information Technology (registration).

<sup>2</sup> All other candidates should apply to the ETH Zurich Admission Office for admission to the degree programme.

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<sup>12</sup> See [www.directives.ethz.ch](http://www.directives.ethz.ch)

<sup>3</sup> The admissions committee of the degree programme investigates candidates' academic backgrounds and suitability for the Master's degree programme and submits a recommendation for admission/rejection to the Director of Studies.

<sup>4</sup> The Rector decides whether to admit/reject the candidate on the basis of the request of the Director of Studies.

<sup>5</sup> The Rector may, depending on the candidate's qualifications and previous knowledge, make admission conditional upon the acquisition of additional knowledge and competences by a certain deadline during the Master's degree programme (admission with additional requirements).

<sup>6</sup> Details regarding application/registration, the admission procedure and entry to the Master's degree programme are determined by the Rector. They are set out in the Appendix.

## **Chapter 4:            Performance assessments**

### **Part 1:                General regulations**

#### **Art. 20    Performance evaluation**

Performance in examinations is graded. Performance in other forms of performance assessment is either graded or evaluated on a pass/fail basis.

#### **Art. 21    Admission to performance assessments**

Admission to performance assessments may be subject to conditions. If these are not specified in these Programme Regulations, they are specified by that ETH Zurich department or the university which offers the respective course unit.

#### **Art. 22    Registering for / deregistering from performance assessments**

<sup>1</sup> The following provisions apply to registration for / deregistration from performance assessments at ETH Zurich:

- a. If the performance assessments in question are end-of-semester examinations or session examinations, registration and deregistration are governed by the stipulations of the ETH Zurich Ordinance on Performance Assessments<sup>13</sup> and the associated implementation stipulations of the Rector<sup>14</sup>.
- b. If the performance assessments fall into another category, registration and deregistration are generally handled by the respective lecturer in person.

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<sup>13</sup> SR 414.135.1, RSETHZ 322.021

<sup>14</sup> See [www.weisungen.ethz.ch](http://www.weisungen.ethz.ch)

<sup>2</sup> If the performance assessments concerned are those of another university, registration and deregistration are subject to the rules of the respective university.

#### **Art. 23** Absence, interruption, breaking off, late submission or non-submission

The following stipulations apply to absence from, interruption or breaking off of, and late submission or non-submission of performance assessments:

- a. ETH Zurich performance assessments are governed by the stipulations of the ETH Zurich Ordinance on Performance Assessments<sup>15</sup> and the associated implementation stipulations of the Rector<sup>16</sup>.
- b. Performance assessments of another university are subject to the rules of the respective university.

#### **Art. 24** Issuing of results, disputes

<sup>1</sup> Students may view all of their performance results online via the corresponding ETH Zurich application. They are informed by email as to which performance assessment results are now viewable.

<sup>2</sup> The procedure in cases of disagreement regarding newly documented results is outlined each time results are issued.

#### **Art. 25** Improper conduct

The sanctions for improper conduct in the context of performance assessments are outlined in the ETH Zurich Ordinance on Disciplinary Measures (*Disziplinarverordnung ETH Zürich*) of 10 November 2020<sup>17</sup>.

### **Part 2: Performance assessments in the Master's degree programme**

#### **Art. 26** Core courses, Specialisation courses, Electives, Science in Perspective

<sup>1</sup> Every course unit in the categories 'core courses', 'specialisation courses' 'electives' and 'science in perspective' is subject to a performance assessment.

<sup>2</sup> The respective mode of each performance assessment is listed in the Course Catalogue if the course unit is offered by ETH Zurich.

<sup>3</sup> If a course unit is offered by another university that university determines the performance assessment mode of said course unit.

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<sup>15</sup> SR 414.135.1, RSETHZ 322.021

<sup>16</sup> See [www.weisungen.ethz.ch](http://www.weisungen.ethz.ch)

<sup>17</sup> RSETHZ 361.1en (SR 414.138.1)

<sup>4</sup> A performance assessment is passed if it is awarded a grade of at least a 4 or a 'pass'.

<sup>5</sup> A failed performance assessment may be repeated once unless the ETH Zurich department or the university offering the respective course unit stipulates otherwise.

<sup>6</sup> A performance assessment, once passed, may not be repeated.

<sup>7</sup> The categories 'core courses', 'specialisation courses' and 'electives' are also subject to the following special stipulations:

- a. The core courses, specialisation courses and electives to be completed are listed in the individual study plan, which is binding.
- b. If students cannot earn credits in a core course, specialisation course or elective because they have failed the respective performance assessment twice, they must adjust the study plan. The change must be approved by the tutor.

## **Art. 27 Semester projects**

<sup>1</sup> Semester projects are supervised and assessed by one or more professors and sometimes further persons. At least one professor must belong to D-ITET.

<sup>2</sup> The responsible project supervisor defines, in writing, the project task, determines the deadlines for project start and submission, sets out the criteria for project assessment, and grades the student's performance.

<sup>3</sup> Semester projects conclude with the submission of the results, a written final report and an oral presentation.

<sup>4</sup> A semester project may take a maximum of seven weeks if all of the total time allotted for full-time studies is used. If a semester project is undertaken during the semester alongside lectures, half of the total time allotted for full-time studies may be used, raising the maximum permitted duration to 14 weeks.

<sup>5</sup> A semester project may be conducted as group work if the performance of each group member can be individually rated, in the form of a grade for each individual. In consultation with the students, the supervisor determines the division of tasks among the participants and the modalities of assessment.

<sup>6</sup> A semester project is passed if it is awarded a grade of at least a 4.

<sup>7</sup> A failed semester project may be repeated once. If it is repeated, a new theme must be addressed. The repetition may be conducted under a new supervisor.

<sup>8</sup> A semester project, once passed, may not be repeated.

## **Art. 28** Industrial Internship

<sup>1</sup> The industrial internship is voluntary. It lasts at least 12 weeks if the position is full-time and usually takes place in an industrial firm in Switzerland or abroad. The internship may be conducted before or during the Master's degree programme.

<sup>2</sup> In exceptional cases a research laboratory within or outside of the ETH domain may be selected for the internship. The Director of Studies rules on such exceptions.

<sup>3</sup> The internship is officially verified via a written confirmation (internship confirmation) from the firm or institution where it took place. It is up to the student to make sure that the internship confirmation is issued.

<sup>4</sup> The Director of Studies decides whether the internship will be recognised on the basis of the internship confirmation. A recognised internship receives a "pass" grade.

<sup>5</sup> Only approved internships may be recognised towards the Master's degree or listed on a separate sheet of the academic record. The recognition of internships which have already counted towards a degree is not permitted.

<sup>6</sup> Further details regarding the industrial internship are provided in the pertaining D-ITET guidelines.

## **Art. 29** Master's thesis

<sup>1</sup> Students are only permitted to commence the Master's thesis if

- a. the Bachelor's degree programme has been completed
- b. any additional requirements for admission to the degree programme have been fulfilled
- c. the required minimum number of credits in the 'core courses' category has been acquired (see Art. 30, Para. 1 (a1), and
- d. a semester project has been successfully completed (see Art. 30 Para 1 (a3))

<sup>2</sup> The Director of Studies rules on any exceptions to Para. 1 (c) and (d). Exceptions require a well-grounded request from the Master's thesis supervisor and the consent of the tutor. Exceptions to Para. 1 (a) and (b) are not permitted.

<sup>3</sup> The Master's thesis is supervised and assessed by one or more professors and sometimes further persons. At least one professor must belong to D-ITET.

<sup>4</sup> The Master's thesis project lasts six months (full-time). The Director of Studies may, on request, extend this by up to three months if cogent grounds are given.

<sup>5</sup> The Master's thesis project is normally conducted in the area of the selected specialisation and must be scientific and if possible innovative in character. The supervisor defines, in writing, the project task, determines the deadlines for project start and submission, and sets out the criteria for project assessment.

<sup>6</sup> The Master's thesis project concludes with submission of the results, a written final report and an oral presentation. Performance is graded.

<sup>7</sup> The Master's thesis project may be conducted as group work if the performance of each group member can be individually rated, in the form of a grade for each individual. In consultation with the students, the supervisor determines the division of tasks among the participants and the modalities of assessment.

<sup>8</sup> The Master's thesis is passed if the grade it receives is at least a 4.

<sup>9</sup> A failed Master's thesis project may be repeated once. If it is repeated, a new theme must be addressed. The repetition may be conducted under a new supervisor.

<sup>10</sup> A Master's thesis, once passed, may not be repeated.

## **Chapter 5: Issuing of the Master's degree**

### **Part 1: Credits by category, and degree request**

#### **Art. 30 Credits by category**

<sup>1</sup> The 120 credits required for the Master's degree must be earned in the following categories in at least the numbers given. Further details are set out in Para. 2 and 3.

- |  |                   |
|--|-------------------|
| <b>a. Main areas</b>                                   | <b>88 credits</b> |
| 1. <b>Core courses</b> (at least 24 credits)           |                   |
| 2. <b>Specialisation courses</b> (at least 40 credits) |                   |
| 3. <b>Semester projects</b> (at least 12 credits)      |                   |
| 4. <b>Electives</b> (-- credits)                       |                   |
| 5. <b>Industrial internship</b> (-- credits)           |                   |
| <b>b. Science in Perspective</b>                       | <b>2 credits</b>  |
| <b>c. Master's thesis</b>                              | <b>30 credits</b> |

<sup>2</sup> Of the 88 credits required in the 'main areas' category (Para. 1 (a))

- a. at least 24 must come from the category 'core courses'. At least four core courses must be completed, irrespective of whether the minimum of 24 credits could be earned by taking fewer than four.
- b. at least 40 must come from the category 'specialisation courses';
- c. at least 12 must come from the category 'seminar projects';
- d. any credits still to be earned to make up the required sum of 88 can come from any category under 'Main areas' above (Para. 1 (a) 1–5).

<sup>3</sup> D-ITET oversees compliance with the stipulations set out in Para. 2.

### **Art. 31 Degree request**

<sup>1</sup> When they have fulfilled the requirements set out in Art. 30 students may request the issue of the Master's degree. The degree request must be submitted within four years of commencing the Master's degree programme. The Rector may extend this deadline if cogent grounds are provided by the respective request deadline.

<sup>2</sup> The request should contain all those study achievements with pass grades in the categories and sub-categories listed in Art. 30 which are to be listed in the final academic record. The sum of credits in each category and sub-category must reach the minimums designated in Art. 30.

<sup>3</sup> The following points also apply to recognition of study achievements for the Master's degree:

- a. In the categories 'cores courses', 'specialisation courses' and 'electives', only course units listed in the individual study plan can be recognised. Further details are provided in Art. 10.
- b. A maximum of 130 credits may be recognised towards the Master's degree in the final academic record. All other study achievements are listed on a separate sheet of the academic record.
- c. A maximum of 30 mobility credits may be recognised towards the Master's degree. The stipulations of Art. 15 apply.

<sup>4</sup> The credits earned by completing a course unit may not be recognised more than once, or divided up.

<sup>5</sup> Recognition of study achievements or credits from preceding studies is not possible. The exceptions are:

- a. Credits earned at ETH Zurich before taking up Master's degree studies may be recognised as long as the knowledge and skills acquired thereby are integral to the degree programme and the credits in question have not already been recognised towards a degree.
- b. An industrial internship undertaken before Master's degree studies began may be recognised if the conditions set out in Art. 28 have been met and the internship has not already counted towards a degree.
- c. The Director of Studies decides whether credits mentioned in (a) and (b) will be recognised. There is no automatic entitlement to recognition.

## **Part 2: Academic record, degree certificate and Diploma Supplement**

### **Art. 32 Documents**

Graduates of the degree programme receive three documents: an academic record, a degree certificate and a Diploma Supplement.

### **Art. 33 Academic record**

<sup>1</sup> The academic record verifies the successful completion of the Master's degree.

<sup>2</sup> The academic record lists:

- a. The study achievements listed in the degree request as per Art. 31, Para. 2, including grades and other measures of performance
- b. The final grade, computed as the weighted average of all the grades listed in the degree request, with the corresponding credits as weighting.

<sup>3</sup> A separate sheet of the academic record lists:

- a. Any additional admission requirements
- b. All further study achievements as set out in the pertaining implementation stipulations<sup>18</sup> of the Rector

<sup>4</sup> D-ITET records, checks and administers the grades and other measures of performance, and issues the order to print the academic record.

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<sup>18</sup> See [www.directives.ethz.ch](http://www.directives.ethz.ch)



## **Art. 34** Degree certificate, Diploma Supplement

<sup>1</sup> Details regarding the degree certificate are set out in Art. 28 of the ETH Zurich Ordinance on Performance Assessments<sup>19</sup>.

<sup>2</sup> The Diploma Supplement comprises a standardised explanation of the degree.

## **Chapter 6: Final clauses**

### **Art. 35** Definitive failure, exclusion from the degree programme

<sup>1</sup> The degree programme is regarded as definitively failed if one of the following applies:

- a. The conditions for obtaining the Master's degree (acquisition of the required number of credits for the Master's degree according to the stipulations of Art. 30, or any other conditions) can no longer be satisfied due to failure of performance assessments or failure to respect programme deadlines.<sup>20</sup>
- b. In cases of admission with additional requirements said additional requirements have not been fulfilled due to failure of performance assessments or failure to respect the deadlines set for them.

<sup>2</sup> Definitive failure results in exclusion from the degree programme.

### **Art. 36** Transcript of records after exclusion or abandonment of studies

Students who are excluded from the degree programme or withdraw from it before obtaining the Master's degree receive a transcript of records which lists all the study achievements generated and evaluated before exclusion or withdrawal.

### **Art. 37** Special cases

The Director of Studies rules on cases which are not or are not sufficiently addressed by these Programme Regulations, their Appendix, or other relevant ordinances and directives.

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<sup>19</sup> RSETHZ 322.021en (SR 414.135.1)

<sup>20</sup> Academic deadlines are deadlines for conducting performance assessments, additional individual deadlines, and the maximum permitted duration of studies.

## **Art. 38**    Entry into effect

<sup>1</sup> These Programme Regulations enter into effect at the beginning of Autumn Semester 2018.

<sup>2</sup> They apply to students who

- a. enter the degree programme from Autumn Semester 2018 onwards. The stipulations of Para. 3 below still apply.
- b. entered the degree programme before Autumn Semester 2018. Such students may, on request, complete their studies according to the provisions of these Programme Regulations 2018. The Director of Studies rules on changes of programme regulations in consultation with Academic Services. If there is a change of programme regulations the maximum permitted duration of studies is extended by two semesters for the affected student.
- c. re-enter the degree programme from Autumn Semester 2018 onwards

<sup>3</sup> Students in the ETH Bachelor's degree programme in Electrical Engineering and Information Technology who are subject to the Programme Regulations 2012<sup>21</sup> or 2016<sup>22</sup> may, when progressing to Master's degree studies, choose whether they wish to obtain the degree according to the 2018 Programme Regulations (120 credits) or according to those of 2008<sup>23</sup> (90 credits). This choice is not open to students who leave ETH after their Bachelor's degree studies.

<sup>4</sup> The Director of Studies, in consultation with Academic Services, rules on special cases relating to programme regulation assignment.

On behalf of the Executive Board

President: Lino Guzzella

General Secretary: Katharina Poiger Ruloff

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<sup>21</sup> RSETHZ 323.1.0350.10

<sup>22</sup> RSETHZ 323.1.0350.11

<sup>23</sup> RSETHZ 324.1.0350.11

## Appendix 1

To the Programme Regulations 2018 of the  
Master's degree programme in Electrical Engineering and Information Technology

31.10.2017 (Version: 01.10.2020)

*Applies to students who commence or re-enter the degree programme in Autumn Semester 2021 or later.*

*The special provisions set out in section 2.2.1, Para. 2 below also apply.*

***This English translation is for information purposes only. The German version is the legally binding document.***

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### Subject and scope

This appendix sets out the academic, language and performance prerequisites for and further details regarding admission to the Master's degree programme in Electrical Engineering and Information Technology. It supplements the stipulations of the Admission Regulations of ETH Zurich and the Directive on Admission to Master's degree programmes.

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## 1 Profile of requirements

### *Policy*

For admission to the Master's degree programme in Electrical Engineering and Information Technology (subsequently 'the degree programme') all of the following prerequisites must be satisfied.

### 1.1 Degree qualifications

<sup>1</sup> Admission to the degree programme presupposes a university Bachelor's degree comprising at least 180 ECTS<sup>(1)</sup> credits, an equivalent university degree, or a Bachelor's degree from a Swiss university of applied sciences<sup>(2)</sup> in a discipline the content of which – also with regard to any additional academic requirements within the given framework – satisfies the pertaining academic prerequisites.

<sup>2</sup> A Bachelor's degree qualifies its holder for admission to an ETH Master's degree programme only if it also qualifies said holder to enter, without additional requirements, the desired Master's degree programme within the university system where the Bachelor's degree was acquired. The Rector may also demand proof of this, determining whether such proof must come from the home university or from another university in the country where the Bachelor's degree was acquired.

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<sup>1</sup> ECTS: European Credit Transfer System. Credits describe the average time expended to achieve a learning goal. One credit corresponds to 30 hours of work.

<sup>2</sup> A Diploma from a Swiss university of applied sciences is considered equivalent to a Bachelor's degree in the same discipline. A Bachelor's degree from a German or Austrian university of applied sciences is considered equivalent to a Bachelor's degree from a Swiss university of applied sciences.

## 1.2 Academic prerequisites

<sup>1</sup> Attendance of the Master's degree programme in Electrical Engineering and Information Technology presupposes basic knowledge and skills which must in content, scope, quality and skill level be equivalent to those covered at ETH Zurich (discipline requirements profile).

<sup>2</sup> The **discipline requirements profile** comprises **134 credits** in total and includes the significant knowledge and skills covered in the ETH Bachelor's degree programme in Electrical Engineering and Information Technology, including the corresponding methodological scientific thinking skills. Details are set out in Para. 5 below.

<sup>3</sup> If an applicant does not completely satisfy the academic prerequisites, admission may be subject to the acquisition of the missing knowledge and skills in the form of additional requirements. Completion of additional requirements is expressed in credits. For further details, see Section 4 below.

<sup>4</sup> Admission to the degree programme is not possible if the academic gaps in the candidate's background are too extensive. For further details, see the Sections below.

<sup>5</sup> The **discipline requirements profile** is structured in three parts set out below. Details regarding the content of the corresponding course units are published in the ETH Course Catalogue ([www.courses.ethz.ch](http://www.courses.ethz.ch)).

### Part 1: Basic knowledge and skills (104 credits)

Part 1 comprises 104 credits and covers basic knowledge. The substance of the following course units is required:

#### Mathematics (40 credits):

- Analysis I – III
- Discrete Mathematics
- Complex Analysis
- Linear Algebra
- Numerical Methods
- Probability Theory and Statistics

#### Physics (16 credits):

- Physics I-II
- Engineering Mechanics

**Electrical Engineering (36 credits):**

- Digital Circuits
- Electromagnetic Fields and Waves
- Semiconductor Devices
- Electronic Circuits
- Networks and Circuits I - II
- Signals and Systems I - II

**Computer Science (12 credits):**

- Computer Science I - II
- Computer Engineering

**Part 2: Specialisation (18 credits)**

Part 2 comprises at least 18 credits from at least 3 of the following third year core courses. The substance of the following course units is required:

- Advanced Electromagnetic Waves
- Analog Integrated Circuits
- Communication and Detection Theory
- Communication Electronics
- Communication Networks
- Discrete Event Systems
- Embedded Systems
- Introduction to Electric Power Transmission
- High-Speed Signal Propagation
- High Voltage Engineering
- Communication Systems
- Power Electronics
- Optics and Photonics
- Power Semiconductors
- Control Systems
- Solid State Electronics and Optics
- VLSI I: From Architecture to VLSI Circuits and FPGAs
- Discrete-Time and Statistical Signal Processing

**Part 3: Independent project work (12 credits)**

Another requirement is the ability to conduct independent project work; here 12 credits must be earned in the framework of one or more Bachelor's degree projects.

### 1.3 Language prerequisites

<sup>1</sup> The teaching language of the degree programme is English.

<sup>2</sup> For admission to the degree programme, proof of sufficient knowledge of English (level C1)<sup>(3)</sup> must be provided.

<sup>3</sup> Applicants to the degree programme who hold a Bachelor's degree from a university of applied sciences must, according to the pertaining additional requirements (see Section 2.1.4), also supply proof of sufficient knowledge of German (level C1).

<sup>4</sup> The required language certificates must be submitted by the application deadline. The ETH Zurich publishes a list of the language certificates accepted.

## 2 Specific stipulations for admission and entering the degree programme

### 2.1 Specific stipulations for admission to the degree programme

#### 2.1.1 Candidates with a Bachelor's degree in Electrical Engineering and Information Technology from ETH Zurich

##### *Unconditional admission*

The following persons are guaranteed unconditional admission to the degree programme:

- a. Holders of a Bachelor's degree in Electrical Engineering and Information Technology from ETH Zurich
- b. Students enrolled in this ETH Zurich Bachelor's degree programme

#### 2.1.2 Candidates with a Bachelor's degree in Génie Electrique et Electronique from EPF Lausanne

##### *Admission*

<sup>1</sup> Admission to the degree programme is guaranteed for persons holding a Bachelor's degree in Génie Electrique et Electronique from EPF Lausanne.

<sup>2</sup> Admission is subject to fulfilment of the language prerequisites set out in section 1.3 above.

<sup>3</sup> Admission may be subject to additional requirements.

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<sup>3</sup> The required language level is measured according to the Common European Framework of Reference for Languages (CEFR) scale

### **2.1.3 Candidates with a Bachelor's degree in Electrical Engineering and Information Technology from a university outside Switzerland**

<sup>1</sup> Holders of a Bachelor's degree or the equivalent in Electrical Engineering and Information Technology from a university outside Switzerland must satisfy all of the academic and language prerequisites listed in Section 1.2 and 1.3 above for admission to the degree programme.

<sup>2</sup> Admission may be subject to additional requirements.

<sup>3</sup> Admission is not possible if any of the following apply

- a. the language prerequisites are not satisfied
- b. the content, scope, quality and skills level of the degree are not equivalent to those at ETH Zurich
- c. the number of additional credits required to satisfy the academic prerequisites exceeds
  1. 30 credits in total; or
  2. 12 credits from Part 1 of the academic prerequisites (see Section 1.2 above).

### **2.1.4 Candidates with a Bachelor's degree in Electrical Engineering from a Swiss university of applied sciences**

<sup>1</sup> Holders of a Bachelor's degree in Electrical Engineering from a Swiss university of applied sciences may be admitted to the degree programme if they can satisfy all of the following prerequisites

- a. the academic requirements set out in Section 1.2 above are satisfied within the given framework
- b. the language prerequisites set out in Section 1.3 above are satisfied
- c. the final Bachelor's degree grade is at least a 5 (according to the Swiss grading system, which involves grades from 1 [lowest] to 6 [highest])<sup>4</sup>.

<sup>2</sup> Admission is always subject to the compensation of missing academic and methodological knowledge with additional study achievements comprising at least 40 credits.<sup>5</sup>

<sup>3</sup> Admission is not possible if any of the following apply

- a. the language or performance prerequisites are not satisfied
- b. the number of additional credits required to fulfil the academic prerequisites exceeds 60

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<sup>4</sup> The method of computation of the final grade is stipulated in the Directive on Admission to Master's Degree Programmes ([www.directives.ethz.ch](http://www.directives.ethz.ch)).

<sup>5</sup> The additional requirements are published on the D-ITET website ([www.ee.ethz.ch](http://www.ee.ethz.ch)).



### **2.1.5 Candidates with a university Bachelor's degree in a discipline other than Electrical Engineering and Information Technology**

<sup>1</sup> Holders of a university Bachelor's degree or the equivalent in a discipline other than Electrical Engineering and Information Technology may be admitted to the degree programme if they can satisfy all of the following prerequisites

- a. the academic requirements set out in Section 1.2 above are satisfied within the given framework
- b. the language prerequisites set out in Section 1.3 above are satisfied
- c. a very good academic performance during the Bachelor's degree studies

<sup>2</sup> Admission may be subject to additional requirements.

<sup>3</sup> Admission is not possible if any of the following apply

- a. the language or performance prerequisites are not satisfied
- b. the content, scope, quality and skills level of the degree are not equivalent to those at ETH Zurich
- c. the number of additional credits required to satisfy the academic prerequisites exceeds
  1. 30 credits in total; or
  2. 12 credits from Part 1 of the academic prerequisites (see Section 1.2 above).

## **2.2 Specific stipulations for entering the degree programme**

### **2.2.1 Candidates with an ETH Bachelor's degree in Electrical Engineering and Information Technology**

<sup>1</sup> Students of the ETH Zurich Bachelor's degree programme in Electrical Engineering and Information Technology may enrol in the degree programme directly via [www.mystudies.ethz.ch](http://www.mystudies.ethz.ch). The admission procedure outlined in Section 3 is waived. Further details:

- a. The normal ETH enrolment dates and deadlines apply.
- b. Enrolment is possible as soon as only a maximum of 30 credits towards the Bachelor's degree are pending and the number of credits required for the Bachelor's degree in the categories 'First-year subjects' and 'Examination block subjects' have been obtained. This stipulation applies to all students who are subject to the Bachelor's degree Programme Regulations of 2012, 2016 or 2018<sup>6</sup>.
- c. Admission is provisional until the Bachelor's degree is issued. Admission will be revoked if the Bachelor's degree is not or cannot be issued.

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<sup>6</sup> RSETHZ 324.1.0350.10 / RSETHZ 324.1.0350.11 / RSETHZ 324.1.0350.11

<sup>2</sup> Transitional provision according to Art. 38, Para. 3 of the Programme Regulations:

Students in the ETH Bachelor's degree programme in Electrical Engineering and Information Technology who are subject to the Programme Regulations 2012<sup>(7)</sup> or 2016<sup>(8)</sup> may, when progressing to Master's degree studies, choose whether they wish to obtain the degree according to the 2018 Programme Regulations (120 credits) or according to those of 2008<sup>(9)</sup> (90 credits). This choice is not open to students who leave ETH after their Bachelor's degree studies.

### **2.2.2 Candidates with an ETH Bachelor's degree in a discipline other than Electrical Engineering and Information Technology**

The following stipulations regarding entry to the Master's degree programme apply to students from an ETH Zurich Bachelor's degree programme (other than Electrical Engineering and Information Technology) who have been granted admission:

- a. They can enrol in the programme once they have acquired that number of credits which would qualify them to enrol in the Master's degree programme consecutive to their original subject.<sup>10</sup>
- b. The normal ETH enrolment dates and deadlines apply.
- c. Admission is provisional until the Bachelor's degree is issued. Admission will be revoked if the Bachelor's degree is not or cannot be issued.

### **2.2.3 Candidates with a Bachelor's degree from another university**

Non-ETH graduates who have been granted admission may only begin the degree programme when they have completed the previous (Bachelor's) degree programme.

## **3 Application and admission procedure**

<sup>1</sup> All candidates – with the exception of matriculated ETH Zurich students from the Bachelor's degree programme in Electrical Engineering and Information Technology – must submit an application for admission to the degree programme. The binding specifications for application, in particular the documents required and the submission dates/deadlines, are published on the website of the ETH Zurich Admissions Office ([www.admission.ethz.ch](http://www.admission.ethz.ch)).

<sup>2</sup> Application may be made even if the required preceding degree has not yet been issued.

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<sup>7</sup> RSETHZ 323.1.0350.10

<sup>8</sup> RSETHZ 323.1.0350.11

<sup>9</sup> RSETHZ 324.1.0350.11

<sup>10</sup> The permitted number of missing credits is set out in the Programme Regulations of the respective consecutive Master's degree programme (e.g., BSc Physics → MSc Physics).

<sup>3</sup> Applications will not be considered if

- a. they are submitted late or not in the correct form, or
- b. the relevant fees have not been paid.

<sup>4</sup> The admissions committee of the degree programme determines how far the background of the candidate corresponds to the profile of requirements and submits an application for admission/rejection to the Director of Studies.

<sup>5</sup> On the request of the Director of Studies the Rector makes the final decision regarding admission or rejection.

<sup>6</sup> The candidate receives a written admissions decision which includes relevant information concerning any additional admission requirements.

## **4 Fulfilling additional admission requirements**

### **4.1 General regulations**

<sup>1</sup> Candidates who are admitted subject to the fulfilment of additional requirements must acquire the required additional knowledge and skills before or during the Master's degree programme via self-study or by attending classes. The corresponding individual performance assessments must take place by set deadlines.

<sup>2</sup> If the candidate fails said performance assessments or does not respect the set deadlines he/she will be regarded as having failed the programme and will be excluded from it.

<sup>3</sup> The deadlines and conditions for undergoing said performance assessments depend upon the background of the candidate (see Sections 4.2 and 4.3 below).

### **4.2 Candidates with a university Bachelor's degree**

<sup>1</sup> Candidates holding a university Bachelor's degree must undertake all of the performance assessments pertaining to the additional admission requirements by the end of the first year of the Master's degree programme at the latest. All additional requirements, including any assessment repetitions, must be fulfilled within 18 months of the start of the Master's degree programme at the latest.

<sup>2</sup> A pass grade in each individual performance assessment is required.

<sup>3</sup> A failed performance assessment may only be repeated once.

### **4.3 Candidates with a Bachelor's degree from a Swiss university of applied sciences**

<sup>1</sup> Candidates holding a Bachelor's degree from a Swiss university of applied sciences must undertake all of the performance assessments pertaining to the additional admission requirements by the end of the first year of the Master's degree programme at the latest. All additional requirements, including any assessment repetitions, must be fulfilled within two years of the start of the Master's degree programme at the latest.

<sup>2</sup> Session examinations may be combined in examination blocks. The examinations belonging to one examination block must always be undertaken during the same examination session.

<sup>3</sup> A pass grade in the examination block is achieved if the average of the individual grades is at least a 4.

<sup>4</sup> A failed performance assessment or a failed examination block may be repeated once. Repeating an examination block entails repeating all of the examinations belonging to it.

## Appendix 2

To the Programme Regulations 2018 of the  
Master's degree programme in Electrical Engineering and Information Technology

15.10.2023 (Version: 15.10.2023)

*Applies to students who commence the direct doctorate programme in Autumn Semester 2024 or later.*

*This English translation is for information purposes only. The original German version is the legally binding document.*

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### Direct doctorate programme

(Ref.: Art. 9a of the Programme Regulations)

#### Art. 1 Subject and scope

This appendix sets out the policies which govern the direct doctorate programme in Electrical Engineering and Information Technology (direct doctorate programme) at the ETH Zurich department of Information Technology and Electrical Engineering (D-ITET).

#### Art. 2 Objective

The direct doctorate programme enables candidates with an outstanding university Bachelor's degree to commence doctoral studies directly.

#### Art. 3 General

The modalities of the direct doctorate programme are based upon the Rector's Directive on the direct doctorate programme of 1 November 2016<sup>1</sup> and further relevant ETH Zurich enactments: the Ordinance on the Doctorate ETH Zurich of 23 November 2021<sup>2</sup>, the ETH Zurich Admissions Ordinance of 30 November 2010<sup>3</sup> and the ETH Zurich Ordinance on Performance Assessments of 22 May 2012<sup>4</sup>.

#### Art. 4 Components of the direct doctorate programme

The direct doctorate programme is composed of two parts. The first comprises a complete Master's degree programme in Electrical Engineering and Information Technology according to Art. 8 of this appendix, and the second actual doctoral studies.

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<sup>1</sup> See [www.directives.ethz.ch](http://www.directives.ethz.ch)

<sup>2</sup> RSETHZ 340.31en (SR 414.133.1)

<sup>3</sup> SR 414.131.52, RSETHZ 310.5

<sup>4</sup> RSETHZ 322.021en (SR 414.135.1)

**Art. 5 Application**

<sup>1</sup> Holders of a Bachelor's degree from ETH Zurich or another university or a degree recognised by ETH Zurich as equivalent which demonstrates outstanding academic performance may apply for admission to the direct doctorate programme. The respective degree must be in one of the disciplines which qualify the holder to pursue the Master's degree programme in Electrical Engineering and Information Technology.

<sup>2</sup> Application for the direct doctorate programme is always associated with the D-ITET Master's degree programme in Electrical Engineering and Information Technology. Application proceeds online via the application portal for Master's degree studies.

<sup>3</sup> Application for the direct doctorate programme is also subject to the following:

- a. The same binding stipulations which govern application for the Master's degree programme in Electrical Engineering and Information Technology also apply to the direct doctorate programme, particularly those regarding dates, deadlines, and documents to be submitted.
- b. In addition to the documents mentioned in (a), the following must be submitted with the application: a written statement from a member of D-ITET that she/he agrees to supervise the doctoral thesis. This person must be qualified to supervise doctoral theses according to the provisions of Art. 5 of the Ordinance on the Doctorate ETH Zurich<sup>5</sup> and the associated implementation stipulations<sup>6</sup> of the Rector.
- c. Application may proceed even if the required Bachelor's degree has not yet been issued. Entry to the direct doctorate programme may not proceed, however, until Bachelor's degree studies have been completed.

**Art. 6 Admission**

<sup>1</sup> Admission to the direct doctorate programme is only possible if all of the following conditions are met:

- a. Official proof of qualifications as per Art. 7, Para. 2 (d) of the Ordinance on the Doctorate ETH Zurich<sup>7</sup> have been supplied, with the proviso that the direct doctorate programme includes a Master's degree programme in Electrical Engineering and Information Technology according to the provisions of Art. 8 of this appendix.
- b. All the admission prerequisites of the D-ITET Master's degree programme in Electrical Engineering and Information Technology have been met and allow admission to the Master's degree programme in Electrical Engineering and Information Technology with no additional requirements. The appraisal of applications is conducted according to the normal procedure through the Academic Services Admissions Office and the admissions committee of the Master's degree programme in Electrical Engineering and Information Technology.
- c. The doctoral committee of D-ITET endorses any admissions to the direct doctorate programme.

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<sup>5</sup> SR 414.133.1

<sup>6</sup> RSETHZ 340.311

<sup>7</sup> RSETHZ 340.31en (SR 414.133.1)

- d. A written agreement to supervise the doctoral thesis as per Art. 5, Para. 3 (b) has been received.

<sup>2</sup> If the admission requirements of (1) are fulfilled, D-ITET submits a request for admission to the direct doctorate programme to the Rector (represented by the Vice-Rector for Doctoral Studies).

<sup>3</sup> Admission to the direct doctorate programme comprises:

- a. Admission to the Master's degree programme in Electrical Engineering and Information Technology with no additional requirements
- b. Provisional admission to doctoral studies as per Art. 9 of the Ordinance on the Doctorate ETH Zurich<sup>8</sup>

<sup>4</sup> Completion of the Master's degree programme in Electrical Engineering and Information Technology according to the provisions of Art. 8 of this appendix replaces the additional admission requirements described in Art. 59 of the Ordinance on the Doctorate ETH Zurich<sup>9</sup>.

## **Art. 7**      Matriculation

Students pursuing the direct doctorate programme have two matriculations at ETH Zurich: they are matriculated as both Master's degree and doctoral students. The Master's degree matriculation ends when the Master's degree programme is completed.

## **Art. 8**      Master's degree programme: Policy

<sup>1</sup> Students in the direct doctorate programme complete the D-ITET Master's degree programme in Electrical Engineering and Information Technology and acquire the Master's degree in Electrical Engineering and Information Technology. Even during the Master's degree programme, they are supervised by the doctoral thesis supervisor (see Art. 5, Para. 3 (b)).

<sup>2</sup> To complete the Master's degree in Electrical Engineering and Information Technology in the framework of the direct doctorate programme, students must

- a. adhere to the stipulations of the Programme Regulations 2018 of the Master's degree programme in Electrical Engineering and Information Technology<sup>10</sup>;
- b. complete the additional provisions set out in Art. 9 of this appendix; the additional provisions may differ from the stipulations of the Programme Regulations 2018.

<sup>3</sup> D-ITET is responsible for checking adherence to the requirements set out in Para. 2 above.

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<sup>8</sup> RSETHZ 340.31en (SR 414.133.1)

<sup>9</sup> RSETHZ 340.31en (SR 414.133.1)

<sup>10</sup> RSETHZ 324.1.0350.12

**Art. 9** Master's degree programme: Additional requirements

The additional provisions mentioned in Art. 8, Para. 2 (b) are the following:

- a. Students must acquire at least 42 credits within the first two semesters of commencing studies. These 42 credits must stem from the following course unit categories:
  1. Three core courses from the Master's degree programme (at least 18 credits) according to Art. 26 of the Programme Regulations 2018 of the Master's degree programme in Electrical Engineering and Information Technology<sup>11</sup>;
  2. At least, two specialisation courses from the Master's degree programme (at least 12 credits) according to Art. 26 of the Programme Regulations 2018<sup>12</sup>;
  3. a semester project (12 credits) according to Art. 27 of the Programme Regulations 2018<sup>13</sup>.
- b. An average grade of at least 5.00 must be achieved in the three core courses mentioned in (a)(1). The average grade is computed as the weighted average of the respective grades with the number of credits as the weighting value.
- c. The Master's thesis is governed by the provisions of Art. 29 of the Programme Regulations 2018<sup>14</sup>. The Master's thesis may not be substituted by other research papers.
- d. The Master's degree must be acquired within four semesters of commencing studies. This deadline may be extended by the doctoral committee if a substantiated request is submitted.

**Art. 10** Degree request

<sup>1</sup> Students must submit the degree request as soon as they have fulfilled all the academic requirements for the Master's degree as listed in Art. 8 and 9 of this appendix.

<sup>2</sup> Completion of the Master's degree programme is verified with the usual documents (academic record, degree certificate and Diploma Supplement).

**Art. 11** Definitive admission to doctoral studies

Definitive admission to doctoral studies proceeds when all of the following apply:

- a. Master's degree studies have been completed.
- b. The additional requirements according to Art. 9 of this appendix have been fulfilled.
- c. All further admission requirements as per Art. 17 of the Ordinance on the Doctorate ETH Zurich<sup>15</sup> have been fulfilled.

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<sup>11</sup> RSETHZ 324.1.0350.12

<sup>12</sup> RSETHZ 324.1.0350.12

<sup>13</sup> RSETHZ 324.1.0350.12

<sup>14</sup> RSETHZ 324.1.0350.12

<sup>15</sup> RSETHZ 340.31en (SR 414.133.1)



**Art. 12** Maximum permitted duration of doctoral studies

<sup>1</sup> The doctoral examination must be undertaken six years after admission to the direct doctorate programme or provisional admission to doctoral studies at the latest. Students in the direct doctorate programme may, pursuant to Art. 39, Para. 3 of the Ordinance on the Doctorate ETH Zurich<sup>16</sup>, extend this deadline by one year.

<sup>2</sup> Despite the right to this one-off extension it is not automatic, but requires a request.

**Art. 13** Exclusion from the direct doctorate programme

<sup>1</sup> Exclusion from the direct doctorate programme proceeds in the following cases:

- a. The requirements for obtaining the Master's degree in Electrical Engineering and Information Technology (required number of credits, any other requirements) set out in the Programme Regulations 2018 of the Master's degree programme in Electrical Engineering and Information Technology<sup>17</sup> can no longer be fulfilled.
- b. The additional requirements as per Art. 9 of this appendix can no longer be fulfilled.

<sup>2</sup> Exclusion as mentioned in Para. 1 (a) constitutes simultaneous exclusion from the Master's degree programme in Electrical Engineering and Information Technology, because the latter counts as definitively failed.

<sup>3</sup> The Master's degree programme in Electrical Engineering and Information Technology may be continued after exclusion according to Para. 1 (b). The additional requirements as per Art. 9 of this appendix are then no longer relevant to acquiring the Master's degree. Renewed application for doctoral studies is possible after successful completion of Master's degree studies.

<sup>4</sup> The provisions of Art. 20, 21 and 22 of the Ordinance on the Doctorates ETH Zurich<sup>18</sup> also apply.

**Art. 14** Withdrawal of agreement to supervise the doctoral thesis

If the supervisor withdraws her/his agreement to supervise the doctoral thesis, the provisions of Art. 30, 33 and 49 – 51 of the Ordinance on the Doctorate ETH Zurich<sup>19</sup> apply.

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<sup>16</sup> RSETHZ 340.31en (SR 414.133.1)

<sup>17</sup> RSETHZ 324.1.0350.12

<sup>18</sup> RSETHZ 340.31en (SR 414.133.1)

<sup>19</sup> RSETHZ 340.31en (SR 414.133.1)

**Art. 15** Funding, tuition fees waiver and doctoral studies fees

<sup>1</sup> Students in the direct doctorate programme receive a merit-based scholarship for the duration of the Master's degree programme. The respective amount corresponds to the funds required of foreign students by the Migration Office of the Canton of Zurich to cover tuition and living costs.<sup>20</sup>

<sup>2</sup> The doctoral thesis supervisor (see Art. 5, Para. 3 (b)) is responsible for financing the merit-based scholarship mentioned in Para. 1. The scholarship is paid out each semester by the Financial Aid Office.

<sup>3</sup> Students in the direct doctorate programme are not subject to tuition fees for the duration of the Master's degree programme.

<sup>4</sup> Students may work as Teaching Assistants (Hilfsassistentin/Hilfsassistent) while drawing the merit-based scholarship.

<sup>5</sup> Exclusion from the direct doctorate programme means loss of the merit-based scholarship and cessation of the tuition fees waiver.

<sup>6</sup> After Master's studies are completed the student is employed as a doctoral student according to the conditions usual in D-ITET.

<sup>7</sup> Doctoral fees as per Art. 6 of the Ordinance on the Doctorate ETH Zurich<sup>21</sup> cannot be waived.

<sup>8</sup> Any deviations from the stipulations in Para. 1 and 2 are subject to the Rector's approval.

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<sup>20</sup> At the time this appendix came into force: CHF 24,000.00 per year.

<sup>21</sup> RSETHZ **340.31en** (SR **414.133.1**)

## Anhang 3

zum Studienreglement 2018 für den  
Master-Studiengang Elektrotechnik und Informationstechnologie

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### Qualifikationsprofil

*(English version, please see below)*

Der Master-Abschluss in Elektrotechnik und Informationstechnologie befähigt die Absolventinnen und Absolventen zur selbständigen Tätigkeit in Forschung und Entwicklung. Er ermöglicht es, ein Doktorat im Bereich Elektrotechnik und Informationstechnologie oder in einem verwandten Gebiet zu beginnen sowie eine verantwortungsvolle Position in diesen Gebieten zu besetzen.

Absolventinnen und Absolventen mit einem Master-Abschluss in Elektrotechnik und Informationstechnologie haben insbesondere folgende Kenntnisse und Fähigkeiten erworben:

- Solide Kenntnisse in Physik, Mathematik, Signal- und Systemtheorie sowie Elektronik;
- Vertiefte Kenntnisse in der gewählten Vertiefungsrichtung, inklusive Kenntnis der theoretischen Prinzipien, modernen Methoden und praktischen Erfahrung in der Durchführung ingenieurwissenschaftlicher Forschungsprojekte;
- Fähigkeit, Probleme im Kontext von Elektrotechnik und Informationstechnologie unter Anwendung von Ingenieurs-Prinzipien gekoppelt mit einer rigorosen mathematischen und physikalischen Wissenschaftsbasis anzugehen und in effizienten Lösungen umzusetzen.

### Qualification profile

*The Master's degree in Electrical Engineering and Information Technology qualifies graduates to work independently in research and development, pursue doctoral studies (PhD) in the area of Electrical Engineering and Information Technology or in a related field, and assume responsible positions in these fields.*

*In particular, graduates with a Master's degree in Electrical Engineering and Information Technology have acquired the following knowledge and competences:*

- *Have a sound knowledge of the relevant principles of physics, mathematics, signals and systems, and electronics;*
- *Have in-depth knowledge of their area of specialisation (major), including knowledge of its theoretical principles, state-of-the-art methodologies, and hands-on experience in conducting engineering-related research projects;*
- *Have the ability to apply an engineering approach with an in-depth mathematical/physical basis to solve interdisciplinary problems related to electrical engineering and information technology.*