TECHNISCHE UNIVERSITÄT DRESDEN

Faculty Electrical Engineering and Information Technology

Examination Regulations for the Consecutive Master Programme Nanoelectronic Systems

as of #date of issue#

Pursuant to § 34 sec. 1 sentence 1 of the Law Governing the Universities in the Free State of Saxony (*Sächsisches Hochschulfreiheitsgesetz - SächsHSG*) of 15 January 2013 (*SächsGVBl.* p. 3), last amended by article 24 of the Act of 18 December 2013 (*SächsGVBl.* pp. 970, 1086), the Technische Universität Dresden enacts the following Examination Regulations as a statute.

Please note: This is an English translation of the German original. **Only the German version is legally binding**

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Section 1: General provisions

§ 1
Standard period of study

During the standard period of study for the Master programme Nanoelectronic Systems, students are required to accomplish face-to-face studies, self-study and the Master examination.

§ 2
Examination structure

The Master examination comprises module examinations, the Master thesis and the colloquium. By taking a module exam the student completes a module. As a rule, a module exam is an exam or qualification equivalent to an exam. The equivalent qualifications are taken throughout the course.

§ 3
Dates and deadlines

(1) Students are expected to pass the Master examination within the standard period of study. Unless the Master examination is passed within four semesters after the end of the standard period of study, the exam is considered a fail. A failed Master examination can be retaken once within one year. After this deadline passed, the exam is assessed as fail once again. A second attempt is only possible at the next scheduled exam date. Afterwards the Master examination is considered failed at the final attempt.

(2) It is necessary that module examinations are taken by the end of the semester that is defined in the curriculum structure.

(3) On the basis of the study regulations and the courses offered, the Technische Universität Dresden ensures that academic qualifications and exams and also the Master thesis and the colloquium can be accomplished within the defined periods of time. Students are informed in time about type, number and dates of academic qualifications and exams, and also about the dates of issue and submission of the Master thesis and the day and time of the colloquium. Students are informed about the number of possible retakes before each module exam.

(4) During maternity and parental leave times, periods do not start and maternity and parental leave times do not count towards running periods.

§ 4
General requirements for admission and admission procedures

(1) The Master examination can only be taken by students who

1. are enrolled in the Master programme Nanoelectronic Systems at Technische Universität Dresden and
2. have fulfilled the relevant subject-related prerequisites (§ 25) and
3. have submitted a written or electronic statement on section 4 no. 3.

(2) For taking exams or rendering other assessments, students have to register. Later cancellation is possible without stating reasons. Registration procedures and deadlines are defined by the Examination Committee and are publicly announced by the faculty in the known manner at the beginning of each semester.

(3) Students are admitted to

1. a module exam on the basis of the first registration for an assessment within this module exam,

2. the Master thesis because of the application for a thesis topic or, in case of § 20 sec. 3 sentence 5, as the topic is handed over and
3. to the defence because the student was given grade „sufficient" (4.0) or better for the Master thesis.

(4) Admission is refused if

1. the prerequisites mentioned in section 1 or the rules of procedure in accordance with section 2 are not fulfilled or
2. the papers are incomplete or
3. students have already failed an exam at the final attempt and this exam is a prerequisite for the successful completion of the Master programme Nanoelectronic Systems.

(5) The Examination Committee decides on admission. Admission may be publicly announced. § 17 sec. 4 remains unaffected.

§ 5
Types of assessments

(1) Assessments can be completed as

1. written exams (§ 6),
2. oral assessments (§ 7),
3. projects (§ 8),
4. reports (§ 9) and/or
5. other assessments (§ 10).

In modules, which obviously fall under the responsibility of several examination regulations, synonyms can be used for assessments of the same content. In special circumstances, written assessments may include multiple-choice examination tests. The respective MC Regulations of the Faculty of Electrical and Computer Engineering, as amended, governs the organisation and evaluation of these assessments.

(2) Academic performances and assessments shall be in English or – as specified in the module descriptions – in German.

(3) If a student can produce prima facie evidence that s/he is unable to either partly or entirely complete assessments in the defined manner because of a long-time or permanent physical defect or chronic illness, the chairperson of the examination committee will allow her/him to render the assessments within a longer period or to render equivalent assessments in a suitable manner. Students may be asked to produce a medical certificate from a doctor and, if there is reasonable doubt, evidence from a public health officer. Equivalent provisions apply to exam prerequisites.

(4) If a student can produce prima facie evidence that s/he is unable to complete assessments in the defined manner because s/he cares for own children, who are 14 years old or younger, or for close relatives, the chairperson of the Examination Committee will accept applications to complete assessments in an equivalent manner. Close relatives are children, parents, grandparents, spouses and domestic partners. The chairperson of the Examination Committee will decide on how the assessment shall be completed by appointment with the responsible examiner according to their reasonably exercised discretion. Suitable measures to eliminate prejudices are, e.g. longer times and breaks when working on projects or theses, use of alternative media, alternative exam locations within the university or alternative exam dates. Equivalent provisions apply to exam prerequisites.

§ 6
Written exams

(1) Written exams are designed to show that students are able to solve tasks and work on topics on the basis of the necessary basic knowledge within a limited time frame and with the use of limited aids and making use of the common methods of the subject studied. If written exams or individual tasks are set up according to § 5 sec. 1 sentence 3, the student is asked to demonstrate the knowledge that is required for achieving the module objective. For this purpose, s/he has to indicate which of the provided answers s/he assumes to be correct.

(2) Written exams, the passing of which is a prerequisite requirement for being allowed to continue studies, are – as a rule, however always in case of last attempts – assessed by two examiners. The grade is calculated from the average of the individual assessments pursuant to § 11 sec. 1. The duration of the evaluation procedure should not be longer than four weeks.

(3) The module descriptions define the duration of a written exam. The duration is 90 minutes minimum and 240 minutes maximum.

§ 7
Oral assessments

(1) Oral assessments are designed to demonstrate that the student is able to discern interrelations of the field of knowledge examined and to link specific questions with these interrelations and to answer them. Moreover, it shall be ascertained whether the student has developed the basic knowledge that is typical for students at this stage of the programme.

(2) Oral assessments are, as a rule, conducted by at least two examiners in a so-called *Kollegialprüfung* or by one examiner who is accompanied by an expert associate examiner (§ 18) as individual examinations.

(3) Oral assessments may last from 15 to 45 minutes. The actual number of hours is defined in the module descriptions.

(4) The substantial subjects and results of the oral assessments should be recorded in minutes. The student is informed about the result right after the oral assessment.

§ 8
Projects

(1) As a rule, projects are designed to demonstrate the student's ability to be part of a team and to show their skills for developing, realising and presenting concepts. Students are expected to demonstrate their ability to define goals in a complex task and to work out interdisciplinary solutions and concepts.

(2) For projects § 6 sec. 2 applies accordingly.

(3) The module descriptions define the duration of projects which is 20 weeks as a maximum.

(4) If the project is done as a group, there should be a clear distinction of each student's contribution for grading purposes and the requirements according to section 1 should be fulfilled.

§ 9
Reports

(1) Reports are designed to demonstrate the student's skill to work on specific tasks and present them. The assigned tasks define the total of hours and the form of the report.

(2) § 6 sec. 2 sentences 1 and 2 apply accordingly. As a rule, reports are assessed by the lecturer who is responsible for the course in which the report is assigned and possibly presented.

(3) § 7 sec. 4 applies accordingly.

§ 10
Other assessments

(1) The student shall complete the defined achievements by other controlled assessments, which can be evaluated on the same evaluation basis and which are mentioned in detail in the module descriptions together with the requirements and the indicated number of hours (hereinafter called other assessments). Other assessments are colloquia, assigned papers, (a collection) of exercises, computer-assisted tests and experiments, lab courses, (a collection of) lab course records, lab course reports, presentations and simulations.

(2) The colloquium is the summary and presentation of the results of a student assignment with subsequent discussion.

(3) An assigned paper is the summary of the results, which a student worked out individually and presents in a scientific documentation.

(4) In a lab course students can demonstrate their skills of handling devices and apparatuses properly and efficiently when researching a certain physics or technical task.

The lab course record is a formalised report summarising the results obtained in lab courses, in which the student demonstrates the competency to prepare experimental results and present them in a suitable manner and to dispute on them.

In comparison, a lab course report details the order of actions, the subject matter, the result and the competencies acquired while working on a subject-related task.

(5) Exercises are designed to demonstrate that students are able to use the content taught in the module when solving a series of theoretical or practical tasks, which cover single aspects of the module each.

Computer-assisted test tasks help demonstrate that students are able to independently use the theoretical knowledge in given learning structures.

During experimentation students show that they can reliably identify, prove and/or represent selected physics phenomena.

(6) The presentation is an oral report that is given by one or more students and that presents the results found during their independent work. The presentation follows a certain structure and is given by using visual aids.

(7) In a simulation, students display their social and language skills in various settings, such as negotiations, conferences or interviews.

(8) For other written assessments § 6 sec. 2 applies accordingly. For other than written assessments § 7 sec. 2 and 4 apply accordingly.

§ 11
Evaluation of assessments, calculation and weighting of grades, announcement of examination results

(1) The individual assessments are evaluated by the examiners. The grades below shall be used:

1 = very good = an excellent performance;

2	=	good	=	a performance that stands out considerably from the average
3	=	average	=	a performance that meets average requirements;
4	=	sufficient	=	a performance that still meets the requirements despite some inadequacies
5	=	insufficient	=	a performance that does not meet the requirements because of its grave inadequacies

For a more detailed assessment, grades can be raised or lowered by 0.3 to obtain intermediate values; grades 0.7, 4.3, 4.7 and 5.3 cannot be given.

A single assessment is rated as „pass“ or „fail“ (ungraded assessment) if the relevant module description provides for this as an exception. Ungraded assessments that are rated as „pass“ do not enter further grade calculations; Ungraded assessments that are rated as „fail“ enter further grade calculations as grade 5 (insufficient);

(2) The module grade is calculated from the average of the grades of the assessments of the module, to which a weighting factor may be applied if prescribed in the module description. Only the first decimal place is indicated; all other decimal places are eliminated without rounding. On the basis of the averages below, the module grades are

1.5 and better	=	very good,
from 1.6 to 2.5 inclusive	=	good,
from 2.6 to 3.5 inclusive	=	average,
from 3.6 to 4.0 inclusive	=	sufficient,
4.1 and worse	=	insufficient.

If a module examination is not passed due to failing an assessment which is required for passing the module according to § 13 sec. 1 sentence 2, the module grade is “insufficient” (5.0).

(3) Module examinations, which solely consist of one ungraded assessment, are rated as „pass“ or „fail“ (ungraded module examinations) in accordance with the evaluation of the assessment. Ungraded module examinations do not enter further grade calculations;

(4) A final overall grade is calculated for the Master examination. The final grade of the Master examination consists of the final grade given for the Master thesis, to which a weighting factor of 30 is applied, and the module grades that are weighted on the basis of the credit points according to § 26 sec. 1. The overall grade given for the Master thesis is a combination of the grade given for the Master thesis with a weighting factor of 4 and the grade given for the defence with a weighting factor of 1. For the calculation of the overall and final grades, sec. 2 sentences 2 and 3 shall apply mutatis mutandis.

In case of extraordinary achievements (if the average grade is 1.2 or better and the overall grade earned for the Master thesis is 2.0 or better), the overall rating is „passed with distinction“ instead of “very good”.

(5) The total grade given for the Master examination is additionally shown as a relative grade on the basis of the ECTS grading scale.

(6) The students shall be informed about the details concerning the announcement of the examination results in the usual way of announcement.

§ 12
Non-appearance, withdrawals, cheating, breach of regulations

(1) An assessment is evaluated with grade „insufficient“ (5.0) or „fail“ if the student fails to appear for a binding exam date or if s/he withdraws from a registered exam without good cause. The same applies when an assessment is not completed within the defined period of time.

(2) The student has to announce and substantiate the good cause for the withdrawal or the non-appearance in writing and immediately to the Examination Office. In case of illness, the student usually hasto produce a medical certificate and, if there is reasonable doubt, evidence by a medical officer of health. As regards the adherence to deadlines for the first registration for exams, retake of exams, reasons for no-shows and the adherence to time limits for working on exams illness of the student is equivalent to illness of the child for which the student has the sole parental responsibility most of the time. If the reason is accepted, a new exam date is set. In this case, if exam results are already available they will be counted towards the final result. The Examination Committee decides upon the acceptability of the withdrawal or the reason for no-show.

(3) If a student attempts to manipulate the result of the assessment by fraud or the use of unfair means, the relevant assessment will be evaluated as „insufficient“ (5.0). Accordingly, ungraded assessments are evaluated as “fail“. Students who obstruct the proper process of an exam, can be excluded from completing the assessment by the examiner or the proctor; in this case, the assessment is graded as „insufficient“ (5.0) or „fail“. In grave cases, the Examination Committee may exclude the student from completing further assessments.

(4) Sections 1 to 3 hold accordingly for exam prerequisites, the Master thesis and the defence.

§ 13
Pass and fail

(1) A module exam is passed if the module grade is „sufficient“ (4.0) or better or if the ungraded module exam is assessed as „pass“. Moreover, in cases that are defined in the module descriptions accordingly, passing the module exam depends on the grading of individual assessments with at least “sufficient” (4.0). If the student passed the module exam, s/he earns the credit points that are associated with the module in the module description.

(2) The Master examination is passed after all necessary module examinations, the Master thesis and the defence are all passed with at least grade “sufficient” (4.0).

(3) A module exam is not passed if the module grade is worse than „sufficient“ (4.0) or if the module exam is assessed as „fail“ or if a required pre-exam achievement or assessment has not been completed and if it is no longer possible to retake it. A module exam, which consists of several assessments, is already failed at the first attempt if it is mathematically no longer possible to achieve a module grade of “sufficient” (4.0) or better pursuant to § 11 sec. 2.

(4) A module exam is failed at the final attempt unless the module grade is „sufficient“ (4.0) or better or the module exam is assessed as „fail“ and it is no longer possible to retake the exam. Master thesis and defence are failed at the final attempt unless they were assessed with grade „sufficient“ (4.0) or better and unless it is possible to retake the exam.

(5) A Master examination is not passed or failed in the final attempt unless either a module exam, the Master thesis or the colloquium are passed or failed in the final attempt, respectively. § 3, sec. 1 remains unaffected.

(6) If a student failed a module exam, or the Master thesis or the defence were assessed with a grade worse than „sufficient“ (4.0), the student shall be informed about whether and to which extent and within which time limits s/he can retake the relevant exam.

(7) If a student failed the Master examination, s/he can apply for a certificate, upon the production of the necessary proofs of academic achievements and the Certificate of Withdrawal from Student Register, which confirms the completion of parts of exams and – if applicable – the missing/failed parts of exams and which also states that the Master examination was not successfully passed.

§ 14
Free trial

(1) Module examinations can be taken earlier than in the semesters defined by the curriculum plan if the admission requirements are fulfilled (Annex 2 of the Study Regulations) (free trial).

(2) Students can apply for another retake of module examinations they successfully passed as a free trial or assessments that were assessed with at least grade „sufficient“ (4.0) to improve their grade at the next possible and regular exam date. In such cases, the better grade achieved will count. Form and deadline for the application are defined by the Examination Committee and are publicly announced by the faculty in the known manner. If the next regular exam date or the application deadline are missed, grades can no longer be improved. Assessments for which students earned grade "sufficient" (4.0) or better may – on application – count towards the grade calculation in case a module exam is retaken. Assessments that have been graded “passed” in the free trial count towards the module evaluation ex officio.

(3) If a module exam is failed in the free trial, it is considered as an exam that has not been taken. Assessments for which students earned grade „sufficient“ (4.0) or better, or a „pass grade“ count towards grade calculation in the subsequent exam procedure. If students seek to improve their grade for particular assessments pursuant to sec. 2, the better grade achieved will count.

(4) In addition to § 3 sec. 4 times of interruption of studies because of long-term illness of the student or because of a child for whom the student has the sole parental responsibility most of the time and also times spent studying abroad are not taken into account when free trial regulations apply.

§ 15
Retaking module examinations

(1) Failed module examinations can be retaken once within one year after completion of the first attempt. The deadline starts on the day students are notified of the first fail of the module exam. After the deadline passed, the exams are considered as failed once again. An assessment, which has not yet been evaluated pursuant to § 13 sec. 3 sentence 2, can be retaken again at the next available exam date, if the repeated module exam is failed pursuant to sentence 1 because this assessment was not graded with „sufficient“ (4.0) or better. Failure to meet the deadline pursuant to § 3, sec. 1 sentence 2 is also regarded as an assessment. If assessments are retaken pursuant to sentence 4, they are regarded and graded as the first retake of the module exam.

(2) The exam can be retaken for the second time only at the next available exam date. Afterwards, the module exam is considered to be failed in the final attempt. Students can no longer retake exams they failed at the final attempt.

(3) Within a failed module exam, which consists of several assessments, only those assessments shall be retaken which are not graded „sufficient“ (4.0) or better or assessments that are graded „fail“.

(4) It is possible to retake a passed module exam only in the case that is described in § 14 sec. 2 and the retake comprises all assessments.

(5) Unsuccessful attempts of the module exam of the same or other courses of study will be taken over.

§ 16
Recognition of study periods, academic achievements and assessments and also qualifications obtained outside universities

(1) Academic achievements and assessments that were completed at another university are recognised upon application unless there are fundamental differences with regard to the competences acquired. Further agreements of the Technische Universität Dresden, of the German Rectors' Conference (*Hochschulrektorenkonferenz*), of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Laender* in the Federal Republic of Germany (*Kultusministerkonferenz*) and those that have been ratified by the Federal Republic of Germany are to be respected if required.

(2) Qualifications that were not obtained during studies are recognised upon application provided they are equivalent. There is equivalence when contents, number of hours and requirements are in substantial accordance with parts of the Master programme Nanoelectronic Systems at Technische Universität Dresden. No schematic comparison shall be made but an overall analysis and an overall evaluation. Qualifications obtained outside a university may compensate for not more than 50% of studies.

(3) Academic achievements and assessments that were completed in the Federal Republic of Germany in the same course of studies are recognised ex officio.

(4) It it possible to recognise academic achievements and assessments obtained at a university in spite of fundamental differences if they correspond – due to their contents and objectives – to the overall purpose of one option offered in this course of studies and therefore form a structural equivalent. The actual performance is displayed in the Master degree certificate.

(5) The recognition of academic achievements and assessments pursuant to sec. 1, 3 or 4 or of qualifications obtained outside university studies pursuant to sec. 2 is accompanied by the official recognition of study periods ex officio. Provided the grade systems are comparable, grades will be adopted and will enter the calculation of composite grades. Unless grade systems are comparable, the addition "pass" is made and grades will not enter the grade calculation. Recognition may be marked as such in the certificate.

(6) Recognition is made by the Examination Committee. It is necessary that the student produces the relevant documents required for the recognition. From this date on, the process of recognition must not exceed the period of one month. In case of non-recognition, § 17 sec. 4 sentence 1 applies.

§ 17
Examination committee

(1) For the Master programme Nanoelectronic Systems an examination committee is formed the members of which will organise and conduct examinations and also fulfil tasks that arise from the examination regulations. Three university lecturers, a research fellow and a student

form the examination committee. With the exception of the student, the members remain in this office for three years. The student will remain in the office for one year.

(2) The chairperson, his / her deputy and the other members and their deputies are appointed by the Faculty Council of the Faculty of Electrical Engineering and Information Technology, the student member is suggested by the council of student representatives. Normally, the chairperson manages the affairs of the examination committee.

(3) The examination committee ensures that the provisions of the examination regulations are met. At regular intervals, the committee reports to the faculty about the development of examination and study periods including the actual times needed for completing the Master thesis and also about the distribution of the module and overall grades. The report shall be disclosed by the Technische Universität Dresden in a suitable manner. The examination committee makes suggestions as to reforms of the examination regulations, the study regulations, the module descriptions and the curriculum plan.

(4) Undesirable decisions shall be notified in writing to the students in question and shall be accompanied by reasons and by information on legal remedies. The examination committee as examination authority decides on appeals within reasonable time and issues the determinations to appeals.

(5) The members of the examination committee have the right to attend exams, assessments and the defence.

(6) The members of the examination committee and their deputies are subject to professional discretion. Unless they are civil servants, the chairperson shall direct members to use professional discretion.

(7) The examination office organises the examinations and keeps examination files on the basis of the decisions made by the examination committee.

§ 18
Examiners and co-examiners

(1) The examination committee appoints the examiners – these are university lecturers and persons who are eligible to hold examinations pursuant to federal state law. Co-examiners must have passed a Master examination or a comparable exam in the relevant subject area.

(2) Students are entitled to propose a thesis advisor for their Master thesis. The proposal does not substantiate a claim.

(3) The names of examiners shall be announced to students in good time.

(4) For examiners and co-examiners § 17 sec. 6 applies accordingly.

§ 19
Purpose of the Master examination

Passing the Master examination marks the completion of the programme and the award of the job-qualifying degree. By passing the Master examination it is ascertained that students fulfil the final requirements defined in § 2 of the Study Regulations.

§ 20
Purpose, issue, submission, assessment and re-submission of a Master thesis and the defence

(1) The purpose of the Master thesis is to demonstrate that the student is able to work independently on complex tasks in the subject area using scientific methods and within a specified time.

(2) The advisor for the Master thesis can be a professor or another person that is entitled to hold examinations pursuant to *Sächsisches Hochschulfreiheitsgesetz* provided this person works in the course of studies 'Nanoelectronic Systems' at Technische Universität Dresden. If the student wishes that the advisor for the Master thesis is a person who does not work in the university, the chairperson of the examination committee shall agree.

(3) The examination committee hands out the topic of the Master thesis. The topic and the date of handing it out shall be placed on record. Students can suggest preferred topics. Upon application of the student, the examination committee arranges for the issue of the topic for the Master thesis in good time. The topic is issued by the examination committee ex officio at the latest at the beginning of the semester that follows the completion of the last module exam.

(4) The topic can be returned only once and only within six weeks after it was issued. However, in case of a repeated Master thesis students are allowed to return the topic only unless they returned the topic in their first Master thesis attempt. In case the student has returned a topic, s/he must be given a new one without delay pursuant sec. 3, sentences 1 until 3.

(5) The Master thesis can also be performed in a team as long as the individual part worked out by the student as his/her Master thesis can be clearly defined on the basis of paragraphs, page numbers or other objective criteria which allow an individual assessment and fulfil the requirements stated in section 1.

(6) Students shall hand in two typed and bound copies of their Master thesis and also a digital text form of it on a suitable data storage medium either in English or German at the Examination Office within the specified time limit; the hand-in time shall be placed on record. In submitting, students declare in writing that the Master thesis – in case of group work the marked part of the work – is their own work and that they used only the indicated references and devices.

(7) Two examiners will decide on the grade given for the Master thesis pursuant to § 11 sec. 1 sentences 1 to 3. The supervisor of the Master thesis shall be one of the examiners. The duration of the evaluation procedure should not be longer than two weeks.

(8) The grade of the Master thesis is the calculated average of the two individual grades given by the examiners. If the individual grades given by the examiners differ by more than two grades from each other, the average grade shall be given provided both examiners agree. If they do not agree, the examination committee appoints another examiner for a third grade. As a result, the grade of the Master thesis is the calculated average of the three individual grades. Sec. 2 sentences 2 and 3 apply accordingly.

(9) If one examiner gave the student grade „sufficient" (4.0) or better for the Master thesis and the other examiner gave grade „insufficient" (5.0), the examination committee will appoint another examiner for a third grade. This third assessment decides whether the Master thesis is a pass or fail. If the Master thesis as a result of the third assessment is a pass, the average grade is calculated from the individual grades given by the 'pass' voters, otherwise it is calculated from the grades given by the 'fail' voters. Sec. 2 sentences 2 and 3 apply accordingly.

(10) Students can repeat the Master thesis once within one year if the grade given for it is worse than „sufficient" (4.0). A third attempt is not granted.

(11) The student must explain the Master thesis in a public defence in which the supervisor of the thesis as the examiner and a co-examiner are present. Further examiners can be appointed. Paragraph 10 and § 7 sec. 4 and § 11 sec. 1 sentences 1 to 3 apply accordingly.

§ 21
Master degree certificate and certificate of grades

(1) A certificate of the passed Master examination is issued immediately, if possible within six weeks, and handed over to the student. The certificate of the Master examination shall contain the module assessments pursuant to § 26 sec. 1, the topic of the Master thesis, the grade, the supervisor and also the final grade. The grades earned for assessments are listed on the Annex to the Certificate. Students may apply for the addition of extra information on the certificate, such as the assessment of additional modules and the duration of subject-specific studies by the time the Master examination is completed.

(2) Concurrently with the certificate of the Master examination students are handed over the Master degree certificate indicating the date the certificate is issued. This document is to certify that the student has earned the Master degree. The Master degree certificate is signed by the rector and the chairperson of the examination committee and bears the round raised seal of Technische Universität Dresden. Moreover, students are awarded the Master degree certificate and the certificate of the Master examination in English.

(3) The certificate bears the date when the student completed the last part of the examination pursuant to §13 sec. 2. The certificate is signed by the chairperson of the examination committee as well as the dean of the Faculty of Electrical and Computer Engineering and bears the faculty's round raised seal of Technische Universität Dresden. Additionally, the certificate is signed by the Dean of the Faculty Electrical Engineering and Information Technology.

(4) The Technische Universität Dresden issues a Diploma Supplement (DS) following the „Diploma Supplement Model" of the European Union/Council of Europe/UNESCO. The text, which has been agreed upon by KMK and HRK, shall be used in its current version to describe the national education system (DS section 8).

§ 22
Invalid Master examination

(1) If a student cheated during an exam or assessment and this becomes known only after s/he has been handed over the certificate, the assessment of the exam can be modified pursuant to § 13 sec. 3. Where appropriate, the examination committee can declare the module exam as "insufficient"(5.0) and the Master examination as "fail". The same applies accordingly to assessments not graded, the Master thesis and the defence.

(2) If the prerequisites for holding a module exam were not fulfilled and the student did not attempt to disguise this fact, and provided this fact becomes known only after the student has been handed over the certificate, this defect of title is cured by the passing of the module exam. If the student willfully and wrongfully brings about the holding of a module exam, the examination committee can declare the module exam to be „insufficient" (5.0) and the Master examination as a „fail". The same applies accordingly to assessments not graded, the Master thesis and the defence.

(3) The student shall have the opportunity to comment on the case before a decision is made.

(4) The chairperson of the examination committee shall revoke the wrong certificate and replace it by a new one where appropriate. The Master degree certificate, all translations and the diploma supplement shall be revoked together with the false certificate provided the Master examination has been declared to be a „fail"as the result of cheating. It is impossible to make a decision pursuant to section 1 and section 2 sentence 2 or 3 later than five years after the day the certificate was issued.

§ 23
Examination of exam records

The student has the right to file an application within one year after the examination procedure has been closed to be allowed to examine written examinations and assessments thereof and the exam records within adequate time.

Section 2: Subject-specific provisions

§ 24
Duration, structure and scope of studies

(1) Pursuant to § 1 the standard period of study is 4 semesters.

(2) The course of studies has a modular structure and is completed with the Master thesis and the defence. The student can choose between the branch of study Nanoelectronics, and the branch of study Nanoscience and Nanotechnology. The academic achievements and assessments of the first year within the branch of study of Nanoscience and Nanotechnology are to be obtained at the KU Leuven (Belgium) as a compulsory year abroad.

(3) By passing the Master examination the student earns a total of 120 credit points in the modules, the Master thesis and the defence.

§ 25
Subject-related prerequisites for the Master examination

(1) Academic achievements can be exam prerequisites for module examinations. Their number, type and organisation are laid down in the module descriptions. Failed pre-exam achievements can be retaken twice as a maximum.

(2) Before students can take up work on their Master thesis, they must have completed all modules that are required within the course of studies and a specified number of required elective modules of the course of studies totalling 38 credits.

§ 26
Subject, type and scope of the Master examination

(1) The Master examination comprises all required module examinations, the chosen required elective modules and also the Master thesis and the defence; in the branch of study Nanoscience and Nanotechnology also the achievements that have to be obtained at the KU Leuven (Belgium).

(2) For both branchs of study, the required modules are:

- Academic and Scientific Work
- Project Work

Further required modules for the branch of study of Nanoelectronics are:

- Fundamentals of Estimation and Detection
- Hardware/Software Codesign
- Lab Sessions
- Principles of Dependable Systems
- Radio Frequency Integrated Circuits
- Semiconductor Technology.

(3) For both branchs of study, the required elective modules are:

- Computer Arithmetic
- Electromechanical Networks
- German Language and Culture
- Hardware/Software Codesign Lab
- Innovative Concepts for Active Nanoelectronic Devices
- Integrated Circuits for Broadband Optical Communications
- Modelling and Simulation of Telecommunication Systems
- Molecular Electronics
- Optoelectronics
- Real-Time Systems
- Theory of Nonlinear Networks
- Ubiquitous Information Systems

Further required elective modules for the branch of study of Nanoelectronics are:

- Communication
- Integrated Photonic Devices for Communications and Signal Processing
- Investing in a Sustainable Future
- Lab VLSI Processor Design
- Materials for Nanoelectronics and Vacuum Technology
- Memory Technology
- Modeling and Characterization of Electron Devices
- Nanotechnology and Material Science
- Semiconductor Industry Challenges: Market Dynamics - Technology Innovations - Yield and Reliability Engineering
- Software-Fault Tolerance
- Stochastic Signals and Systems
- Systems Engineering
- Wireless Sensor Networks

The students of the branch of study Nanoelectronics are required to select required elective modules totalling 38 credits. Students of the branch of study Nanoscience and Nanotechnology are required to select modules totalling 16 credits.

(4) The module descriptions define the required assessments, which are classified with the modules, their type and organisation. Unless otherwise specified in the module descriptions, content and skills of the module are subject of the assessments.

(5) Students can take exams in modules other than those listed in section 1 (additional modules). The modules for these exams can be chosen freely – after consultation with the respective lecturer or examiner – from the overall module catalogue of Technische Universität Dresden or a co-operating institution of higher education. They do neither enter the calculation of the student's total of hours nor the calculation of the final grade.

§ 27
Time for working on the Master thesis and duration of the defence

(1) The time allowed for working on the Master thesis is 23 weeks, students earn 29 credits. It is the supervisor's responsibility to limit the topic, the assigned task and the extent of the Master thesis such that students are able to keep the deadline for completing the Master thesis. In exceptional cases, the examination committee can extend the time for working on the thesis for further 13 weeks at most, the number of credit points remains unaffected.

(2) The defence lasts 60 minutes. Students earn one credit point.

§ 28
Master degree

After the student has passed the Master examination, s/he is awarded the degree "Master of Science" (short: M.Sc.). Students of the branch of study Nanoscience and Nanotechnology are jointly awarded the degree by the KU Leuven (Belgium) and the TU Dresden

Section 3: Closing provisions

§ 29
Coming into force and public notice

(1) These examination regulations become effective as of 01 October 2014 and are publicly announced in the Official Notices of Technische Universität Dresden.

(2) They are valid for all students that are enrolled in the Master programme Nanoelectronic Systems from the winter semester 2014/15 on.

(3) For students enrolled before the winter semester 2014/15, the examination regulations that were valid before these examination regulations became effective continue being valid.

Issued on the basis of the decision of the faculty council of the Faculty of Electrical and Computer Engineering made on 17 September 2014 and the approval of the rectorial board of #date#.

Dresden, #date of issue#

The Rector
of Technische Universität Dresden

Prof. Dr. Dr.-Ing. habil. Hans Müller-Steinhagen