



**Study Regulations for the Consecutive Master's Program
Organic and Molecular Electronics**

As of #Date of issue#

(Enacted by the Faculty Council in September, 2014)

Pursuant to § 36 of the Law Governing the Universities in the Free State of Saxony (Sächsisches Hochschulgesetz – SächsHSG) of 10 December 2008 (SächsGVBl. p. 900), last amended by article 5 of the Act of 4 October 2011 (SächsGVBl. pp. 380, 391), the Technische Universität Dresden enacts the following Study Regulations as a statute.

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Appendix 1 Module Descriptions

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

§ 1

Applicability

These Study Regulations define the objective, the contents, the structure, and the course of studies for the consecutive Master's program „Organic and Molecular Electronics“ at the Technische Universität Dresden on the basis of the provisions of the applicable Law on Higher Education in the Free State of Saxony and the Examination Regulations.

§ 2

Aims of the Program

(1) On the basis of various methods and scientific approaches introduced during the Master's program „Organic and Molecular Electronics,“ the graduates are able to conduct independent scientific research. The students are able to deal with complex issues and solve them with scientific methods, reaching beyond the current state of knowledge. They possess a subject-related expertise, as well as methodical and analytical competencies, enabling them to broaden the current state of knowledge independently. Research methods and strategies are here of a crucial importance. The students are capable of recognizing scientific correlations, practicing communication on multidisciplinary level, and solving economic problems.

(2) The graduates are familiar with methods, techniques, and tools for manufacturing of organic electronics, as well as their application possibilities. They are capable of analyzing problems concerning these subject areas and thus developing effective solutions with regard to correlations and interdependencies within them. The graduates are familiar with the most current research and developments in this field and able to contribute to them constructively.

(3) The graduates possess extensive technical knowledge as well as acquaintance with the international research on design, manufacture, application, and integration of organic electronics. Thus, after an appropriate training period and in accordance with their chosen specialization, they are able to apply this expertise in solving complex problems in the field of organic electronics in their professional practice.

§ 3

Admission Requirements

(1) The following criteria have to be met in order for a candidate to be admitted to the program:

1. An acknowledged in Germany first level academic degree in science or engineering or a successful graduation of a state or state-approved university of cooperative education in a study course with comparable knowledge especially in higher mathematics.
2. Fluency in English at the level C1 of the Common European Framework of Reference for Languages (CEFR). In case English is not the candidate's native language, an internationally acknowledged certificate confirming the English language proficiency (preferably IELTS or TOEFL at the minimal score of 6.5 and 550 points respectively) has to be provided.

3. A confirmation of candidate's particular aptitude for studies in the Master's program Organic & Molecular Electronics. It comprises sound knowledge in the field of classical physics - including mechanics, electrodynamics, optics, thermodynamics and quantum theory as well as structure of matter.

(2) The fulfillment of these requirements is verified pursuant to the regulations governing aptitude assessment.

§ 4

Beginning and Duration of Studies

(1) The study course begins every winter semester.

(2) The standard period of study comprises four semesters and encompasses participation in classes, as well as self-studies, supervised practical courses and the Master's examination.

§ 5

Teaching and Learning Methods

(1) The content of the curriculum has a modular structure. In the individual modules, the academic contents are communicated, consolidated, and deepened during lectures, exercises, tutorials, lab courses, language classes, projects, as well as self-study.

(2) Lectures provide introduction into the modules' subject areas, for the most part for students' receptive consideration. Therefore, they are usually complemented by exercises, which afford the practical application of the subject matter.

(3) During seminars the students are guided to independently gather, process, present, describe and discuss information on the basis of technical literature and other materials.

(4) During lab courses the students apply the acquired knowledge as well as gain practical skills in potential professional fields. The theoretically discussed issues are here experimentally illustrated. Moreover, lab courses allow the students to gather experience and skills in working with devices, facilities, and measuring instruments.

(5) Language courses impart and train knowledge, skills, and abilities in respective foreign languages. They develop communicative and intercultural competencies in an academic and professional context, as well as in everyday situations.

(6) During research projects the students conduct scientific work, developing their team competencies and their ability of independent problem solving within a given deadline. Furthermore, in research projects the students learn to document and represent their work results in an adequate form and using appropriate language.

(7) During self-study the students can process, repeat, and deepen their knowledge at their own discretion.

§ 6

Structure and Organization of the Program

(1) The content of the curriculum has a modular structure. The courses comprise three semesters. During the fourth semester students work on their Master's thesis. Part-time

studies are possible in accordance with the Technische Universität Dresden's Part-Time Studies Regulations.

(2) The study program comprises eleven compulsory modules totaling to 86 credit points, an elective module of 4 credit points, and a Master's thesis and defense, totaling to 30 (29+1) credit points. The modules "Major" and "Minor" offer several elective contents, enabling the students to focus their studies on their chosen specialization area. Changing a "Major" or a "Minor" is possible but requires a written application to the examination office, where the specialization area that is subject to change and the new specialization area are stated.

(3) The module descriptions (Appendix 1) contain contents and objectives of the individual modules, their prerequisites and applicability, as well as the teaching and learning methods they comprise.

(4) The classes are held in English.

(5) The study plan (Appendix 2) contains the information about the appropriate modules' distribution in the respective semesters which allows the graduation in the standard period of study, as well as the courses' type and scope along with the number and point in time of assignments and examinations. These conditions can also be specified in an individual study plan, approved by the faculty.

(6) The elective modules as well as the study plan can be modified by the Faculty Council on suggestion of the Academic Committee. The current offer of elective modules has to be announced at the beginning of the semester. The modified study plan is binding for those students to whom it was communicated at the beginning of their studies. The Examination Committee may decide on the exceptions to the clause (3) upon application.

§ 7

Course Contents

(1) The Master's program „Organic and Molecular Electronics“ is research oriented.

(2) The curriculum comprises compulsory modules with the following range of subjects: semiconductor technology, molecular electronics, organic semiconductors, analysis and measurement techniques, as well as processing technology.

(3) The subject matter of compulsory elective or elective modules are the extended basics of chemistry and physics (depending on the student's academic background), materials and materials processing (e.g. fabrication, structuring, characterization, and surface chemistry), photophysics, optoelectronics, applications of organic and molecular electronics (e.g. devices components, circuit integration, memory technology and microsystems technology), economics, as well as German language and academic work.

§ 8

Credit Points

(1) ECTS- credit points document the students' average workload as well as their individual study progress. One credit point corresponds to the workload of 30 hours. As a rule, students acquire 60 credit points in the academic year (30 per semester). The total workload of the study program corresponds to 120 credit points and comprises the

successful participation in the module courses, self-study, completion of assignments and examinations specified in the module descriptions (Appendix 1) as well as the Master's thesis and defense.

(2) The module descriptions (Appendix 1) specify how many credit points can be obtained in the individual modules. Credit points are attained after the successful completion of the module examination. § 27 of the examination regulations remains unaffected.

§ 9

Student Advisory Service

(1) The central student advisory service of the TU Dresden handles the general student counselling which encompasses the issues of study opportunities, application procedure, and general student affairs. The subject-related counselling is carried out by the Faculty of Science and assists students particularly with regard to the organization of studies.

(2) Each student who at the beginning of the third semester has not earned any course credits yet is obliged to seek subject-related counselling.

§ 10

Adaptation of Module Descriptions

(1) The module descriptions can be adapted to the changed conditions in a simplified procedure in order to ensure the optimal organization of studies. The sections "Module Name", "Contents and Objectives", "Types of Teaching", "Requirements" as well as "Credit Points and Grades" cannot be modified.

(2) On suggestion of the Academic Committee, the Faculty Council of the Faculty of Science resolves on the modification of a module description. The modifications are to be announced at the faculty in the customary manner.

§ 11

Clarification of Applicability and Announcement

(1) These study regulations come into force on 1 October 2014 and will be announced in the Official Notice of the Technischen Universität Dresden.

(2) They apply for all students enrolled in the winter semester 2014/2015 in the Master's program „Organic and Molecular Electronics“ at the TU Dresden.

(3) The study regulations effective prior to these regulations coming to force are still binding for students enrolled before the winter semester 2014/2015 in the Master's program "Organic and Molecular Electronics" unless they declare their transfer in a written form to the Examination Board. The declaration's form and deadline are determined by the Examination Board and announced at the faculty in the customary manner.

Issued based on the resolution of the Faculty Council of the Faculty of Science made on June 13th, 2012 and the approval of the rectorate of #date#.