These degree programme and examination regulations have been worded carefully to be up to date; however, errors cannot be completely excluded. The official German text available from L1 – Legal Affairs and Academic Quality Management is the version that is legally binding.

Note: Students who started their studies before the latest amendment came into effect are requested to also comply with previous amendments and the respective transitory provisions.

Degree Programme and Examination Regulations for the Bachelor's degree programme in Nanotechnology and the Master's degree programme in Nanotechnology at the Faculty of Engineering at Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) – FPONT – Dated 15 December 2008

amended by statutes of 2 March 2010 30 July 2010 15 March 2011 5 August 2011 31 July 2012 (joint amendment statute) 6 February 2014 2 July 2015 9 September 2020 29 September 2021

Contents:

Based on Section 13 (1)(2), Section 43 (5)(2) and Section 61 (2)(1) of the Bavarian Higher Education Act (Bayerisches Hochschulgesetz, **BayHSchG**), FAU enacts the following degree programme and examination regulations:

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Part I: General Provisions

Section 35 Scope

¹The degree programme and examination regulations stipulate conditions for admission to and provisions for examinations in the Bachelor's degree programme in Nanotechnology and the consecutive Master's degree programme in Nanotechnology, leading to a Bachelor of Science (BSc) and Master of Science (MSc) degree. ²They complement the current version of the General Examination Regulations for Bachelor's and Master's Examinations of the Faculty of Engineering at FAU – ABMPO/TechFak – dated 18 September 2007.

Section 36 Bachelor's Degree Programme, Related Degree Programmes

(1) The Bachelor's degree programme in Nanotechnology shall begin in the winter semester.

(2) ¹The standard duration of the Bachelor's degree programme in Nanotechnology is six semesters. ²The modules and recommended programme structure of the Bachelor's degree programme are set forth in **Appendix 1**.

(3) The provisions in Section 24 (1)(2)(2) **ABMPO/TechFak** do not apply to related degree programmes.

Section 37 Master's Degree Programme, Standard Duration of Studies, Start of Degree Programme, Related Degree Programmes, Teaching and Examination Language

¹The consecutive Master's degree programme in Nanotechnology consists of modules worth 120 ECTS credits. ²These include compulsory modules, modules in the core subject, elective modules and the Master's thesis module including presentation and discussion.

(2) The modules and recommended programme structure of the Master's degree programme are set forth in **Appendix 2**.

(3) The standard duration of study in the Master's degree programme in Nanotechnology is four semesters.

(4) The Master's degree programme in Nanotechnology starts in both the winter and the summer semester.

(5) The provisions in Section 30 (3)(2) **ABMPO/TechFak** do not apply to related degree programmes.

(6) ¹In deviation from Section 4 (5) **ABMPO/TechFak**, the teaching and examination language in the Master's degree programme is English. ²Individual teaching units and examinations in (compulsory) elective modules may be held in German. ³This shall not affect the rest of Section 4 (5) **ABMPO/TechFak**.

Part II: Special Provisions

1. Bachelor's Examination

Section 38 Scope of the Grundlagen- und Orientierungsprüfung

(1) ¹The Grundlagen und Orientierungsprüfung, GOP, shall consist of the modules set forth in **Appendix 1**.

- 1. B1: Mathematics for NT 1
- 2. B2: Mathematics for NT 2
- 3. B7: Basics of nanotechnology I
- 4. B9: Basics of materials.

²The type and scope of the examinations and the ECTS credits allocated to the modules are set forth in **Appendix 1**.

(2) The Grundlagen und Orientierungsprüfung shall have been passed if the modules listed in (1) worth 35 ECTS credits have been passed.

Section 39 Scope and Structure of the Bachelor's Examination

(1) ¹All modules in the Bachelor's degree programme are compulsory. ²The distribution across the semesters and the required number of ECTS credits to be obtained in each of the modules are set forth in **Appendix 1**.

(2) The Bachelor's examination shall consist of:

- 1. The examinations of the preliminary examination according to Section 38 (1)
- 2. The examinations in modules B3–B6, B8 and B10–B21
- 3. Bachelor's thesis (module B22).

(3) The examination and course achievements for the modules are set forth in **Appendix 1**.

(4) ¹The Bachelor's degree programme shall have been passed once the student has passed all modules pursuant to **Appendix 1** and has acquired 180 ECTS credits. ²Proof of having completed ten weeks industrial internship approved by the Degree Programme Committee as part of module B21 (industrial internship) shall be governed by the internship guidelines stipulated in the module handbook.

Section 40 Bachelor's Thesis

(1) ¹The Bachelor's thesis is intended to enable students to learn to solve problems relating to nanotechnology independently. ²Requirements for the thesis shall be such

that it can be completed with a workload of approximately 360 hours. ³The results of the Bachelor's thesis shall be presented in a presentation with a maximum length of 30 minutes followed by a discussion. ⁴The date of the presentation shall be determined by the supervising lecturer at the latest when the student submits their Bachelor's thesis and the student shall be informed of the date in good time. ⁵ 12.5 ECTS credits shall be awarded for the Bachelor's thesis including the presentation.

(2) The topic of the Bachelor's thesis shall be allocated by a full-time university lecturer or Privatdozent from the Department of Materials Science and Engineering at FAU.

(3) ¹It is recommended to start the Bachelor's thesis no earlier than the end of the lecture period in the 5th semester. ²Admission to the Bachelor's thesis shall be governed by Section 27 (3)(2) **ABMPO/TechFak**.

2. Master's degree programme

Section 41 Qualification for a Master's Degree, Certificates, Admission Requirements, Admission Subject to Conditions

(1) ¹Subject-specific degree as specified in Section 29 (1)(1) **ABMPO/TechFak** is the Bachelor's degree in Nanotechnology according to these degree programme and examination regulations or an equivalent degree in Nanotechnology from another university in Germany or abroad that leads to a qualification equivalent to the Bachelor's degree completed according to these degree programme and examination regulations. ² Subject-related degrees that show no considerable differences in terms of qualification pursuant to Section 29 (1)(1) alt. 2 **ABMPO/TechFak** shall be Bachelor's or Diplom degrees in Materials Science and Engineering, Physics, Chemistry or in degree programmes with a focus on nanotechnology, provided the following minimum content was covered:

1.at least 10 ECTS credits in mathematics

2.at least 20 ECTS credits in physics and chemistry

3.at least 10 ECTS credits in laboratory courses and IT

4.at least 20 ECTS credits in the basics of nanotechnology.

³In accordance with (5)(4) of the **Appendix to the ABMPO/TechFak**, applicants with a subject-related degree as defined in Section 29 (1)(1) **ABMPO/TechFak** or a degree as defined in Section 29 (2)(2) **ABMPO/TechFak** shall only be admitted to the Master's degree programme after passing an oral admission examination according to (4).

(2) ¹As stipulated in section (2)(4) of the **Appendix to ABMPO/TechFak**, applicants are required to provide additional proof of English language skills equivalent to at least Level B2 of the Common European Framework of Reference (CEFR) by submitting either relevant school reports or certificates issued by a language school or university. ²The following are considered suitable proof of language skills:

- A school leaving certificate or another certificate issued by the school providing evidence that English courses have been taken at school up until a level equivalent to B2 CEFR;
- 2. A certificate indicating that the applicant has successfully passed the Test of English as a Foreign Language (TOEFL), attaining at least 85 points in the iBT test, or the
- 3. International English Language Testing System (IELTS) 5.0 or above;

other possible alternatives for proving evidence of language proficiency are listed in the table of equivalence published by the FAU Language Centre.

³Proof of language proficiency does not need to be submitted if the applicant acquired their university entrance qualification or relevant undergraduate degree in English.

(3) Applicants shall be deemed as qualified for the Master's degree programme in Nanotechnology according to paragraph 5 (2)(2) in the **Appendix to ABMPO/TechFak** if they have passed modules B7, B8 and B16 with an average grade of 3.0 or better.

(4) In the oral admission examination according to (5)(3) et seq. of the **Appendix to ABMPO/TechFak**, applicants shall be evaluated according to the following criteria and weighting:

- 1. Basic knowledge in materials science and engineering, physics and chemistry of condensed materials (in particular atomic structure, thermodynamic, optical, electronic and magnetic properties of materials as well as characterisation methods) (50 percent);
- 2. Sound knowledge of nanotechnology, for example chemical materials processing or nano characterisation methods (50 percent).

Section 42 Master's Degree Examinations

(1) Type and scope of the course and examination achievements are set out in **Appendix 2**.

(2) The Master's examination shall have been passed if the modules specified in **Appendix 2** have been passed.

Section 42a Core modules (M6–M9)

(1) ¹The learning outcome of the core modules is to give students the opportunity to expand their professional skills in materials science and engineering. At the same time, by choosing the modules they wish to study, students can tailor their education to suit their own interests and their future profession and/or personality. ²The core modules comprise the foundation module (M6), the supplementary module (M7) and two elective modules (M8 and M9). ³Each Chair in the Department of Materials Science and Engineering offers one core subject. ⁴Laboratory courses teach theoretical and practical content.

(2) The core subject foundation module M6 generally consists of lectures (4 SWS), tutorials (2 SWS) and a laboratory course (2 SWS), or lectures (4 SWS), tutorials (2 SWS) and a seminar (2 SWS), or a combination of lectures, tutorials, laboratory courses and a seminar coming to a total of 8 SWS.

(3) The core subject supplementary module M7 generally consists of one lecture (2 SWS) and one tutorial (2 SWS), or one lecture (1 SWS), one laboratory course (2 SWS) and one seminar (1 SWS), or one laboratory course (4 SWS).

(4) The elective modules M8 and M9 generally consist of one lecture (2 SWS) and one laboratory course (2 SWS) or one lecture (1 SWS), one tutorial (1 SWS) and one practical course (2 SWS).

(5) ¹Any deviations from the provisions in (2) to (4) and the module structure are set out in the module handbook. ²⁾The type and scope of the examinations depend on the chosen modules. Details can be found in the module handbook. ³Examinations in the modules shall take one of the following forms: written examination (90 or 45 min), oral examination (30 or 15 min), seminar achievement or practical achievement pursuant to Section 6 (3) **ABMPO/TechFak**. ³ Section 6 (2)(3) **ABMPO/TechFak** stipulates that in justified exceptional circumstances, combinations of the individual achievements stated in sentence 2 may also be possible. ⁵Other examination forms are possible if so decided by the Degree Programme Committee. ⁶The module handbook is published before the beginning of the semester in accordance with local practice.

Section 42b Scientific-technical modules (M10 + M11)

(1) ¹The learning outcome of the elective modules M10 to M11 is for students to expand their subject-related skills and gain more advanced knowledge in the various subject areas. ²The choice of elective modules, in particular in combination with the core modules M6 to M9, gives students the opportunity to tailor their profile in view of their future careers.

(2) ¹The scientific-technical modules M10 and M11 may be chosen from the modules offered by the Faculty of Engineering and from those offered by the Faculty of Sciences. ²No modules may be taken twice, see Section 4 (3) **ABMPO/TechFak**.

(3) ¹The elective modules generally consist of one lecture (1 SWS), one tutorial (1 SWS) and one laboratory course (2 SWS), one lecture (1SWS), one tutorial (1 SWS) and one seminar (2 SWS), or one laboratory course (4 SWS). ²Any deviations and the exact structure of the modules are stipulated in the module handbook.

(4) ¹ The type and scope of the examination are dependent on the skills for the relevant module according to the module handbook. ²Examinations in the modules shall take one of the following forms: written examination, oral examination, seminar achievement or practical achievement pursuant to Section 6 (3) **ABMPO/TechFak**. ³ Section 6 (2)(3) **ABMPO/TechFak** stipulates that in justified exceptional circumstances, combinations of the individual achievements stated in sentence 2 may also be possible. ⁴Other examination forms are possible if so decided by the Degree Programme Committee. ⁵The module handbook is published before the beginning of the semester in accordance with local practice.

Section 42c Soft Skills (M13)

(1) ¹The first learning outcome of the module "soft skills" is to allow students to acquire relevant skills that will enable them to present and discuss scientific results and findings independently in a topic covered in the Master's degree programme. ²A second learning outcome is aimed at promoting personal and social skills through preparing, reporting on and presenting a topic relating to the subject for a specialist audience at a Master's level and in a manner tailored to suit the target group, as well as working under supervision in a group to develop and test subject-related applications and possibilities for implementation with respect to the chosen subject. ³Thirdly, the choice of excursions allows students to tailor their profile in view of their career plans and/or their own personality. ⁴Section 44 (3) applies.

(2) ¹ The type and scope of the examination are dependent on the skills for the relevant module according to paragraph (1) and the module handbook. ² Students have to complete one ungraded seminar achievement for each module pursuant to Section 6 (3) **ABMPO/TechFak**, depending on the specific manner in which the module is taught. ³In addition, students must show that they have taken part in at least two excursions. ⁴The module handbook is published before the beginning of the semester in accordance with local practice.

(3) ¹The module generally consists of one seminar in presentation skills (4 SWS) and two excursions. ²Any exceptions are detailed in the module handbook.

Section 43 Requirements for Admission to the Master's Thesis

- (1) The requirements for admission to the Master's thesis shall be as follows:
- 1. Acquiring at least 60 ECTS credits in the Master's degree programme;
- 2. Submission of relevant certificates if admission to the Master's degree programme was granted with conditions according to Section 29 (2)(2) **ABMPO/TechFak**.

(2) In justified, exceptional cases, the Examinations Committee shall be entitled to grant early admission to the Master's thesis.

Section 44 Master's Thesis

(1) ¹The Master's thesis module shall be worth 30 ECTS credits. ²It consists of the written Master's thesis worth 27.5 ECTS credits and the presentation worth 2.5 ECTS credits.

(2) ¹The Master's thesis is intended to demonstrate students' ability to solve scientific problems in the field of nanotechnology independently. It shall usually deal with a scientific subject from the core subject. ²The thesis shall have a workload of approximately 840 hours to be completed within six months. ³Sections 40 (2) and (3)(2) shall apply accordingly. ⁴The Master's thesis shall be written in English.

(3) ¹The presentation on the Master's thesis shall last approximately 30 minutes. ²The presentation shall cover the Master's thesis and its results, and shall be followed by a discussion. ³The date of the presentation shall be determined by the supervisor at the latest by the date the Master's thesis is due, and the student shall be informed of the date in good time.

Part III: Transitory and Final Provisions

Section 45 Legal Validity

(1) ¹These degree programme and examination regulations shall come into effect on the day after their publication. ²They shall apply to all students who enter the degree programme in the winter semester 2008/2009 or later.

(2) ¹The eighth amendment statute shall come into effect on the day after its publication. ²It shall apply to all students starting a degree programme from winter semester 2020/2021 onwards. ³Examinations in accordance with previous versions of the degree programme and examination regulations will be offered for the last time in summer semester 2025 for the Bachelor's degree programme and in winter semester 2023/2024 for the Master's degree programme. ⁴From the date stated in sentence 3, those students who are affected by the examination regulations becoming invalid shall take their examinations in accordance with the currently valid version of the degree programme and examination regulations.

(3) ¹The ninth amendment statute shall come into effect on the day after its publication. ²It shall apply to all students studying in accordance with the **FPONT** dated 9 September 2020 at the time the amendment statute comes into effect or those who intend to start the Master's degree programme in the future. ³Notwithstanding sentence 2, the amendments concerning the change to the name of the Master's degree programme and those stipulated in Sections 37(6), 41 and 44 (2)(4) shall only apply to students intending to start the Master's degree programme as of winter semester 2022/2023.

Appendix 1: Structure of the Degree Programme in Nanotechnology

			SWS		(sem	nester	Total ECT	Distrib credits		workloa	d per se	mester ir	ECTS	Type and scope of
No.	Module name	Teaching unit	houi L	T	Р	S	S cred- its	1st sem.	2nd sem.	3rd sem.	4th sem.	5th sem.	6th sem.	the examination
B1	Mathematics for NT 1 (GOP)	Mathematics for NT 1	4	2			7.5	7.5						EA (written exami- nation, 90 mins) + CA (TA)
B2	Mathematics for NT 2 (GOP)	Mathematics for NT 2	4	2			7.5		7.5					EA (written exami- nation, 90 min) + CA (TA)
B3	Mathematics for NT 3	Mathematics for NT 3	4	2			7.5			7.5				EA (written exami- nation, 90 min) + CA (TA)
B4a	Experimental physics I	Experimental physics I	3	1			5	5						EA (written exami- nation, 90 min)
B4b	Experimental physics II	Experimental physics II	3	1			5		5					EA (written exami- nation, 90 min)
B5	General and inorganic chemistry	General and inorganic chemistry	4		7		12.5	5	7.5					EA (written exami- nation, 45 min) + CA (LA)
B6	Physical chemistry of nanostruc- tures	Physical chemistry of nanostruc- tures	2	2			5				5			EA (written exami- nation, 90 min)
	Foundations of nanotechnology I	Nano I: Introduction to nanotech- nology	2					2.5						EA (written exami-
B7	Preliminary examination (GOP)	Nano II: Characterisation	2				10		2.5					nation, 90 min) + CA (LA)
		Nano laboratory course I			5				5					
		Nano III: Materials	2							2.5				EA (written exami-
B8	Foundations of nanotechnology II	Nano IV: Semiconductor devices	2				15				2.5			A (written exami- nation, 90 min) + CA (LA)
		Nano laboratory course II / III			10					7.5	2.5			
B9	Foundations of materials (GOP)	Materials structure/metallic mate- rials	3	1			10	4.5						EA (written exami- nation, 120 min)

	Module name			SWS hours)		(semester		Distrib credits		workload	d per sei	mester ir	n ECTS	Type and scope of
No.			L	s) T	Р	S	S cred-	1st sem.	2nd sem.	3rd sem.	4th sem.	5th sem.	6th sem.	the examination
			L			3	its	3 C III.	3 6 111.	36m.	3 6 11.	sem.	sem.	
		Non-metallic inorganic materials	2					2.5						
		Organic materials	2	1				3						
B10	Mechanical properties of materials	Mechanical properties of materials	2				2.5		2.5					EA (written exami- nation, 45 min)
B11	Testing methods and characteris-	Characterisation and inspection of materials	2				5				2.5			EA (written exami-
БП	tics	Electric, magnetic, and optic properties	2				5				2.5			nation, 90 min)
B12	Physical chemistry of materials	Solid state thermodynamics	1	1			5				2			EA (written exami- nation, 90 min) +
	i nyoloai ononilotry or matonalo	Process engineering interfaces	2	1							3			CA (written exami- nation, 90 min)
B13	Quantum mechanics	Quantum mechanics	4	2			7.5			7.5				EA (written exami- nation, 90 min)
B14	Solid-state physics	Solid-state physics	4	2			7.5				7.5			EA (written exami- nation, 90 min)
B15	Academic working	Methodical working English for Engineers	1	1		1	5			3 2				SA + CA ¹
		Nano devices, nano sensors, MEMS, micro-machining	2	1								3.5		
D1C	Applied postochoolay I	Nanosurfaces and structures	2				10					3		EA (written exami- nation, 120 min)
B16	Applied nantechnolgy I	Nanocomposites	1	1			10					2.5		
		Nanotoxicology	1									1		
B17	Applied nanotechnology II	Process engineering interfaces	2	1			7.5				3.5			EA (written exami-
	Applied handlechhology in	Mechanical process engineering	2	1			7.5					4		nation, 90 min)
B18	Materials	Materials science – elective lec- ture l	2				10					3		EA (written exami- nation, 120 min) +
ыо		Materials science – elective lec- ture II	2				10					3		CA (presentation, 30 min)

Module name	Teaching unit	SWS (semester			Total ECT	Distrib credits	oution of s	Type and scope of					
		L	з) Т	Р	S	cred-	1st sem.	2nd sem.	3rd sem.	4th sem.	5th sem.	6th sem.	the examination
	Materials science – elective lec- ture III	2									3		
	Metrology	1	1								1		
Laboratory: Clean room	Laboratory: Clean room			5		5					5		CA (LA)
Literature research and presenta- tion techniques	Advanced seminar in English lan- guage				2							3	EA (seminar presentation 20 min)
	Presentation techniques				2	5						2	+ CA (2 short presentations each lasting 15 min) ³
Professional environment	Industrial internship ²					12.5						11.5	CA (LA + ExA)
	Excursion											1	
	Bachelor's thesis											10	EA (Bachelor's the-
Bachelor's thesis	Advanced seminar Bachelor's thesis					12.5						2.5	sis) + EA (presenta- tion, 30 min and dis- cussion) (80 % + 20 %)
Total SWS and ECTS credits:		75	24	27	6	180	30	30	30	31	29	30	
	Laboratory: Clean room Literature research and presenta- tion techniques Professional environment Bachelor's thesis	Materials science – elective lecture IIIMetrologyLaboratory: Clean roomLaboratory: Clean roomLiterature research and presentation techniquesProfessional environmentProfessional environmentBachelor's thesisBachelor's thesisAdvanced seminar Bachelor's thesisSWS and ECTS credits:	Module nameTeaching unitImage: Laboratory: Clean roomImage: Laboratory: Clean room1Laboratory: Clean roomLaboratory: Clean room1Literature research and presentation techniquesAdvanced seminar in English language1Professional environmentIndustrial internship²1Bachelor's thesisBachelor's thesis1Bachelor's thesisAdvanced seminar Bachelor's thesis1SWS and ECTS credits:75	LTMaterials science - elective lecture III2Metrology1Laboratory: Clean room1Laboratory: Clean room1Literature research and presentation techniquesAdvanced seminar in English languageProfessional environmentIndustrial internship2Professional environmentExcursionBachelor's thesisAdvanced seminar Bachelor's thesisBachelor's thesisAdvanced seminar Bachelor's thesisBachelor's thesis75	Module nameTeaching unithoursLTPMaterials science - elective lec- ture III211Materials science - elective lec- ture III211Laboratory: Clean room1111Laboratory: Clean roomLaboratory: Clean room15Literature research and presentation techniquesAdvanced seminar in English language11Presentation techniquesIndustrial internship2Industrial internship2Industrial internship2Industrial internship2Bachelor's thesisAdvanced seminar Bachelor's thesisAdvanced seminar Bachelor's thesisIndustrial internship2Industrial internship2Bachelor's thesisAdvanced seminar Bachelor's thesisIndustrial internship2Industrial internship2Industrial internship2Bachelor's thesisAdvanced seminar Bachelor's thesisIndustrial internship2Industrial internship2Industrial internship2Bachelor's thesisIndustrial internship2Industrial internship2Industrial internship2<	Module nameTeaching unithoursLTPSLTPSMaterials science – elective lecture ll211Metrology1111Laboratory: Clean roomLaboratory: Clean room15Literature research and presentation techniquesAdvanced seminar in English language112Professional environmentIndustrial internship21122Bachelor's thesisAdvanced seminar Bachelor's thesis1112Bachelor's thesisAdvanced seminar Bachelor's thesis1111Bachelor's thesisAdvanced seminar Bachelor's thesis1111Bachelor's thesis111111Bachelor's thesis1111 <t< td=""><td>Module nameTeaching unithours)SSLTPSCreditsMaterials science – elective lecture III2221Metrology11111Laboratory: Clean room11115Literature research and presentation techniquesPresentation techniques1122Professional environmentIndustrial internship²11122Bachelor's thesisAdvanced seminar Bachelor's thesis111112.5EXCURSION1111112.512.5EXCURSION1111112.5EXCURSION1111112.5EXCURSION1111112.5EXCURSION111111Bachelor's thesis111111Bachelor's thesis111111EXCURSION1111111Bachelor's thesis1111111Bachelor's thesis1111111EXCURSION11111111Bachelor's thesis1111111EXCURSION1111<td>Module nameTeaching unithoursL or MaterialsCorrection for eachingIst sem.LTPS$\frac{1}{15}$$\frac{1}{10}$</td><td>Module nameTeaching unithoursSSGreat Served tis1st sem.2nd s</br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></br></td><td>Module nameTeaching unithoursSSTeaching3rd sem.3rd<</td><td>Module name Teaching unit hours Sored field Gordan Ist sem. 2nd sem. 3rd sem. 4th sem. 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¹The type and scope of the examination depend on the specific manner in which the module is taught; see module handbook for details. As a rule, the course achievement shall consist of homework exercises taking the form of online exercises or a short presentation.

²⁾Industrial placement: 10 weeks, see Section 39 (3)(2).

³The type and scope of the examination depend on the specific manner in which the respective module is taught; see module handbook for details.

GOPGrundlagen- und Orientierungsprüfung; Preliminary examination

EA = graded examination achievement, see Section 6 (3)(7) ABMPO/TechFak.

CA = ungraded course achievement, see Section 6 (3) sentence 8 **ABMPO/TechFak**.

WE = written examination

TA = tutorial achievement

LA = laboratory achievement, see Section 6 (3) sentences 3 and 5 AMBPO/TechFak and module handbook

SA = seminar achievement, see Section 6 (3) sentence 4 and 5 **ABMPO/TechFak** and module handbook

ExA = Excursion achievement

Appendix 2: Structure of the Master's Degree Programme

No	Module name	Teaching unit		SWS (hours)		(semester		load	bution per s S credi	emes		Type and scope of the
•				т	Ρ	S	S cred its	1st sem	2nd sem	3rd se m.	4. sem	examination
		Electron microscopy	2					3				
		Nanospectroscopy	2					3				
M1	Nanocharacterisation	Scanning electron mi- croscopy / Nanoindentation	2	1			10		4			EA: (oral 30 min)
M2	Laboratory course: Synthe- sis/characterisation				5		5	5				LA
М3	Computational nanoscience		2	2			5		3	2		EA (written examination, 45 min)
	Top-down nanostructuring	Nanoelectronics	2						3			
M4		Photolithography	2	1			10	4			EA: (oral 30 min)	
		Plating technology	2					3				
		Molecular nanostruc- tures	2							3		
M5	Bottom-up nano synthesis / self-assembly	Nanotechnology of disperse systems	2	1			10			4		EA (oral, 30 min)
	, i i i i i i i i i i i i i i i i i i i	Self-assembly on sur- faces	2						3			
M6	Core subject – foundational module	cf. Section 42a	4	(0- 4)	(0- 4)	(0- 2)	10	5	5			EA (written examination, 90 min or oral 30 min, or

No	Module name	Teaching unit	SWS (semester hours)			ester	To- tal ECT	load	bution per s S credi	emes		Type and scope of the
•			L	т	Ρ	S	S cred its	1st sem	2nd sem	3rd se m.	4. sem	examination
												seminar achievement, or laboratory achievement) cf. Section 42a
M7	Core subject – supplementary module	cf. Section 42a	0- 2	(0- 2)	(0- 4)	(0- 2)	5	5				EA (written examination, 45 min or oral, 15 min, or seminar achievement, or laboratory achievement) cf. Section 42a
M8	 Elective module in mate- rials science and engi- neering from core sub- ject 	cf. Section 42a	(0- 2)	(0- 2)	(0- 4)	(0- 2)	5		5			EA (written examination, 45 min or oral, 15 min, or seminar achievement or laboratory achievement, cf. Section 42a
M9	 Elective module in mate- rials science and engi- neering from core sub- ject 	cf. Section 42a	0- 2	(0- 2)	(0- 4)	(0- 2)	5	3	2			EA (written examination, 45 min or oral, 15 min, or seminar achievement or laboratory achievement, cf. Section 42a

No	Module name	Teaching unit	SWS (semester hours)			To- tal ECT	load	bution per se S credi	emes		Type and scope of the	
•				т	Ρ	S	S cred its	1st sem	2nd sem	3rd se m.	4. sem	examination
M1 0	1. Elective module: Engineering or sciences (from Faculty of En- gineering including materials science or Faculty of Sciences)	cf. Section 42b	0- 2	(0- 2)	(0- 4)	(0- 2)	5		5			EA, cf. Section 42b
M1 1	2. Elective module: Engineering or sciences (from Faculty of En- gineering including materials science or Faculty of Sciences)	cf. Section 42b	(0- 2)	(0- 2)	(0- 4)	(0- 2)	5			5		EA, cf. Section 42b
M1	Academic project	Literature research and methods				4	10			5		SA
2		Advanced seminar				4				5		
M1	Soft skills	Presentation techniques				4	5			4		- SA, cf. Section 42c
3	OUT SKIIS	2 excursions					5			1		
M1	Master's thesis	Master's thesis					30				27. 5	EA (MT) + EA (presentation, 30
4	Master's thesis	Presentation					50				2.5	min and discussion) (90% + 10%)
Tota	I SWS and ETCS credits:		24 - 34	5 - 19	5 - 29	11 - 23	120	31	30	29	30	
Tota	Total SWS:											

Key: EA = graded examination achievement, see Section 6 (3)(7) **ABMPO/TechFak**.

CA = ungraded course achievement, see Section 6 (3) sentence 8 ABMPO/TechFak.

WE = written examination

O = oral examination

LA = laboratory achievement, see Section 6 (3) sentences 3 and 5 **AMBPO/TechFak** and module handbook

SA = seminar achievement, see Section 6 (3) sentence 4 and 5 **ABMPO/TechFak** and module handbook

MT = Master's thesis