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# Examination regulations for the English-speaking consecutive degree program Advanced Functional Materials leading to the award of the degree Master of Science (M.Sc.) at Chemnitz University of Technology dated July 10, 2015

Based on Sect. 13(4) in conjunction with Sect. 34(1) of the Law on the Autonomy of Institutions of Higher Education in the Free State of Saxony (Sächsisches Hochschulfreiheitsgesetz - SächsHSFG) as promulgated on January 15, 2013 (SächsGVBI. p. 3), last amended by Article 11 of the law of April 29, 2015 (SächsGVBI. p. 349, 354), the Faculty Board of the Faculty of Natural Sciences at Chemnitz University of Technology enacts the following examination regulations:

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In the following, the generic masculine will generally be used for reasons of better legibility. All personal designations apply naturally to all genders.

#### Part 1 General terms

#### § 1 Standard period of study

The program's standard period of study is four semesters (two years). The standard period of study comprises the study program and all module examinations including the module Master's Thesis.

### § 2 Examination Structure

The master's examination consists of module examinations. Module examinations generally comprise up to two single examinations. The module examinations will be taken alongside the study program.

#### § 3 Time limits

- (1) The master's examination is to be taken within the standard period of study.
- (2) The range of courses offered ensures that all pre-examinations and module examinations may be taken within the periods intended in the study regulations (examinations generally following the lecture period).

### § 4 Admissions procedure, publication of examination dates and examination results

- (1) The master's examination can only be taken by a student who
- 1. is enrolled in the master's degree program Advanced Functional Materials at Chemnitz University of Technology and
- 2. has not ultimately failed the master's examination in the same program and
- 3. has taken the pre-examinations stated in detail in the module descriptions for the respective examinations.
- (2) Application for admission to the master's examination is to be handed in at the examination office in written form for each single examination at the latest three weeks before the start of the central period of examinations at Chemnitz University of Technology, or, in the case of examinations outside the central period of examinations, at the latest three weeks before the examination date. The application has to be accompanied by:
- 1. an indication of the module the examination relates to,
- 2. proof of the admission requirements stated in section 1
- 3. the candidate's declaration of being familiar with the examination regulations and whether a master's examination in the same programme has already been failed or ultimately failed or whether a pending examination procedure is under way.
- (3) The Examination Committee decides about the admission, in urgent cases its chairperson.
- (4) Persons who have acquired the knowledge and skills required by study and examination regulations, may, in deviation from section 1 sentence 1, obtain the qualifying degree in an academic examination as an external. The Examination Committee decides about the application for admission to the master's examination, as well as about the examination procedure and the examinations to be taken, which have to be in accordance with the examination regulations.
- (5) The admission to an examination of the master's examination may only be refused if
- 1. the requirements stated in section 1 or the procedure rules according to section 2 have not been fulfilled,
- 2. the documents to be submitted as per section 2 are incomplete,
- 3. the candidate has ultimately failed the master's examination in the same program or
- 4. the candidate has lost the examination claim under state law by exceeding the time limit for application to the respective examination or for taking it.
- (6) The candidate has to be notified of negative decisions in written form at the latest two weeks before the start of the examination, including an indication of reasons and an instruction on the right to appeal.
- (7) In time, the candidate will be informed of type, number, subject, and organisation of the module examinations to be taken as well as of their dates, and equally of the allocation and submission dates of assignments and the master's thesis. The disclosure of examination dates, admission lists, and examination results will take place at the Central Examination Office. The failing of examinations will additionally be notified to the candidate in written form.

### § 5 Types of assessment components

- (1) Assessment components are to be taken as
- 1. oral assessment components (§ 6) and/or
- 2. written tests and other written papers (§ 7) and/or
- 3. alternative assessment components (§ 8) and/or
- 4. project work (§ 9).
- (2) If a candidate furnishes evidence by medical certificate, that due to chronic illness or handicap he is not able to take examinations in whole or in part in the intended form, the Examination Committee should allow the candidate upon application to take equivalent examinations in a different form.
- (3) The examination language is English. In cases of courses held in German according to the module descriptions, the examination language will also be German. Upon the candidate's application, examinations may also be taken in German or English. The application does not substantiate a claim.

### § 6 Oral assessment components

- (1) In oral examinations, the candidate has to prove the ability to recognise correlations in the area of the examination and to integrate specific problems into these contexts. It shall further be determined whether the candidate possesses the appropriate knowledge for his current state of studies.
- (2) Oral examinations are to be held by several examiners or by one examiner in the presence of an expert observer.
- (3) Oral examinations may be taken as group or individual examinations. The duration of the examination has to be at least 15 minutes and at the most 45 minutes for each single candidate.
- (4) During oral examinations, tasks to be handled in written form may also be assigned to an adequate extent, as long as the oral character of the examination is maintained.
- (5) The essential topics, the duration, progression, and grade of the oral examination are to be taken down in a protocol, which has to be signed by the examiners, or, in the the case of an observer, by the examiner and the observer. Result and grade are to be disclosed to the candidate following the respective oral examination. The protocol is to be enclosed in the examination file.
- (6) Students intending to take the same examination at a later examination date may be admitted as listeners by the examiner(s), space permitting, unless the candidate objects. The admission does not include the conferring about the examination result and its disclosure.
- (7) The examination may be intermitted for important reasons. A new examination date is to be set for the examination to be held as soon as the reason for intermission has become void. The reasons leading to the intermission have to be noted down in the examination protocol.

### § 7 Written tests and other written papers

- (1) Examinations in written form comprise written examinations and other pieces of work in writing in which the candidate proves his ability to solve problems and work on topics within limited time based on the necessary basic knowledge and with established methods of his subject. For examinations in written form, a selection of topics and tasks may be provided for the candidate to choose from.
- (2) The multiple-choice procedure ranks among the other pieces of work in writing. The questions for the multiple-choice procedure generally have to be formulated by two examiners who also have to determine the evaluation scale. The assessment of multiple-choice procedures my be carried out automatically.
- (3) When the passing of examinations in written form is a prerequisite for continuing the study program, they are generally evaluated by two examiners. The evaluation process shall not exceed four weeks.
- (4) The duration of examinations in written form must not be less than 60 minutes and not exceed the maximum of 300 minutes.
- (5) The examiner decides about resources permitted to be used during an examination in written form. The permitted resources are to be diclosed in time.
- (6) In justified exceptional cases, the Examination Committee may decide to replace the intended examination in written form by an oral examination in the following examination period. The intended duration of the examination is to be defined. The decision of the examining board has to be disclosed at the beginning of the respective semester.

### § 8 Alternative assessment components

- (1) Alternative examinations will particularly be held in the context of seminars, practical courses, or exercises. The achievement will notably be effected in form of written reports, assignments, presentations, or protocols of practical work during one or more courses. The achievements have to be individually allocatable. In the case of assignments and in general in written reports, the candidate has to declare that he has completed the work self-dependently and without the use of any but the specified sources and means.
- (2) Concerning the evaluation of alternative examinations, § 6(2) and (5) and § 7(3) apply accordingly.
- (3) Duration and scope of alternative examinations are defined in the module descriptions.

#### § 9 Project work

- (1) By means of project work, possible as individual or group work, teamwork skills and specifically the capability for development, realisation, and presentation of concepts may in general be established. The achievements have to be individually allocatable. The candidate should thus prove his ability to define goals in a more extensive task and to develop interdisciplinary solution approaches and concepts. A project work generally comprises the oral presentation and a written evaluation or documentation of the results.
- (2) When the passing of a project work is a prerequisite for continuing the study program, § 6(2) and (5) and § 7(3) apply accordingly.
- (3) The duration of the oral presentation and the scope of the written report are defined in the module descriptions.

#### § 10

#### Assessment of assessment components, composition and weighting of grades

(1) The grades for individual examination achievements are determined by the respective examiners. The following grades are to be used for the evaluation of examinations:

1 - excellent (an outstanding achievement)

2 - good (an achievement significantly above the avarage requirements)

3 - satisfactory (an achievement meeting the average requirements)

4 - sufficient (an achievement only just meeting the requirements despite deficiencies)
5 - insufficient (fail) (an achievement not meeting the requirements due to significant deficiencies).

For a more differenciated evaluation of examination achievements, individual grades may be raised or lowered to interim values by 0.3, excluding the grades 0.7, 4.3, 4.7, and 5.3. For examinations evaluated by two or more examiners, the grade of the examination achievement is the arithmetic average of the individual evaluations. Section 2 sentence 2 applies accordingly to the formation of the arithmetic average. The grade of the examination achievement calculated by forming the arithmetic average may be rounded up or off by the examiners to result in a feasible grade according to sentences 2 and 3. Should the result be a grade of higher than 4.0, the examination will be evaluated as "insufficient".

(2) In the case of module examinations comprising several individual examinations, the module grade is calculated according to the module description as the weighted arithmetic average of the individual examination grades, otherwise the examination grade equals the module grade. Only the first decimal after the decimal point without rounding is considered. All further decimals are deleted. The module grades correspond to the following rating:

For an average up to and including 1.5 - excellent,
For an average of 1.6 up to and including 2.5 - good,
For an average of 2.6 up to and including 3.5 - satisfactory,
For an average of 3.6 up to and including 4.0 - sufficient,
For an average lower than 4.1 - insufficient.

(3) In order to pass the module Master's Thesis, the master's thesis needs to be evaluated at least with the grade "sufficient" by both examiners. The grade for the master's thesis is calculated from the arithmetic average of both examiners' grades.

- (4) An overall grade is formed for the master's examination. The overall grade is calculated from the weighted arithmetic average of the module grades including the grade for the module Master's Thesis (see § 25). Section 2 sentences 2 and 3 apply accordingly to the formation of the overall grade.
- (5) Course achievements have to comply with examination achievements in nature and extent in order to be accredited as examination achievements. The master's examination cannot predominantly be effected by accreditation of course achievements. The Examination Committee decides about the accreditation.

### § 11 Absence, withdrawal, cheating, infringement of regulations

- (1) The candidate may withdraw from the application for an examination without giving reasons, as long as the Central Examination Office is notified at the latest one week before the respective examination date.
- (2) An examination is considered as evaluated "insufficient" (5.0), if the candidate is absent from a binding examination date without good reason, or if he withdraws without good reason from an examination he has lined up for. The same applies if an examination in written form is not effected within the given time period.
- (3) The reasons claimed for withdrawal or absence have to be immediately and creditably notified in writing to the Examination Committee. In the case of a candidate's illness, providing a medical certificate and in cases of doubt an official medical certificate may be demanded. Concerning compliance with deadlines for the first-time application to an examination, repetition of examinations, reasons for the absence from examinations, and compliance with time limits for the completion of examination papers, a candidate's illness equals the illness of a child for whom the candidate is the predominantly sole carer.
- (4) If the Examination Committee acknowledges the reasons according to section 3, a new examination date will be scheduled together with the candidate.
- (5) If the candidate tries to influence the outcome of his examination by deceit or use of non-permitted resources, the respective examination will be evaluated as "insufficient" (5.0).
- (6) A candidate who disrupts the proper course of the examination may be excluded from continuing the examination by the respective examiner or supervisor; in this case, the examination will be evaluated as "insufficient" (5.0).
- (7) Within two weeks from decisions made according to section 5 or 6, the candidate may have those decisions reviewed by the Examination Committee.

§ 12 (n/a)

#### § 13

#### Passing and failing examinations

- (1) Module examinations need to be graded at least as "sufficient" (4.0) in order to be passed. If examinations which are marked with "passing required" in the module descriptions are evaluated as "insufficient", the module examination is considered as failed. Failed module examinations that are not repeated within one year (§ 14(1)) or that are evaluated as "insufficient" at the repetition, result in a failed module examination. If the application for a second repetition of the module examination (§ 14(2)) has not been made in time, if the application could not be approved, if a second repetition examination has not been taken at the next possible examination date, or if this examination has been evaluated as "insufficient", the module examination is considered as "ultimately failed".
- (2) By ultimately failing a module examination, the master's examination is considered as "ultimately failed".
- (3) The master's examination is passed, when the required pre-exams have been taken and all module examinations have been passed. A master's examination that has not been completed within four semesters after the standard period of study is considered as "failed".
- (4) If an examination procedure is proven to have been defective, thus influencing the examination achievement, there may be an order upon a candidate's application or ex officio to schedule the examination or individual parts of it anew for a specific candidate or all candidates. In this case, the examination results already obtained are invalid.
- (5) Deficiencies in the examination procedure have to be claimed immediately, at the latest within one month after the respective examination day, at the chairperson of the Examination Committee or the examiner. Orders according to section 4 can only be effected up to a point in time when an application for the following examination period is still possible.

### § 14 Retaking module examinations

- (1) A repetition examination is possible in the case of failing a module examination (module grade "insufficient"). If the module examination comprises more than one individual examination, only those examinations evaluated as "insufficient" that are required for passing the module examination may be repeated. Irrespective of this, examinations marked with "passing required" in the module descriptions and having been evaluated as "insufficient" have to be repeated. A repetition examination is only permissible within one year. This period of time begins with the disclosure of the examination result of the module examination. After the end of this period of time, the module examination is considered as "failed".
- (2) The admission to a second repetition examination is only possible upon application at the next possible examination date. Further repetition examinations are not permissible.
- (3) The repetition of a passed examination is not permissible.

#### § 15

#### Transfer of credits for study time, coursework and assessment components

- (1) Study periods, course achievements and examination achievements from other study programs are accredited upon the student's application, unless there are significant differences concerning the acquired skills. Instead of a schematic comparison, an overall survey and overall evaluation is to be carried out. The accreditation may be refused if more than 80 credit points or the master's thesis are to be accredited. The Examination Committee decides about the accreditation. Concerning accreditation of study periods, course and examination achievements acquired outside the Federal Republic of Germany, the agreements on equivalence as approved by the Conference of the Ministers of Education and Cultural Affairs (Kultusministerkonferenz, KMK) and the German Rectors' Conference (Hochschulrektorenkonferenz, HRK) as well as understandings relating to university cooperation agreements are to be taken into account.
- (2) Relevant work experience may be accredited by the Examination Committee upon the student's application.
- (3) University applicants with university entrance qualification are placed in a higher semester, if they can provide evidence of the necessary skills and knowledge by means of a special academic test (placement test).
- (4) If course and examination achievements are accredited, the credit points and grades are to be carried over as far as the grading systems are comparable. In the case of incomparable grading systems, the notation "passed" will be laid down.
- (5) The students have to provide the necessary documents for the accreditation of study periods, course and examination achievements.

### § 16 Examination Committee

- (1) The Faculty Board of the Faculty of Natural Sciences appoints an Examination Committee for the organisation of the examinations and for the administration of the tasks assigned by these examination regulations.
- (2) The Examination Committee comprises the chairperson, its deputy, and two further members from the ranks of the professors at the Faculty of Natural Sciences, two members from the ranks of the scientific associates at the Faculty of Natural Sciences, and one member from the ranks of students.
- (3) In general, the duration of the term of office is three years, for student members one year.
- (4) The Examination Committee is responsible for all matters in connection with the examination regulations, particularly for:
- 1. the organisation of examinations,
- 2. the accreditation of study periods and course and examination achievements,
- 3. the appointment of examiners and observers,
- 4. the decision about appropriate examination conditions for students during maternity and parental leave,
- 5. the decision about appropriate examination conditions for disabled students and chronically ill persons.
- (5) The Examination Committee may delegate the chairperson to carry out tasks. This does not apply to decisions according to § 11 and § 13(4), to decisions about appeals, and to reports to the Faculty Board.
- (6) The Examination Committee reports to the faculty board about the development of examination and study periods, the actual time periods needed for completing the master's thesis, about the distribution of

module and overall grades, and it makes suggestions as to reforming the study and examination regulations.

- (7) The Examination Committee has a quorum when the chairperson or its deputy and the majority of the members are present and the professors command the majority of votes. The meetings of the Examination Committee are closed to the public.
- (8) The members of the Examination Committee have the right to attend when examinations are being held. They cannot administer Examination Committee responsibilities while they themselves are involved in an examination.
- (9) The members of the Examination Committee are subject to official secrecy. They are bound to secrecy about the topics of Examination Committee meetings.
- (10) For all matters concerning the examination regulations, the Examination Committee is the effecting and reviewing authority. Detrimental decisions have to be immediately disclosed and justified to the candidate in written form, including an instruction on the right to appeal.

### § 17 Examiners and observers

- (1) The Examination Committee appoints the examiners and observers. The appointment of examiners shall occur from the ranks of members and affiliates of the university or other institutions of higher education, who are authorised to lecture independently in the respective examination subject. If appropriate relating to the object of the examination, the examiner may also be appointed from the ranks of those who are only authorised to lecture independently in a section of the examination subject. In specific exceptional cases, qualified teachers for specific tasks as well as persons experienced in professional practice and training may be appointed as examiners, if appropriate relating to the character of the examination. Examination achievements may only be evaluated by persons possessing themselves at least the same or equivalent qualification to be asserted by the
- (2) The candidate may suggest the examiner or a group of examiners to the Examination Committee for the evaluation of his master's thesis (§ 19) and of oral examinations (§ 6). The suggestion does not substantiate a claim.
- (3) The Examination Committee takes care to disclose the names of the examiners to the candidate at least two weeks before the examination date.
- (4) § 16(9) applies to the examiners and observers accordingly.

### § 18 Purpose of the Master's examination

The Master's examination constitutes the degree with professional qualification of the master's program. By means of the master's examination, it shall be determined:

- whether the candidate proves to possess a knowledge and understanding which usually builds upon the bachelor level and is significantly deepened and extended,
- whether the candidate is able to define and interpret the characteristics, limits, terminology, and schools of thought of the subject area,
- whether the candidate is able to apply his knowledge and understanding to problem solving in new and unfamiliar situations as well, and
- whether the candidate is capable of coming to scientifically informed decisions based on incomplete and limited information while taking into account social, scientific, and ethical aspects.

#### § 19

#### Allocating the thesis topic, submission, assessment and repeating the Master's thesis

- (1) In the Master's thesis, the candidate is to show his ability to work self-dependently on a suitable subject-specific or interdisciplinary task at the current state-of-the-art in research or application within the given time limit, using scientific methods and expressing and imparting his results in a clear and unambiguous way.
- (2) The topic of the Master's thesis must be in context with the study program. The Master's thesis can be supervised by every authorised examiner. The candidate has the right to suggest a supervisor and a topic. There is no legal claim for the suggestion to be complied with.
- (3) When submitting the Master's thesis, the candidate has to declare that he has completed the work self-dependently and without the use of any but the specified sources and means. In the case of teamwork, the individual contribution of each candidate is to be identified in detail.
- (4) The Master's thesis has to be handed in on time at the Central Examination Office in two typed and bound copies, supplemented by a digital file of the thesis in a version suitable for permanent reproduction of the written characters.
- (5) The allocation of a topic and the date of submission are to be put on record.

- (6) The topic of the Master's thesis may be replaced once, but only within four weeks after allocation of the topic. A further replacement of the topic is excluded.
- (7) Generally, the master's thesis has to be assessed by at least two examiners. The supervisor of the Master's thesis should be among these. The assessment is carried out according to § 10(1) and (3) of these examination regulations. The assessment process should not exceed four weeks.
- (8) Master's theses not submitted on time are assessed with the grade "insufficient" (5.0). If a Master's thesis is assessed worse than "sufficient" (4.0), is may only be repeated once. In the case of a repetition of the Master's thesis, a replacement of the topic within the time limit stated in section 6 is only permissible, if the candidate has not already exercised this option for writing his Master's thesis evaluated as "insufficient".

### § 20 Transcript and Master's degree certificate

- (1) After the successful completion of the Master's examination, a transcript will immediately be issued, preferably within four weeks. The module names, module grades, as well as the awarded credit points, the topic of the Master's thesis, the overall grade and sum total of credit points are to be included in the transcript.
- (2) The transcript bears the date of the last examination taken and will be signed by the chairperson of the examining board. Together with the transcript, the candidate will receive the Master's degree certificate bearing the certificate date. This authenticates the awarding of the Master's degree. The Master's degree certificate will be signed by the Dean and the chairperson of the Examination Committee and will hold the seal of Chemnitz University of Technology. An English translation of the Master's degree certificate has to be enclosed.
- (3) A Diploma Supplement will be issued. To describe the national educational system, the text agreed between the Conference of the Ministers of Education and Cultural Affairs (Kultusministerkonferenz, KMK) and the German Rectors' Conference (Hochschulrektorenkonferenz, HRK) is to be used in the applicable version.
- (4) Sorbs may additionally hold the degree in Sorbian language and upon request receive a Sorbian version of Master's degree transcript and certificate.
- (5) Upon application, the Central Examination Office will issue a study certificate stating the accomplished achievements for students who do not complete their study program.

### § 21 Invalid Master's examination

- (1) If the fact of a candidate's deceit in an examination emerges only after the handing over of the certificate, the grade of the examination may be corrected according to § 11(5). Where required, the module examination may be declared as "insufficient" and the Master's examination as "failed".
- (2) If, without the candidate's planning for deceit, the requirements for admission to an examination were not fulfilled and the fact emerges only after the handing over of the certificate, this deficiency will be cured by passing the examination. Should the candidate willfully and wrongly have effected the admission, the module examination may be declared as "insufficient" and the Master's examination as "failed".
- (3) The incorrect transcript is to be withdrawn and, if applicable, a new one to be issued. Together with the incorrect certificate, the Master's degree certificate, its English translation, and the Diploma Supplement are to be withdrawn, if the Master's examination has been declared as "failed" due to deceit. A decision according to section 1 and section 2 sentence 2 is excluded following a time period of five years from the certificate's issue date.
- (4) The candidate has to be given the opportunity to make a statement prior to a decision according to section 1 or section 2.

### § 22 Access to examination files

Upon application within one year from the completion of the examination procedure, the graduate may be granted access to his written examinations, to the respective assessments and to the examination protocols within a reasonable period of time.

#### § 23 Responsibilities

Particularly decisions concerning the consequences of infringement of examination regulations (§ 11), passing and failing (§ 13), the transfer of credits for study time, coursework and assessment components (§ 15), the appointment of examiners and observers (§ 17), the right to allocation of Master's theses (§ 19), and the invalidity of the Master's examinations (§ 21) are made by the Examination Committee. The issue of certificates and documents falls to the Central Examination Office.

### Part 2 Subject-specific guidelines

### § 24 Structure and scope of the study program

- (1) The study program has a modular structure. It comprises basic and specialisation modules which are offered as compulsory or elective modules, and the module Master's Thesis.
- (2) For sucessfully completing the Master's degree program, 120 credit points are required.
- (3) The time frame of the student's required workload is approximately 900 working hours per semester. The respective intended credit points are awarded upon successfully completing module examinations.
- (4) Prior to completing the last examination, the students may take examinations in more elective modules of the program than needed for providing 30 CP. Those additionally chosen elective modules are to be registered by the students as additional modules. The examination results of these additional modules will upon the students' application be included in the transcript, but not taken into account for the determination of the overall grade.

### § 25 Subject matter, nature and scope of the Master's examination

(1) The following modules are integral parts of the Master's examination:

#### 1. Basic modules:

CH1 - Synthetic Methods in Chemistry	5 CP (compulsory module), weighting 5
CH2 - Analytical Methods	5 CP (compulsory module), weighting 5
CH3 - Sustainable Production Technologies	5 CP (compulsory module), weighting 5
PH1 - Advanced Surfaces, Thin Films and Interfaces	5 CP (compulsory module), weighting 5
PH2 - Semiconductor physics - Nano structures	5 CP (compulsory module), weighting 5
PH3 - Photovoltaics with Nanotechnology	5 CP (compulsory module), weighting 5
AFM1 - Facets of Materials Science	10 CP (compulsory module), weighting 10

#### 2. Specialisation modules:

AFM2 - Research Project

20 CP (compulsory module), weighting 20

From the following, modules amounting to a sum of 30 CP have to be chosen. To broaden the selection range, up to 32 CP may be chosen. Those additional credit points will not be counted as credits towards the degree. Upon application and on an individual basis, the Examination Committee can authorise the choice of other suitable modules.

Students whose first language is not German and who can't show proof of German language proficiency on level A1 of the Common European Framework of Reference for Languages, are obligated to take the following module: WS1 – German as a Foreign Language I (Level A1)

4 CP (elective module), weighting 4

Students whose first language is not German and who can't show proof of German language proficiency on level A2 of the Common European Framework of Reference for Languages, are obligated to take the following module:

WS2 – German as a Foreign Language II (Level A2)

4 CP (elective module), weighting 4

WCH1 - Colloids

WCH2 - Polymer Materials

WCH3 - Materials Technology

WCH4 - Processes and products of the chemical industry

WCH5 - Practice of electrochemical materials science

WCH6 - Functional Materials

WCH7 - Analytics of surfaces and colloids

5 CP (elective module), weighting 5

CP (elective module), weighting 5

CP (elective module), weighting 5

WCH7 - Analytics of surfaces and colloids

WCH8 - Practical course for analytics of surfaces and colloids 3 CP (elective module), weighting 3 WCH9 - Spectroelectrochemistry 3 CP (elective module), weighting 3 WCH10 - Surface Spectroscopies 3 CP (elective module), weighting 3 WCH11 - Heterogeneous Catalysis 5 CP (elective module), weighting 5 WCH12 - Challenges for future energy concepts -5 CP (elective module), weighting 5 Chemical energy conversion 5 CP (elective module), weighting 5 WCH13 - Crystallography 5 CP (elective module), weighting 5 WCH14 - The Energiewende WPH1 - Nanophysics - Physics of mesoscopic systems WPH2 -5 CP (elective module), weighting 5 Microscopy and analysis on the nano scale WPH3 - Polymer 5 CP (elective module), weighting 5 **Physics** 3 CP (elective module), weighting 3 WPH4 - Modern Microscopy (AFM) 5 CP (elective module), weighting 5 5 CP (elective module), weighting 5 WPH5 - Theoretical Solid State Physics WPH6 - Experimental Physics - Complex Materials WMB1 -10 CP (elective module), weighting 10 Surface and Interface Engineering 5 CP (elective module), weighting 5 5 CP (elective module), weighting 5 WET1 - Materials in micro and nano technologies WMB2 - Printed Functionalities 5 CP (elective module), weighting 5 WMB3 - Interface design for fibre-plastic composites WMB4 -5 CP (elective module), weighting 5 3 CP (elective module), weighting 3 **Electrochemical Coating** 4 CP (elective module), weighting 4 WMB5 - Innovative Materials Engineering WMB6 - Rheology of Polymers 4 CP (elective module), weighting 4 WMB7 - Biomaterials and materials for medical technology 4 CP (elective module), weighting 4 WMB8 - Materials Engineering - Structure Formation Processes 3 CP (elective module), weighting 3

Option only for students whose first language is not English and who haven't yet taken one of the modules German as a Foreign Language I (Level A1) or German as a Foreign Language II (Level A2). One of the following modules may be chosen:

WS3 - English in study-related and professional conversation I (Level B2) 4 CP (elective module), weighting 4 WS4 - English in study-related and professional conversation III (Level C1) 4 CP (elective module), weighting 4

Option only for students whose first language is not German and who haven't yet taken one of the modules German as a Foreign Language I (Level A1) or German as a Foreign Language II (Level A2). One of the following modules may be chosen:

WS5 - German as a Foreign Language III (Level B1)

WS6 - German as a Foreign Language IV (Level B2)

WS7 - German as a Foreign Language 
Specialised Communication I (Level C1)

4 CP (elective module), weighting 4

4 CP (elective module), weighting 4

3. Module Master's Thesis:

AFM3 - Master's Thesis

30 CP (compulsory module), weighting 30

(2) Number, type, subject, and organisation of the examinations and pre-examinations are determined in the module descriptions, which are part of the study regulations.

#### § 26 Deadline for the Master's thesis, Colloquium

- (1) The time limit for completing the master's thesis is 23 weeks at the most.
- (2) In individual cases, the time limit may upon justified application be prolonged by a maximum of six weeks by the Examination Committee.
- (3) Topic, task and scope of the Master's thesis are to be restricted by the supervisor so as to enable the time limit for completing the Master's thesis to be kept.
- (4) The candidate elucidates his Master's thesis during a colloquium.

#### § 27 Academic degree

Following a passed Master's examination, Chemnitz University of Technology awards the degree "Master of Science (M.Sc.)".

### Part 3 Final provisions

### § 28 Entry into force and publication

The Examination Regulations apply to all students enrolled from winter term 2015/2016 onwards.

The Examination Regulations take effect from the day after their publication in the Official Publications of Chemnitz University of Technology ("Amtliche Bekanntmachungen").

Issued on the basis of the decision of the Faculty Board of the Faculty of Natural Sciences on June 17, 2015 and the approval of the University Management of Chemnitz University of Technology on 2015, July 1.

Chemnitz, July 10, 2015

The President of Chemnitz University of Technology

Prof. Dr. Arnold van Zyl