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 at the Examinations Office is the version that is legally binding.

Degree Programme and Examination Regulations for the Bachelor's and Master's Degree Programme Chemistry at the Faculty of Sciences of Friedrich-Alexander-Universität Erlangen-Nürnberg – FPOChem –

Dated 25 July 2013

Based on Section 6, Section 13 (1)(2), Section 43 (4) and (5), Section 61 (2)(1) of the Bavarian Higher Education Act (Bayerisches Hochschulgesetz, BayHSchG), the University of Erlangen-Nürnberg enacts the following examination regulations:

Part I: General Conditions

Section 35 Scope

The degree programme and examination regulations for the Bachelor's and consecutive Master's degree programme Chemistry complement the General Examination Regulations for the Bachelor's and Master's degree programmes Chemistry and Molecular Science at the Faculty of Engineering of Friedrich-Alexander-Universität Erlangen-Nürnberg as amended from time to time.

Section 36 Bachelor's Degree Programme, Standard Duration of Studies, Start of Programme

[1]The Bachelor's degree programme Chemistry shall consist of modules over the course of six semesters. [2]This shall include the period for working on the Bachelor's thesis.

Section 37 Master's Degree Programme, Standard Duration of Studies, Teaching Language

[1]The Master's degree programme Chemistry builds on the contents of the Bachelor's degree programme Chemistry. [2]It shall consist of modules worth 120 ECTS credits including the Master's thesis. [3]The teaching language shall be English.

II. Part: Special Provisions

1. Bachelor's Examination

Section 38 Structure of the Bachelor's Degree Programme

The distribution across the semesters, the type and duration of the examinations in the compulsory modules and the required number of ECTS credits are set forth in **Appendix 1**.

Section 39 Preliminary Examination (Grundlagen- und Orientierungsprüfung, GOP)

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

Section 40 Bachelor's Thesis

(1) [1]The Bachelor's thesis is supposed to enable students to learn to solve chemical problems independently. [2]Requirements for the Bachelor's thesis shall be such that it can be completed with a workload of 300 hours.

(2) 10 ECTS credits shall be awarded for the Bachelor's thesis.

2. Master's Examination

Section 41 Qualification for a Master's Degree Programme, Certificates and Admission Requirements

(1) A subject-specific degree within the meaning of Section 29 (1)(1) ABMPOChemMol/NatFak is a Bachelor's degree or a Diplom degree in the subject chemistry. [2]Bachelor's degrees in molecular science in particular shall be recognised as subject-related degrees within the meaning of Section 29 (1)(1) ABMPOChemMol/NatFak.

(2) In the oral admission examination according to Appendix Paragraph 5 (3) ff. ABMPOChemMol/NatFak, applicants shall be evaluated according to the following criteria:

1. A good knowledge of the foundations of the subject (60%)
2. Good knowledge of a field of specialisation corresponding to an eligible specialisation in the Master's degree programme (20%)
3. A positive prognosis based on improving performance over the course of the studies so far (20%)

Section 42 Scope and Structure of the Master's Degree Programme

(1) The Master's degree programme shall consist of the modules set forth in **Appendix 2**.

(2) The elective module must be previously agreed upon with the dean of studies.

Section 43 Master's Degree Examinations

The type and duration of the module examinations is set forth in **Appendix 2**.

Section 44 Requirements for Admission to the Master's Thesis

[1]Students may begin with the Master's thesis (CMT) as soon as the other course and examination achievements according to **Appendix 2** have been successfully completed. [2]If admission to the Master's degree programme was granted with conditions, the relevant certificates shall be submitted.

Section 45 Master's Thesis

(1) [1]The Master's thesis is supposed to demonstrate students' ability to solve scientific problems in the field of chemistry. [2]Requirements for the thesis shall be such that it can be completed within a period of six months.

(2) [1]The Master's thesis shall usually deal with a scientific subject from the chosen branch of study.

[3]30 ECTS credits shall be awarded for the Master's thesis.

III. Part: Concluding Provisions

Section 46 Legal Validity

[1]These degree programme and examination regulations shall come into effect on 01 October 2013. [2]It shall be applied to students who start the Bachelor's or Master's degree programme Chemistry from the winter semester 2013/2014 onwards.

Appendix 1: Chemistry (Bachelor's degree)

Chemistry – basic study period

No.	Module	V	P	S	Ü	Sem.	ECTS credits	Examination	PFP definition	Preliminary Examination (GOP*)
CBG-1	General Inorganic Chemistry	4			2	1	5	PFP	W90 (PL) + EX (SL)	**x**
CBG-2	Qualitative Analytical Chemistry	2	8	2		1	10	PFP	W90 (PL) + LAB (PL, AP)	**x**
	Modern Aspects of Chemistry – MAC	2				1			SL:	
CBG-3	Quantitative Analytical Chemistry	2	5	1		2	5	LAB	LAB (PL, AP), W60 (PL)	**x**
CBG-4	Chemistry of Metals	3				2	5	W	W90 (PL)	**x**
CBG-5	Preparative Inorganic Chemistry		7	1		3	5	LAB	LAB (PL, AP)	
CBG-6	General Organic Chemistry	4			2	2	5	PFP	W90 (PL) + EX (SL)	**x**
CBG-7	Organic Chemistry	3		2		3	10	PFP	W90 (PL) + EX (SL)	
	Spectroscopy of Organic Compounds	2			2	3			EX (SL)	
CBG-8	Lab course: Organic Chemistry		13	1		4	10	LAB	LAB (PL, AP)	
CBG-9	PC1 Thermodynamics, Electrochemistry	3			1	2	5	PFP	W90 (PL) + EX (SL)	**x**
CBG-10	PC2a Atomic and molecular structure of matter	2			1	3	5	PFP	W60 (PL) + EX (SL)	
CBG-11	PC2b Kinetics	2			1	3	5	PFP	W60 (PL) + EX (SL)	
CBG-12	PC3 – Lab Course for Beginners		9	1		4	10	LAB	LAB (PL, AP)	
CBG-13	Theoretical Chemistry 1	2			2	2	5	PFP	W90 (PL) + EX (SL)	**x**
CBG-14	Theoretical Chemistry 2	2			2	3	5	PFP	W90 (PL) + EX (SL)	
CBG-15	Theoretical Chemistry 3	2			2	4	5	PFP	W90 (PL) + EX (SL)	
CBG-16	Mathematics	2			2	1	5	W	W90 (PL) + EX (SL)	
CBG-17	Physics 1	4			1	1	5	W	W90 (PL) + EX (SL)	
CBG-18	Physics 2	4			1	2	5	W	W90 (PL) + EX (SL)	
CBG-19	Toxicology and Jurisprudence	2				3	5	PFP	W60 (PL)	**‡ 5 ECTS**
	Toxicology and Jurisprudence	2				4			W60 (SL)	
CBG-20	Biochemistry and Molecular Biology I	2				3	5	PFP	W90 (PL)	
	Biochemistry and Molecular Biology II	2				4			W90 (PL)	
	Σ BSc-G	53	42	8	19		120		*) 30 ECTS from these modules	
	Σ BSc-G-SWS	**122**							must be obtained in first 2 semesters	

Chemistry – focus period

No.	Module	V	P	S	Ü	Sem.	ECTS credits	Examination	PFP definition	
CBV-1	Synthetic Chemistry IC	2				5 and 6	5	W	W90 (PL)	
	Synthetic Chemistry OC	2				5 and 6				
CBV-2	Lab course: Synthetic Chemistry IC		10	2		5 and 6	5	LAB	LAB (PL, AP)	**‡a 1.25 ECTS**
CBV-3	Lab course: Synthetic Chemistry OC		10	2		5 and 6	5	LAB	LAB (PL, AP)	**‡a 1.25 ECTS**
CBV-4	Mechanisms and Stereochemistry OC	3				5	5	W	W90 (PL)	
CBV-5	Mechanisms and Stereochemistry IC	3				6	5	W	W90 (PL)	
CBV-6	Theory of Periodic Systems	2				5	5	PFP	W90 (PL) (50%)	**‡a 2 ECTS**
	Modern Software Applications			1	1	5			EX (PL) (25%)	
	Computational Chemistry		2			6			LAB (PL, AP) (25%)	
CBV-7	Instrumental Analytics			4		5 and 6	5	W	W90 (PL)	
CBV-8	PC4 Statistics and Spectroscopy	3			1	5	5	PFP	W90 (PL) + EX (SL)	
CBV-9	Lab course: PC4 (Spectroscopy and Modern Measuring Techniques)		8	2	1	5 and 6	10	PFP	LAB (PL) (75%) + LEC (PL) (25%)	**‡a 4 ECTS**
CBV-10	Bachelor's thesis		10			6	10	Thesis	2 reviewers	
	Σ BSc-V	15	40	11	3		60			
	Σ BSc-V-SWS	**69**							‡: Module contains core skills	
	Σ BSc	68	82	19	22		180		‡a: Module contains xx ECTS including core skills	
	Σ BSc SWS	**191**								

Appendix 2: Chemistry (Master's degree)

No.	Module	V	P	S	Ü	Sem.	ECTS credits	Examination	PFP definition
CM1-IC	Mandatory module: Inorganic Chemistry	4	8	3		1/2	**15**	PFP	O45 (2 examiners) (PL)
	A – Advanced Inorganic Chemistry I	2		1					LEC (SL)
	B – Advanced Inorganic Chemistry II	2		1					LEC (SL)
	C– Adv. Inorganic Chemistry – LAB COURSE + Seminar		8	1					LAB (SL, AP) + EX (SL)
CM2-PC	Mandatory module: Organic Chemistry	4	7	4		1/2	15	PFP	O45 (2 examiners) (PL)
	A – Advanced Organic Chemistry I	2		1					LEC (SL)
	B – Advanced Inorganic Chemistry II	2		1					LEC (SL)
	C– Adv. Organic Chemistry – LAB COURSE + Seminar		7	2					LAB (SL, AP) + EX (SL)
CM3-PC	Mandatory module: Physical Chemistry	4	9	2		1/2	15	PFP	O45 (2 examiners) (PL)
	A – Advanced Physical Chemistry I	2		1					LEC (SL)
	B – Advanced Physical Chemistry II	2		1					LEC (SL)
	C– Adv. Physical Chemistry – LAB COURSE		9						LAB (SL, AP)
CME	Mandatory elective module **Detailed modules can be found in the module hand-book**	5	7	3		1-3	15	PFP	according to chosen module
	Examples								
	Bio(in)organic Chemistry								
	Bio(in)organic Chemistry 1	2		1					
	Lecture of choice in the field of bio(in)organic chemistry	2							
	Special aspects in bio(in)organic chemistry	2		1					
	Bio(in)organic Chemistry – LAB		7						LAB (SL, AP)
	Quantum Chemistry								
	Quantum Chemistry 1	2			1				
	Quantum Chemistry 2	2			1				
	Scientific Programming			1	1				EX (SL)
	Handling of Computer Systems in Science			1	1				EX (SL)
	Training in Computer Chemistry		4						LAB (SL, AP)

CE	Elective module	5	7	3		1-3	15	PFP	according to
	Module of free choice								chosen module
	Example modules can be found in module handbook	8	0	1	#				(according to choice of module)
CS	Specialisation module		14	1		3	15	PFP	LAB (PL, AP)
	Research project including report 6 weeks' full time in a work group of the student's choice at a research group at the Department of Chemistry and Pharmacy								
CS-IC	Inorganic Chemistry		15						
CS-PC	Physical Chemistry		15						
CS-TC	Theoretical Chemistry		15						
CS-OC	Organic Chemistry		13	2					
CMT	Master's Thesis		30			4	30	Thesis	referee report 2 reviewers
	MSc	22	82	16	0		120		
	MSc SWS	**120**							
	BSc+MSc	90	164	35	22				
	BSc+MSc SWS	**311**							

elective module without a lab course

V Vorlesung (lecture)
P Praktikum (lab course)
S Seminar (seminar)
Ü Übung (exercise)

PFP portfolio examination
Wxx written examination xx minutes
Oxx oral examination xx minutes
Ex exercises (further details: module handbook)
LAB lab course (further details: module handbook)
LEC seminar lecture
TH seminar paper or thesis
AP compulsory attendance for lab courses

PL Prüfungsleistung (examination achievement)
SL Studienleistung (course achievement)

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17 July 2013 and the President's authorisation on 25 July 2013.

Erlangen, 25 July 2013

Prof. Dr. Karl-Dieter Grüske
President

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