

Fakultät für Chemie und Biochemie

Examination Regulations

Unauthorized Translation

from Prüfungsordnung AB Nr. 999 (08.2013)

and AB Nr. 1305 (06.2019)

Master of Science (M.Sc.) in Molecular Sciences – Spectroscopy and Simulation

**Preliminary Examination Regulations for the
International Master's Course „Molecular Sciences
– Spectroscopy and Simulation“ at the Faculty of
Chemistry and Biochemistry at the Ruhr-
Universität Bochum dated XX . XX. XXXX**

– *Unauthorized Translation* –

Table of Contents

I. General Regulations

§ 1	Objectives
§ 2	Degree
§ 3	International Organization
§ 4	Expected Course Duration, Course Begin, and Modularization
§ 5	General Admission Requirements
§ 6	Examinations and Assessments
§ 7	Grading System, Formation and Weighting of Grades
§ 8	Admission to Work Assessments and Examinations
§ 9	Failure and Repetition of Examinations and Work Assessments
§ 10	International Course
§ 11	Assignment, Delivery, Grading and Repetition of Master Thesis
§ 12	Extension of Due Dates, Protection Regulations
§ 13	Malicious Fraud, Violation of Regulations
§ 14	Accountability of Study Periods, Work Assessments, and Examinations
§ 15	Master Examination
§ 16	Examination board
§ 17	Examiners
§ 18	Transcript of Records and Master Certificate
§ 19	Invalidity of Master Examination
§ 20	Access to Examination Documents

II: Final Clauses

§ 21	Scope
§ 22	Effective Date and Publication

III: Unofficial Translation

I. General Regulations

**§ 1
Objectives**

The international Master Course Program „Molecular Sciences – Spectroscopy and Simulation“ is a graduate program following a completed Bachelor degree in natural sciences and related engineering Bachelor Programs. The Master Program serves to achieve and to broaden an advanced understanding of interdisciplinary knowledge in the areas of molecular sciences, spectroscopy and simulation. The graduates will be enabled to independently tackle complex molecular problems as are common in a research-oriented environment in industry, administration, and research institutions.

**§ 2
Degree**

After full completion of the Master examinations the Faculty of Chemistry and Biochemistry awards the degree „Master of Science“ (M. Sc.).

**§ 3
International Organisation**

- (1) The Master Course Program will be taught in English.
- (2) All examinations and work assessments are performed in English.
- (3) In the course of the program, a practical at a foreign university or research institution is mandatory.

**§ 4
Expected Course Duration, Course Begin, and
Modularisation**

- (1) The Master Course Program is a graduate program. The expected course duration is 4 semesters. The program can only be started in the winter semester.
- (2) The Master Course Program consists of modules according to Annex 1. Modules consist of individual or several courses or the master thesis and conclude with an examination based on assessments according to §6.
- (3) Modules listed in Annex 1 are allocated credit points by Lectures (in Annex 1 indicated by a “V”) with accompanying exercises (Üb), seminars (S), and the research internship (Practical, Pr) and Master Thesis. Contact times are given in semester hours per week (SWS).
- (4) Three of the following seven modules must be taken: 1 (Concepts of Quantum Mechanics), 2 (Statistical Physics and Thermodynamics), 6 (Biomolecular Simulation), 10 (Concepts of Molecular Chemistry 2), 11 (Methods of Structural Analysis), 12 (Fundamentals of Magnetic Resonance) and 13 (Scientific Programming Methods for Chemists). If more than three modules are taken, those additional modules will be mentioned in the examination certificate as an optional achievement of the candidate's choice, but will not be awarded credit points and will not be included in the overall grade.
- (5) All modules are graded. For modules consisting of several components, the module exam may be replaced by module sub-examinations.
- (6) All assessments and examinations are carried out during the course of the studies.
- (7) Proof of the course achievements will be accounted using the European Course Credit Transfer System (ECTS). Each achievement will be weighted according to the necessary student workload. The expected workload is 1800 hours per year of studies and is converted into 60 credit points (CP). One credit point (CP) corresponds to an estimated workload of 30 hours.

**§ 5
General Admission Requirements**

- (1) Admission to the Master Course Program „Molecular Sciences – Spectroscopy and Simulation“ is acceptable only for students that prove:
 - a) a successfully completed bachelor's degree within the European Union (EU) in a course of study with at least 180 credit points or an equivalent bachelor's degree in a country outside the EU in one of the fields mentioned in paragraph 2 with an overall grade of 2.0 according to the German grading system or an ECTS equivalent and
 - b) professional prerequisites of a minimum
 - (i) 10 CP in mathematics
 - (ii) 8 CP in theoretical chemistry and/or fundamentals of spectroscopic techniques and/or basic quantum mechanical courses in physics and/or equivalent.
 - c) and satisfactory English language skills.

(2) applicable fields referred to in paragraph 1 are chemistry, physics, biology, mathematics, related engineering fields, and comparable specialized courses such as nano or materials sciences. The examination board decides on the comparability of a course program.

(3) Sufficient English language skills are proven by

- completion of a purely English-language bachelor's degree program or
- TOEFL 600 (paper-based), 250 (computer-based), 100 (internet-based) or
- IELTS 6.0 or better or
- provide evidence of equivalent services.

(4) The examination board decides on equivalency of English language skills in accordance with paragraphs 1-3.

§ 6

Examinations and Assessments

(1) The performance with respect to lectures and associated exercises of modules according to §4 is generally assessed by graded oral or written examinations at the end of the semester. The performance with respect to practicals and seminars are assessed by graded work assessments as e.g. seminar contributions or written reports.

(2) In oral examinations, the student shall demonstrate basic knowledge appropriate to the expected study progress and the ability to realize connections between different parts of the studied field and to rank special problems accordingly. Individual oral examinations are e.g. carried out by two examiners or by a single examiner accompanied by a knowledgeable observer. They last 30 – 45 minutes. The essential topics and results of the examination have to be recorded in a written protocol. Following the examination, the result of the examination has to be disclosed to the student.

(4) In written examinations, the student shall prove that, based on the required fundamental knowledge and with established methods of the field, she/he is able to solve problems and to discuss topics within a limited time and with limited tools. Written examinations last between 90 und 120 minutes. They are graded by a single examiner. The result of the examination shall be disclosed to the student at latest three weeks after the examination.

(5) The student may view his/her examination paper within one year starting from the examination date. The examiner may define dates for the viewing that lie generally within two weeks after the disclosure of the examination results. In case of a formal objection the examination paper has to be graded by two examiners. In this case, the final grade is calculated as the arithmetic mean of both ratings. This mean will be rounded to the closest better grade according to § 7, clauses 1 and 2.

(6) Seminar contributions are work assessments with respect to a larger topic that are presented by a student or a group of students in form of a talk or an elucidated graphical presentation in front of the seminar audience. The contributions are graded by the seminar instructor as examiner. The assessment must be documented in form of a written protocol.

(7) Written reports shall summarize the essential facts, interconnections and interpretations related to topics studied, e.g. in a course or research practical. The assessment of written reports has to be documented by the examiner within the report in a comprehensible manner.

(8) Contributions according to clauses 6 and 7 can be admitted as group work by the module instructor if an individual assessment of the student contributions is feasible.

§ 7

Grading System, Formation and Weighting of Grades

(1) The grades for individual examination performance are determined by the respective examiner. The following grades shall be used for the evaluation:

1 = sehr gut = excellent performance;
(very good)

2 = gut = considerably above average
(good) performance;

3 = befriedigend = average performance;
(satisfactory)

4 = ausreichend = a performance which still meets
(adequate) the requirements despite
weaknesses;

5 = nicht = performance which no longer
ausreichend meets the requirements due to
(fail) substantial weaknesses.

(2) For a more differentiated assessment of the examination performance, individual grades may be lowered or raised by 0.3; the grades 0.7, 4.3, 4.7 and 5.3 are not permissible.

(3) The average grade of a module consisting of several partial assessments is formed from the weighted individual assessments according to credit points for each component and rounding down the result to the next better grade. However, a module is only passed when each individual assessment is graded at least „adequate“.

(4) The average grade for the Master Course Program is formed from the sum of the individual module grades, including the master's thesis, weighted by the respective credit points (CP) specified in Annex 1, divided by the total number of credit points.

(5) In the formation of the average grade, only the first decimal will be considered, all other decimals will be deleted without rounding. The following average grades may be achieved:

average up to 1.5 = very good

average from above 1.5 to 2.5 = good

average from above 2.5 to 3.5 = satisfactory

average from above 3.5 to 4.0 = adequate.

§ 8

Admission to Work Assessments and Examinations

(1) The admission to a work assessment and/or examination is only valid if the applicant is enrolled in the Master Course Program “Molecular Sciences – Spectroscopy and Simulation” and registered for the particular work assessment/examination in accordance with clauses 4 and 5. The admission is prohibited if the applicant is registered for a similar examination or work assessment at another university or if he/she/they has finally failed a similar examination/work assessment at another university.

(2) Work assessments and examinations for a given module have to be taken at the earliest possible date according to the course program (Annex 1). The students have to be informed about the type, number of credits to be earned, and dates of examinations and work assessments when the module starts.

(3) The examination associated with a lecture is scheduled shortly after the end of the lecture period according to § 6. In case of failure of the first examination, a re-examination is offered shortly before the beginning of the lecture period of the next semester.

(4) The registration procedure will be announced by the module instructor at the beginning of the module. The minimum time span for registration is 28 days. Registration must be possible up to 7 days before the examination.

(5) For practica, registration is required. The registration procedure will be determined by the module instructor and published via notice on campus. The minimum registration period spans 28 days. If possible, the student may cancel his/her registration up to the start of the practical.

(6) To be admitted to practica according to modules 14 (International Course) and 15 (Focal Point Practical) in Annex 1 students must acquire at least 46 credit points for courses of the first and second semester. If no credit points are earned for one of the compulsory modules consisting of a lecture and a practical that have been assessed with 9 CP (see Annex 1), proof must be

provided that the partial performance associated with the respective research practical has been passed. The examination board decides on exceptions.

(7) The admission to an individual experiment as part of a practical may be retracted if the applicant is missing the knowledge to perform the experiment safely and properly. In such a case, the module coordinator will ensure to his best effort that this experiment can be carried out within the same module. If one of the compulsory modules according to Annex 1 is definitively failed, the examination board may, upon a reasoned request, approve only once the proof of the required credit points by means of study or examination credits for other courses offered by the Faculty of Chemistry and Biochemistry. The application for this alternative credit must be submitted within three weeks of the announcement of the examination result. The application should only be granted if there are special reasons for a successful completion of all other courses of the Master program. The application excludes applications for further courses. If the application is approved, the examination board will determine the equivalent substitute performance. If the application is rejected, de-registration takes place.

(8) In case of deregistration, the right to participate in examinations and work assessments expires.

§ 9

Failure and Repetition of Examinations or Work Assessments

(1) A final examination or a work assessment is passed if it is at least graded „ausreichend“ (adequate). A Module is passed if all respective component examinations and assessments are passed.

(2) The examination is graded „nicht ausreichend“ (fail, 5.0) if the student misses a binding examination appointment, or retreats from an examination that has already started or is incapable of completing a written exam in the given time. This failure will not hold if the student cannot be held liable.

(3) If an examination attributed to a lecture is failed on the first attempt, it must be repeated at the second examination date offered. In case of a failure of a work assessment during the first attempt, it can be repeated once in the following year of studies.

(4) The full module may be repeated once, by registering for the repeat examination in the following year of studies. The conditions and deadlines specified in §8 apply to the examinations of the repeated module.

(5) Partial assessments of the module that have been passed will be accounted.

(6) In case of a failure of both end of term examinations held for the repeated module and in case of failure of a repeated work assessment, the right to participate in any further examinations and work assessments expires. In that case, the full master examination is irrevocably failed.

§ 10

International Course

(1) A required part of the Master Course Program is an international practical (Module 14: International Course) with an estimated student work load of 420 hours (14 credit points). Generally, the practical will take place in the third Master Course semester. The admittance to the International Course is defined in §8, clause 6. The examination board may permit exceptions.

(2) The practical will exclusively take place at institutions that are approved by the examination board. The Faculty for Chemistry and Biochemistry ensures a sufficient number of opportunities via agreements with international partner institutions.

(3) The distribution of practical appointments will be decided upon by the examination board. The decision will be made based on considerations concerning the scientific relevance based on the individual course plan and availability. The student may suggest a suitable international institution.

§ 11

Assignment, Delivery, Grading, and Repetition of the Master Thesis

(1) The master thesis shall show that the candidate is capable to independently treat a problem using scientific methods within a given time. The size of the thesis should not exceed 100 pages.

(2) The master thesis may be supervised by any professor, honorary professor, or assistant professor (Privatdozent) who is participating in teaching with respect to the Master Course Program „Molecular Sciences – Spectroscopy and Simulation“. The examination board may permit exceptions.

(3) The topic of the master thesis is assigned by the head of the examination board on application by the candidate. The candidate may propose a topic for the master thesis.

(4) Precondition for the assignment of the topic is the proof of 14 credit points related to Module 14 (International Course) and of 15 credit points related to Module 15 (Focal Point Practical) according to Annex 1.

(5) The minimum working time required to complete the master thesis is 5 months, the maximum time 6 months. Both times are counted from the date of assignment. The topic of the master thesis and the assignment date have to be recorded. The topic can be rejected only once within two months after assignment. In case of a justified request, the examination board may extend the working time by at most six weeks. The examination board may permit exceptions.

(6) The master thesis has to be submitted to the examination board in the form of two printed copies and electronically; the submission date has to be recorded. When submitting the thesis, the candidate has to affirm in written form that he/she/they has performed the work independently, that he/she/they has used no other means and sources as those stated in the thesis, and that all sources have been cited properly. If the master's thesis is not submitted on time, the thesis will be graded "nicht ausreichend" (fail, 5.0).

(7) The master thesis has to be graded by two examiners independently. One of the examiners has to be the supervisor of the thesis. The second examiner will be assigned by the head of the examination board. The grading process must not exceed four weeks' time.

(8) The final master's thesis grade will be obtained as the arithmetic mean according to §7, clause 2 from the two grades that have been obtained according to § 7 clauses 1 and 2. In case the difference between the two grades exceeds 1.0 or in case the average grade is larger than 4.0 a third examiner will be assigned by the head of the examination board. In that case, the final grade will be obtained as arithmetic mean of the two better grades according to §7, clause 2. The master thesis can only be graded "ausreichend" (adequate, 4.0) or better, if at least two grades are „ausreichend“ or better. The third assessment does not apply if the first two assessments result in the grade „ungenügend“ (5.0).

(9) In case of failure, the master thesis may be repeated once. A rejection of the topic according to clause 4 [sic] is only allowed in those cases where the candidate has not used this option before.

§ 12

Extension of Due Dates, Protection Regulations

(1) If a candidate resigns from or misses an examination without negligence the asserted reason must be indicated and made plausible in written form at the examination office.

(2) In case of an illness a doctors certificate must be presented stating the student was not able to participate in the examination. In doubtful cases, the examination office may ask for a certificate from a public health office. Starting from the second retreat from the same examination a certificate from the public health office is mandatory. The illness of the candidate is treated the same way as the illness of a child raised predominantly by the student.

(3) In case the reason for the retraction from an examination is approved by the examination board, in general the examination will take place at the next possible due date. If this procedure

leads to an unacceptable extension of the course plan, the examination board may assign compensatory assessments.

(4) In case a candidate proves by means of a certificate issued by a public health office a prolonged physical or mental disability to participate in examinations or work assessments in the expected way, the examination board may assign compensatory assessments.

(5) With respect to legal safety regulations, Clause 4 is also applicable in case of pregnancy or in case of claims concerning the maternal protection law, educational time, or home care of close relatives. These claims have to be indicated and made plausible to the examination board in due time.

§ 13

Malicious Fraud, Violation of Regulations

(1) If the candidate attempts to take influence on the result of an examination or work assessment by means of malicious fraud or usage of unauthorized aids the examination will be graded as "nicht ausreichend" (fail, 5.0). The same holds if the supervisor of an examination excludes a candidate from further participation in the examination because of disturbance of the orderly course of examination. In severe cases, the supervisor may exclude the candidate from further examinations.

(2) The candidate may demand within one month that decisions based on clause 1 are reviewed by the examination board. Unfavorable decisions have to be disclosed to the candidate immediately in writing together with an instruction on the right to appeal.

§ 14

Accountability of Study Periods, Work Assessments, and Examinations

(1) Examinations and work assessments may be credited ex officio if they were performed in the same Master Course Program at another German university. Assessments obtained in different Master Course Programs will be accounted in case of equivalency in line with German Basic Law. Assessments obtained at universities in other countries may be accounted if equivalency is ascertained. The application to account work assessments and examinations must be submitted together with the application of admission to the Master Course Program including the necessary documents.

(2) Substantial differences may exist when the acquired skills do not meet the requirements of the bachelor's degree requirements for the Master Course Program. In these cases, an overall evaluation may be made. An evaluation may observe equivalence agreements approved by the Standing Conference of the Ministers of Education and Cultural Affairs of the States in Germany and agreements entered with university partnerships. The International Office and Central Office for Foreign Education may be consulted.

(3) The examination board is responsible for the accountability of credits or qualifications under clause 1 and 2. A representative of the subject matter shall have input before determining whether significant differences exist. The student shall present the documents required for recognition. After submission of the complete documents, a decision will be issued within 6 weeks, which will include instructions on how to appeal. Generally, the decision will be disclosed jointly with the admission documents.

(4) If work assessments and examinations are credited and the grades are comparable or transferable according to the ECTS system, the grades will be transferred and included in the final master grade. The transferred grades will be marked in the transcript of record. In case the grades are not comparable they will be marked „pass“ in the transcript of records and not considered when calculating the final grade.

(5) If the requirements of clause 1 and 2 are met, there is legal claim to accounting of credits or recognition.

§15

Master Examination

(1) The master examination is passed in proving the 120 credit points according to §4 and Annex 1.

(2) The master examination is irrevocably failed if a single module is irrevocably failed or a master thesis has been graded worse than „ausreichend“ (adequate, 4.0) taking into account a possible second attempt.

(3) After passing the Master Examination all pending assessments are terminated.

(4) In case the candidate fails the master examination she/he/they may submit a request to hand out a transcript of records. This contains the work assessments and examinations and their grades as well as missing work assessments and examinations. This transcript of records must show that the master examination was not passed. It is handed out on proof that the student has signed off the students register (de-registration).

§ 16

Examination Board

(1) To organize the end term examinations and the tasks assigned by these examination regulations the Faculty for Chemistry and Biochemistry forms an examination board. The examination board is a public authority according to German administrative law.

(2) The examination board consists of

- the chair,
- its deputy,
- two additional members from the group of professors,
- one member from the group of senior researchers,
- two members from the group of students.

(3) The members of the examination board will be elected by the faculty council of the Faculty of Chemistry and Biochemistry on proposal of the respective group. The term of office will be three years for the members from the groups of the professors and senior scientists, and one year for student members. Re-election is feasible.

(4) The examination board ensures that the Master Course Program and accompanying assessments are carried out according to the examination regulations. It will also decide on objections against decisions in course of the examination procedure. The examination board will inform the faculty council at least once per year about the development of examinations, the grades obtained, and the duration of study. This report will be published by the faculty in a suitable manner.

(5) For common cases, the examination board may transfer its duty to the chair. This is not valid in case of decisions against objections and the faculty report.

(4 [sic]) The examination board is quorate if – besides the chair or its deputy – two additional members of the group of professors and at least two additional members entitled to vote are present. Decisions are made by simple majority. In case of a tie of votes the vote of the chair is decisive.

(5 [sic]) The student members are not entitled to vote in the cases of evaluation of work assessments and examinations, the assignment of examination questions and the assignment of examiners and knowledgeable observers.

(6) The members of the examination board are entitled to observe the examinations.

(7) The meetings of the examination board are not open to the public. The members of the examination board are obliged to discretion. In case the members are not part of the public administration they have to be obliged to discretion by the chair of the examination board.

§ 17

Examiners

(1) The examination board appoints the examiners and the knowledgeable observers. The examiners have to teach in the respective module in the Master Course Program "Molecular Science: Spectroscopy and Simulation". The group of people from which examiners may be appointed is regulated by § 65 clause 1 HG (State Higher Education Law). A knowledgeable observer must have at least a master degree in one of the fields given in § 5 clause 2 or an equivalent degree. The chair of the examination board ensures that the names of the examiners are published on the blackboard in the deanery at least three weeks prior to the examination.

(2) The examiners assess the examinations independently.

(3) For examiners and knowledgeable observers § 16 clause 7 sentences 2 and 3 are valid accordingly.

§ 18

Transcript of Records and Master Certificate

(1) After passing the master examination, the candidate receives the document of credentials within four weeks. The credentials include the topic of the master thesis, its grade and the final grade of the master examination. In addition, a second sheet (master transcript) displays the modules credited together with the respective credit points and grades. In addition, the graduate receives a Diploma Supplement which explains the scientific level, content, international comparability, and job relevance of the degree.

(2) Simultaneously with the credentials, the graduate will receive the Master Certificate with the final examination date. In this document, the degree Master of Science will be awarded. The Master Certificate will be signed by the chair of the examination board and includes the seal of the Faculty for Chemistry and Biochemistry.

(3) The certificate carries the date of completion of the last assessment. This is the date of submission of the master thesis.

(4) Master-Certificate, credentials, Master Transcript, and Diploma Supplement will be issued in English and German.

§ 19

Invalidity of Master Examination

(1) In case of malicious fraud in an examination or work assessment that is only realized after handing out the Master Certificate the grade may be corrected. In severe cases the examination will be graded "nicht bestanden" (fail, 5.0) and or the master examination will be graded "nicht bestanden" (fail, 5.0). The same holds for the master thesis.

(2) In case that the preconditions for participation in an examination or work assessment were not fulfilled without any

liability or attempt of fraud by the candidate and this fact is only realized after handing out the Master Certificate, this deficiency is remedied by passing the examination.

(3) Before a decision according to clauses 1 and 2 the candidate will have the opportunity to explain his/her/their case.

(4) All incorrect certificates will be withdrawn. If applicable, new certificates will be issued. A decision according to clauses 1 and 2 is excluded starting one year after the disclosure of all relevant circumstances.

§ 20

Access to Examination Documents

Within one year after completion of the master examination, the candidate is granted access to written examinations, the grading documents and examination protocols within three weeks of a request.

II. Final Clauses

§ 21

Scope

These examination regulations will be applied to students enrolled in the Master Course Program „Molecular Sciences – Spectroscopy and Simulation“ of the Ruhr Universität Bochum beginning with the winter semester 2011/2012.

§ 22

Effective Date and Publication

These statutes come into force on the day after their publication in the Official Notices (AB) of the Ruhr-University Bochum and apply to all students in the Master's program "Molecular Sciences – Spectroscopy and Simulation". The German text of this translation was issued on the basis of the decision of the Faculty of Chemistry and Biochemistry on 17.12.2018, Bochum, June 12, 2019 as Amtliche Bekanntmachung der Ruhr-Universität Bochum Nr. 1305 and on the basis of the decisions of the Faculty of Chemistry and Biochemistry on 9.05.2011; Bochum, 07.10.2013, as Amtliche Bekanntmachung der Ruhr-Universität Bochum Nr. 999.

III. Unofficial Translation

Of note, this English translation is an unofficial document. The original legally binding documents which apply to the master program are the Amtliche Bekanntmachung der Ruhr-Universität Bochum Nr. 1305 and Amtliche Bekanntmachung der Ruhr-Universität Bochum Nr. 999. Both documents have been merged into this single English translation.

Annex I

Study plan for the Master Program "Molecular Sciences – Spectroscopy and Simulation"

	Module Nr.	Module	V	Üb/S	Pr	Typ	CP
1. Sem.	1 ^{a)}	Concepts of Quantum Mechanics	2	1	-	WPf	5
	2 ^{a)}	Statistical Physics and Thermodynamics	2	1	-	WPf	5
	3	Dynamics and Simulation	2	1	5	Pf	9
	4	Concepts of Spectroscopy 1	2	1	5	Pf	9
	5	Concepts of Molecular Chemistry 1	2	1	-	Pf	5
	6 ^{a)}	Biomolecular Simulation	2	1	-	WPf	5
Total		22-25 SWS	8-10	4-5	10		28-33
2. Sem.	7	Electronic and Molecular Structure	2	1	5	Pf	9
	8	Concepts of Spectroscopy 2	2	1	5	Pf	9
	9	Theoretical Spectroscopy	2	1	-	Pf	5
	10 ^{a)}	Concepts of Molecular Chemistry 2	2	1	-	WPf	5
	11 ^{a)}	Methods of Structural Analysis	2	1	-	WPf	5
	12 ^{a)}	Fundamentals of Magnetic Resonance	2	1	-	WPf	5
	13 ^{a)}	Scientific Programming Methods for Chemists	2	1	-	WPf	5
Total		22-25 SWS	8-10	4-5	10		28-33
3. Sem.	14	International Course	-	-	14	Pf	14
	15	Focal Point Practical	-	-	15	Pf	15
Total		29 SWS	-	-	29		29
4. Sem.	16	Masters Thesis				Pf	30
Total			18	9	49		120

a) Of the seven modules 1, 2, 6, 10, 11, 12 und 13, at least three modules must be taken (see § 4 clause 4).

§ 4 clause 3 states: Modules listed in Annex 1 are allocated credit points by Lectures (in Annex 1 indicated by a "V") with accompanying exercises (Üb), seminars (S), and the research internship (Practical, Pr) and Master Thesis. Contact times are given in semester hours per week (SWS).

Module Type: WPf (Wahlpflichtveranstaltung, Elective Course) and Pf (Pflichtveranstaltung, Required Course)