Technische Universität Dresden
Faculty of Civil Engineering

Study Regulations for the Consecutive Master's Programme Advanced Computational and Civil Engineering Structural Studies – ACCESS

as of 22 October 2016

Pursuant to section 36 par. 1 of the Gesetz über die Freiheit der Hochschulen im Freistaat Sachsen [Law on the Freedom of HE Institutions in the Free State of Saxony] (Sächsisches Hochschulfreiheitsgesetz - SächsHSFG) as first published on 15 January 2013 (SächsGVBl. p. 3), last updated by section 11 of the Law on 29 April 2015 (SächsGVBl. p. 349, 354), the Technische Universität Dresden enacts the following Examination Regulations as a statute.

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§ 1
Area of applicability

These Study Regulations define the objective, the contents, the structure and the order of events during studies for the consecutive Master's programme Advanced Computational and Civil Engineering Structural Studies – ACCESS at the Technische Universität Dresden on the basis of the provisions of the Law on the Freedom of HE Institutions in the Free State of Saxony and the Examination Regulations.

§ 2
Aims of the programme

(1) On completion of the consecutive Master's programme Advanced Computational and Civil Engineering Structural Studies – ACCESS students are able to employ innovative computer-assisted methods for modelling, analysing, upgrading and for the design of structures, in particular in civil engineering.

(2) After a settling-in period in their professional practice and thanks to their knowledge and practical use of modern concepts and scientific methods, the graduates are able to master the most various and complex tasks in all engineering areas that deal with carrying structures and field problems for solids and fluids in the widest sense.

§ 3
Admission requirements

Admission to the programme is subject to the prerequisite of a first university engineering degree recognised in Germany, preferably a civil engineering degree, or a degree awarded by a state or state-recognised University of Cooperative Education in the area of civil engineering. Moreover, special knowledge of mathematics and mechanics and also advanced proficiency in English are essential; Students are tested in an assessment procedure pursuant to the Regulations Governing Aptitude Assessment.

§ 4
Beginning and duration of studies

(1) Students can commence studies in the winter semester.

(2) The standard period of study is 4 semesters during which students are required to accomplish face-to-face studies, self-study and the Master's examination.

§ 5
Types of teaching and learning

(1) The academic material is organised in a modular structure. In the individual modules, the academic contents is communicated, consolidated and deepened in lectures, tutorials,

projects, seminars and also by mentoring and self-study. Self-study is supported by mentoring.

(2) Lectures serve to communicate basic knowledge of the module topics. Tutorials focus on the application of the taught contents and teach by example in subfields. Mentoring is done in individual or group discussions and extends the skills when using the different types of teaching and learning, it improves orientation in the required elective field and also the students' ability to work effectively with others on a common task. Seminars allow students to gather information about a chosen topic independently while under supervision on the basis of technical literature, documentations or other material, to present and discuss in a group what they worked out and to present it also in writing. Projects serve to apply taught knowledge and to acquire practical skills. Self-study deepens and expands the knowledge and skills students acquire and also helps them put them in relation to other applications and research areas independently.

§ 6
Structure and organisation of the programme

(1) The programme has a modular structure. The courses are offered in three semesters. During the fourth semester, students work on their Master's thesis.

(2) The programme includes 8 required modules and 7 required elective modules. The required elective modules allow students to focus on areas of particular interest. Once the student elected these modules, this decision is binding. Students can re-elect only twice; written re-election applications can be made to the Examination Office and must name the module to be dropped and the newly elected module.

(3) The module descriptions contain contents and qualification aims, the types of teaching and learning used, prerequisites, usability, frequency, amount of work involved and duration of the various modules (Appendix 1).

(4) Classes are held in English.

(5) The appropriate distribution of the modules across the semesters, the observance of which allows the completion of studies within the standard period of study, the types and numbers of hours of the courses and also the number and fixed times of assessments and examinations are listed in the curriculum plan attached (Appendix 2).

(6) The required elective modules offered and the curriculum plan can be modified by the Faculty Council on suggestion of the Academic Committee. The currently offered required elective modules shall be communicated by the faculty in the known manner as the semester starts. The modified curriculum plan is binding on those students to whom the faculty communicates it in the known manner as soon as studies begin. On application, the Examination Committee may decide on exceptions to sentence 3.

(7) The staff members responsible for the required elective modules (responsible lecturers, professors etc.) can set a minimum number of participants of up to 5 students for the module. The relevant required elective modules including the information about the minimum number of participants and also the type of and deadline for registration shall be

communicated by the faculty in the known manner. If during the semester the number of participants in the module falls below this minimum number, the complete module will be taught for the attending students.

§ 7
Course contents

(1) The Master's programme Advanced Computational and Civil Engineering Structural Studies – ACCESS is research-oriented.

(2) The programme covers the fundamentals of computer-assisted mechanics, materials science, numerical mathematics and software engineering and also advanced topics of civil engineering, materials science and computer-assisted mechanics. Moreover, it includes the numerical modelling and also the analysis of the load-carrying capacity and the durability of engineering structures with a particular focus on the load-bearing structures in civil engineering.

§ 8
Credits

(1) ECTS credits document the average student workload and individual progress. One credit is equivalent to a workload of 30 hours. As a rule, students can earn 60 credits per academic year, i.e. 30 per semester. The total [workload] of the programme is 120 [credits] [and] comprises the types of teaching and learning, the academic achievements and assessments and also the] [Master's thesis] [and] [the] [disputation] the type and scope of which are all defined in the module descriptions ([Appendix] 1).

(2) The module descriptions (Appendix 1) indicate how many credits students can earn in one module. Students can earn credits after having passed the module exam. § 26 of the examination regulations remains unaffected.

§ 9
Student advisory service

(1) The general student advisory service is the responsibility of the Central Student Information and Counselling Service of Technische Universität and answers all questions regarding programmes offered, terms of enrolment and general student affairs. Later on, it is the responsibility of the staff in the degree programmes to advise students on questions arising during studies. This subject-related advisory service helps students, in particular, tailor and plan their studies.

(2) As the third semester starts, students who have not yet earned an attestation by that time, are obliged to seek advisory service.

§ 10
Adaptation of module descriptions

(1) A simplified procedure is used to adapt module descriptions to changed conditions to ensure the organisational conditions for the programme. The fields „module name“, „contents and qualification aims“, „types of teaching and learning“, „prerequisites for earning credit points“ and also „credit points/ and grades“ cannot be modified.

(2) In the simplified procedure, the Faculty Council on suggestion of the Academic Committee decides upon the modification of the module description. The modifications shall be communicated by the Faculty in the known manner.

§ 11
Coming into force and public notice

These study regulations become effective as of 01 October 2010 and are publicly announced in the Official Notices of Technische Universität Dresden.

Issued on the basis of the decision of the faculty council of the Faculty Civil Engineering made on 01 September 2010 and the approval of the rectorial board of 24 February 2015.

Dresden, 22 October 2016

The Rector
of Technische Universität Dresden

Prof. Dr.-Ing. habil. DEng/Auckland Hans Müller-Steinhagen