# TEACHING AND EXAMINATION REGULATIONS (TER)

(see Article 7.13 of the Higher Education and Research Act)

# 2016-2017 3TU MASTER's DEGREE PROGRAMME

**SYSTEMS AND CONTROL** 

**UNIVERSITY OF TWENTE** 

Section 1 - General	3
Article 1 – Definitions of terms used	3
Article 2 – About the programme	4
Article 3 – Programme composition	5
Article 4 – The programme's final attainment levels	5
Article 5 – Admission to the programme	6
Article 6 - Curriculum	6
Article 7 – Language	6
Section 2 – Examinations	
Article 8 - Number, times and frequency of examinations	6
Article 9 – Validity of examinations	
Article 10 – Oral examinations	7
Article 11 – Determining and announcing the results	7
Article 12 – The right to inspect the results	8
Article 13 – Subsequent discussion of the examination results	8
Section 3 – Studying with a disability	8
Article 14 – Adaptations to assist students with a disability	8
Section 4 – Approval by the Examination Board	
Article 15 – Exemption from examinations or practicals	9
Article 16 – Elective subjects	9
Article 17 – Free programme choice	9
Section 5 – Degree audit	9
Article 18 – The times and frequency of the degree audit	9
Article 19 – Student support and guidance	9
Article 20 – Monitoring academic progress	
Section 6 – Appeals and objections	10
Article 21	10
Section 7 – Contravention, changes and implementation	10
Article 22 – Contravening the Regulations	
Article 23 – Amendments to the regulations	
Article 24 – Transitional regulations	
Article 25 – Publication of the regulations	
Article 26 – Entry into force	

The Board of the EEMCS Faculty of the University of Twente,

in view of articles 9.5, 9.15, first paragraph, subparagraph a, 7.13, first, second and third paragraph, 9.38, subparagraph b, and 9.18, first paragraph, subparagraph a, as well as article 7.8b of the Higher Education and Scientific Research Act of the Netherlands

having heard the recommendations of the Programme Committee of the MSc programme Systems and Control,

with due observance of the consent of the Faculty Council/Faculty Student Council

#### hereby establishes

Teaching and Examination Regulations for the Systems and Control programme.

# Section 1 - General

# Article 1 – Definitions of terms used

The terms used in these regulations should be interpreted as meaning the same as in the Higher Education and Scientific Research Act, insofar as they are defined in that Act.

The following terms are to be defined thus:

a. the Act: the Higher Education and Scientific Research Act (in Dutch: Wet op het

Hoger onderwijs en Wetenschappelijk onderzoek, WHW), in the Dutch Bulletin of Acts, Orders and Decrees, number 593 and as amended

since;

b. the Dean If an institution that is fully or partly responsible for the programme has

opted for a Joint Faculty Board, then "Dean" will also include the Faculty

Board;

c. programme: the Master's degree programme as denoted in Article 7.3a paragraph 1,

subparagraph b of the Act;

d. student: anyone enrolled at the University of Twente as a student or external

student for the purpose of benefiting from education and/or for the purpose of sitting the examinations and undergoing the degree audit

which form part of the programme;

e. subject: a unit of study within the programme as referred to in Article 7.3,

paragraphs 2 and 3 of the Act;

f. practical: a practical exercise as intended in Article 7.13, paragraph 2,

subparagraph d of the Act, taking one of the following forms:

· writing a thesis

conducting a project or developing an experimental design

• completing a design or research assignment

• conducting a literature review

completing an internship

• giving a public presentation

participating in field work or an excursion

conducting tests and experiments

· writing a position paper

 or participating in other educational activities aimed at enabling participants to attain certain knowledge, insights or skills;

g. examination: an assessment of the student's knowledge, insight and skills in relation

to a subject, as well as the marking of that assessment by at least one

examiner, appointed for that purpose by the Examination Board;

h. degree audit: an assessment by which the Examination Board, in accordance with

Article 7.10 of the Act, establishes whether all examinations in the various subjects that constitute the degree programme have been successfully completed (also referred to as final examination);

i. Examination Board: the programme's Examination Board, which has been installed in

accordance with Article 7.12 of the Act;

j. examiner: the individual who, in line with Article 7.12, paragraph 3 of the Act, has

been appointed to set the examinations;

k. credit: a credit awarded in accordance with the European Credit Transfer

System (ECTS); one credit denotes a study load of 28 hours;

I. working day: Monday to Friday with the exception of recognised national public

holidays and other days that the university is closed;

m. study guide: a guide (electronic or in print) to the degree programme containing

specific information pertaining to the various subjects;

n. graduation supervisor a staff member, appointed by the Examination Board, responsible for

the supervision of the graduation project.

o. institution: University of Twente

p. disability: all conditions which are (at least for the period in question) chronic or

lasting in nature and which form a structural limitation for the student in receiving education and/or sitting examinations or taking part in

eceiving education and/or sitting examinations of taking part

practicals.

#### Article 2 – About the programme

The Master's degree program in Systems and Control is a 3TU MSc program. The program is
offered at TU/e (Eindhoven University of Technology), TUD (Delft University of Technology)
and UT (University of Twente). The programs have a similar structure and comparable core
program. The programs are not the same, in the sense that the courses and specializations
at each university are different.

2. If a student is admitted to the Systems and Control program at one of the 3 universities, he/she is also admitted to the program at the other universities.

- 3. After a student is enrolled in the MSc program in Systems and Control at one of the 3 universities he/she will also obtain a secondary enrolment (neveninschrijving) at the 2 other universities.
- 4. The pre-Master's programs in Systems and Control of the 3 universities are interchangeable, in the sense that a completed pre-master program at one of the three universities grants admission to the MSc program in Systems and Control at each of the three universities.
- 5. The core programs of the 3 universities are interchangeable, in the sense that all credits for core courses obtained in the Systems and Control master program at one university will be accepted when a student transfers to the MSc program in Systems and Control at one of the other universities.

6. The pre-master's programs and master programs in Systems & Control at the University of Twente is described in the appendix.

# <u>Article 3 – Programme composition</u>

- 1. The following points regarding the programme are included in the Appendix:
  - a. programme composition and relevant examinations,
  - b. whether the programme is full-time, part-time or a sandwich programme,
  - c. composition of the specializations,
  - d. study load of the programme and of each of the units of study making up that programme,
  - e. number and sequence of examinations and practical exercises,
  - f. whether the examinations will be administered in an oral, written or other format,
  - g. the content of the practicals,
  - h. if and when necessary, that a satisfactory result on an examination is a prerequisite for admission to other examinations.
  - i. if and when necessary, that the requirement to participate in a practical will be part of the admission procedure to a particular examination,
  - j. the units of study from which the student may choose to fulfil programme elective requirements,
  - k. the transitional regulations as referred to in article 23.
- 2. The Appendix forms an integral part of these regulations.

# Article 4 – The programme's final attainment levels

The graduated Master of Systems and Control Engineering meets, to a sufficient level, the following qualifications:

- 1. Broad and profound knowledge of engineering sciences (electrical engineering, mechanical engineering, applied physics, mathematics) and the capability to apply this knowledge at an advanced level in the systems-and-control-engineering discipline.
- 2. Broad and profound scientific and technical knowledge of the systems- and control engineering discipline and the skills to use this knowledge effectively. The discipline is mastered at different levels of abstraction, including a reflective understanding of its structure and relations to other fields, and reaching in part the forefront of scientific or industrial research and development. The knowledge is the basis for innovative contributions to the discipline in the form of new designs or development of new knowledge.
- 3. Thorough knowledge of paradigms, methods and tools as well as the skills to actively apply this knowledge for analysing, modelling, simulating, designing and performing research with respect to innovative technological dynamical systems, with an appreciation of different application areas.
- 4. Capability to independently solve technological problems in a systematic way involving problem analysis, formulating sub-problems and providing innovative technical solutions, also in new and unfamiliar situations. This includes a professional attitude towards identifying and acquiring lacking expertise, monitoring and critically evaluating existing knowledge, planning and executing research, adapting to changing circumstances, and integrating new knowledge with an appreciation of its ambiguity, incompleteness and limitations.
- 5. Capability to work both independently and in multidisciplinary teams, interacting effectively with specialists and taking initiatives where necessary.
- 6. Capability to effectively communicate (including presenting and reporting) about one's work such as solutions to problems, conclusions, knowledge and considerations, to both professionals and non-specialised public in the English language.
- 7. Capability to evaluate and assess the technological, ethical and societal impact of one's work, and to take responsibility with regard to sustainability, economy and social welfare.
- 8. Attitude to independently maintain professional competence through life-long learning.

# Article 5 – Admission to the programme

1. Students in possession of a diploma which shows that they have passed the final examination for one of the Bachelor's programmes, mentioned below, obtained at a Dutch Technical University (Delft, Eindhoven, Twente) or at one of the IDEA League Universities (ETH Zürich, RWTH Aachen, Chalmers University Gothenburg, Politecnico di Milano) will be eligible for admission to the programme.

BSc	University D: Delft E: Eindhoven T: Twente	Free admittance	Conditional free admittance	After additional program (max. 30 EC)
Advanced Technology	Т			X
Biomedical Technology	E,T			Х
Civil Engineering	D, T			X
Electrical Engineering	D,E,T	Х		
Aerospace Engineering	D	X		
Marine Technology	D			Χ
Molecular Science and Technology	D		Х	
Chemical Engineering	E, T		X	
Applied Earth Sciences	D			Χ
Technical Informatics	D, E, T			Χ
Applied Physics	D, E, T		X	
Technical Mathematics	D, E, T	X	_	·
Mechanical Engineering	D,E,T	X		

- Students who are not in possession of one of the diploma's mentioned in paragraph 1 will require a certificate of admission issued by the Dean.
- 3. Students in possession of a diploma which shows that they have passed the final examination for the Bachelor's programme at a Dutch institute of higher vocational education (HBO), can be admitted. A bridging programme, as detailed in Art. 3.5 of the Appendix, needs to be completed before the candidate is formally admitted.

# Article 6 - Curriculum

Abrogated

#### Article 7 – Language

Teaching shall be provided in English. Students shall sit examinations and undergo the degree audit in English. The Dean has the authority to adapt language criteria under certain circumstances.

# Section 2 – Examinations

# Article 8 - Number, times and frequency of examinations

- 1. There are at least two opportunities in each academic year for sitting examinations.
- 2. A timetable of all opportunities for sitting written examinations is drawn up on a semi-annual basis and details are published before the start of each semester.
- 3. Notwithstanding the provisions of paragraph 1, there will be at least one opportunity in a year to sit examinations relating to subjects not taught in that academic year.
- 4. If a subject is removed from the study programme, two opportunities to sit an examination in this subject will be granted after the last classes in this subject have been taught: an examination following the last of the classes, and one resit in the same academic year. In the following academic year there will be two subsequent resits.
- 5. In exceptional cases, the Examination Board may permit a deviation from the standard number of times and the way in which certain examinations may be administered.

# Article 9 – Validity of examinations

- 1. The result of an examination is valid for an unlimited period.
- 2. However, in cases where the examination result dates from over six years ago, the Examination Board may impose an additional or substitute examination.
- 3. Written exams are to be kept in possession for at least two years
- 4. Graded three-dimensional products are to be kept in possession for at least 10 weeks (TUD and UT) or 6 weeks (TU/e) after the moment of grading. If a legal procedure or appeal is initiated within this period the product has to be kept for the entire period of the procedure/appeal.
- 5. Final reports and traineeship reports are to be kept in possession for at least ten years (UT, TUD) or seven years (TU/e).

# Article 10 – Oral examinations

Oral examinations will be held in public, unless determined otherwise by the Examination Board in a special case or unless the student has formally objected to the public nature of the examination.

#### Article 11 – Determining and announcing the results

- 1. The examiner is required to determine the result of an oral examination as soon as it is finished and to supply the student with a written statement of the result.
- 2. In the case of written examinations, the examiner is required to determine the result as soon as possible after the examination but within 15 working days at most. Taking due account of the student's right to privacy, the student administration then ensures that the results are registered and published within 20 working days of the examination date. If the examiner is unable to meet these criteria due to extenuating circumstances, the examiner must inform the Examination Board, stating reasons for the delay. The Examination Board will then pass this information on to the student or students without delay, and a new date for announcing exam results will simultaneously be made known.
- 3. Regarding any examinations that are not taken orally or in writing, the Examination Board will determine beforehand precisely how and within what period of time the student will be notified of the results.
- 4. When receiving the result of an examination, the student will be made aware of his or her right to inspect the results as referred to in Article 12, the opportunity for a subsequent discussion as referred to in Article 13 and the opportunity to lodge an appeal with the Examination Appeals Board.

5. The date of an examination is defined as the date on which the written or oral examination took place. For a practical assignment the date of examination is the day on which the final report was handed in or the day on which the oral end presentation took place or, if reports or oral presentations are not part of the assessment, the day on which the practical assignment was completed.

# Article 12 – The right to inspect the results

- 1. For a period of at least 20 working days after notification of the results of any written examination, the student has the right to inspect his or her marked work, on request. If a student intends to lodge an appeal regarding the marking of his or her written work, he or she will be supplied with a copy of the marked work at cost price.
- 2. During the period referred to in paragraph 1, all interested individuals may acquaint themselves with the questions and assignments set in the examination in question, as well as with the criteria used for marking.
- The Examination Board may determine that the right to inspection as referred to in paragraphs 1 and 2 will be exercised at a location specified beforehand and at no less than two specific times, also to be decided in advance of the test.
  - If the student can prove that he/she is or was unable to be present at the location at the set time due to circumstances beyond his or her control, then another opportunity will be provided, if possible within the period stated in paragraph 1.
  - The location and times mentioned in the first sentence will be announced within five working days.

# Article 13 – Subsequent discussion of the examination results

- 1. As soon as possible after the results of an oral examination have been announced, an opportunity will be arranged for the examiner to discuss the results with the student, if so requested by the student or at the instigation of the examiner. At this meeting, the reasons behind the marks awarded will be explained.
- 2. For a period of 20 working days after the results have been announced, students who have taken a written examination may submit a request to discuss the results with the relevant examiner. The discussion will take place within a reasonable time span and at a place and time determined by the examiner.
- 3. In cases where a collective discussion is organised by or on the instructions of the Examination Board, a student may only submit a request, as referred to in the preceding paragraph, if the student was present at the collective discussion and if the student provides a good reason for the request or if, due to circumstances beyond the student's control, the student was unable to attend the collective discussion.
- 4. The provisions of paragraph 3 are similarly applicable if either the Examination Board or the examiner first gives the student the opportunity to compare his/her answers with model answers.
- 5. The Examination Board may permit deviations from the provisions of paragraphs 2 and 3.

# Section 3 - Studying with a disability

#### Article 14 – Adaptations to assist students with a disability

1. Students who have a physical or sensory disability are entitled to adaptations in teaching, examinations and practicals. If possible, the student must submit a written request to the Dean

- at least three months before the student is due to participate in course work, examinations and/or practicals. These adaptations will be geared as much as possible to a student's individual needs, but they must not affect the quality or the degree of difficulty of a subject or an examination programme. The facilities provided to this end may involve adapting the form or duration of examinations and/or practicals to the student's individual situation or making practical aids available.
- 2. The request referred to in paragraph 1 should be accompanied by a recent medical certificate from a doctor or a psychologist. If there is evidence of dyslexia, for example, the request should be accompanied by a document issued by a recognised dyslexia-testing bureau (i.e. registered with BIG, NIB, or NVO). If possible, this certificate should also give an estimation of the extent of the disability and of appropriate steps that could be taken by the programme organisation.
- 3. The Dean will decide on requests for adaptations to the educational environment. The Examination Board will decide on requests for adapting examinations. The decision must be announced within four weeks after the request as mentioned in paragraph 1 has been submitted.

# Section 4 – Approval by the Examination Board

# <u>Article 15 – Exemption from examinations or practicals</u>

- After having been advised by the relevant examiner, the Examination Board may decide to exempt students from an examination or practical. Conditions for exemption are to be specified in the Rules and Regulations of the Examination Board
- 2. The Examination Board may exempt a student from a specific examination only on the grounds of the content, level and quality of examinations successfully completed earlier or on the grounds of the student's prior knowledge, insights and skills developed outside of higher education.

#### Article 16 – Elective subjects

The procedure for choosing elective subjects is given in Article 6 of the appendix.

# Article 17 – Free programme choice

The Examination Board shall decide on reasoned requests from students for free programme choice as referred to in Article 7.3c of the Act. Conditions related to this matter are described in Article 9 of the Appendix.

# Section 5 – Degree audit

# Article 18 – The times and frequency of the degree audit

The dates set by the Examination Board are to be published before the start of the academic year. Each academic year there are at least two degree audits

### Article 19 – Student support and guidance

Responsibility for student support and guidance lies with the Dean. This includes informing students about study options within the programme or elsewhere. One or more study advisers may be appointed for this purpose.

# <u>Article 20 – Monitoring academic progress</u>

- 1. The Dean is responsible for the registration and timely publication of the exam results of individual students in the institution's virtual learning system.
- 2. The Dean is responsible for facilitating discussion of the results between the student and the study adviser, when appropriate.

# Section 6 – Appeals and objections

# Article 21

- 1. Decisions by the Examination Board or examiners based on these regulations, may be appealed within six weeks after the announcement of the decision to the student in question. Appeals should be lodged with the Examination Appeals Board.
- Decisions by the Dean based on these regulations may be appealed within six weeks after the announcement of the decision to the student in question. Objections are to be lodged with the Dean.

# Section 7 – Contravention, changes and implementation

# Article 22 – Contravening the Regulations

If the study guide and/or any other regulations relating to the study programme and/or the examination programme prove to contravene these Regulations and the accompanying Appendix, precedence will be given to the provisions of these Regulations with which the Appendix forms an integral whole.

# <u>Article 23 – Amendments to the regulations</u>

- 1. Any amendments to these regulations will be made by special resolution of the Dean.
- 2. No amendments will affect the current academic year unless it is reasonable to suppose that the interests of students will not be adversely affected.
- 3. Amendments to these regulations may not retroactively affect a decision by the Examination Board to the detriment of the student.

# <u>Article 24 – Transitional regulations</u>

- If the composition of the study programme undergoes intrinsic changes or if these regulations are amended, the Dean will draw up transitional regulations that will be incorporated into Appendix of these Regulations.
- 2. If and when appropriate, such transitional regulations are required to include:
  - a. a provision concerning the exemptions that can be given on the basis of the examinations already passed:
  - b. a provision specifying the validity of the transitional regulations.

# <u>Article 25 – Publication of the regulations</u>

The Teaching and Examination Regulations and the Appendix, which forms an integral whole with the Regulations, shall be published on the institution's website.

# Article 26 – Entry into force

These regulations will come into effect on September 1, 2016

# APPENDIX TO TEACHING AND EXAMINATION REGULATIONS

# **IMPLEMENTATION REGULATIONS**

2016-2017

# 3TU MASTER'S DEGREE PROGRAMME Systems and Control

**UNIVERSITY OF TWENTE** 

Article 1 – Study load	. 3
Article 2 – Composition of the degree programme	. 3
Article 3 – Bridging programme	. 3
Article 4 – Core programme	. 3
Article 5 – Specialisations and specialisation-linked subjects.	. 4
Article 6 – Elective subjects	. 4
Article 7 – Internship/ Graduation Work	. 5
Article 8 – Study Programme	. 5
Article 9 – Free degree programme	. 6
Article 10 – Practical exercises	. 6
Article 11 – The form of the examinations	. 6
Article 12 – The frequency, terms and sequence of examinations	. 7
Article 13 – Hardship clause	. 7
Article 14 – Transitional regulations	. 7

# Article 1 – Study load

- The Master's degree audit for the Systems and Control programme has a study load of 120 credits. These 120 credits must not include any credits which constituted part of a previously passed Bachelor's audit.
- 2. The programme will be taught in full-time.

# Article 2 – Composition of the degree programme

1. The composition of the study programme is as follows:

Part	Number of credits
Core programme, as described in Article 4	25
Specialisation-linked subjects, as described in Article 5, Complemented with Elective subjects, as described in Article 6,	35
Internship / Graduation work, as described in Article 7	60

# Article 3 – Bridging (premaster's) programme

- The admission committee can decide to admit a candidate to the master study Systems & Control on the condition that before the final admission a bridging programme is completed successfully.
- 2. A bridging programme contains a study load of 15 or 30EC.
- The bridging programme is assembled by the study director together with the admission committee.
- 4. From the start, candidates shall complete the bridging programme within a period not longer than two times the period according to the study load. For the examination of each part of the programme two occasions are given.
- 5. Students seeking admission on the basis of a Bachelor's degree awarded by a Dutch institute of professional education must complete a bridging programme that includes the following subjects:

Code	Course	Credits
201500291	Calculus A	5
201500293	Calculus B	4
201500292	Linear Algebra	3
191231490	Linear Systems	6
201500340	Control Engineering	4
201400315	Digital Logic and Computer Organization	4
201400279	Academic Research Skills	4

#### Article 4 – Core programme

Students must complete the core programme shown below, totalling 25 credits. This core programme is interchangeable with each of the core programmes at the Technical Universities of Eindhoven and Delft in the sense as indicated in Article 2.5 of the main text of these Teaching and Examination Regulations.

Code	Course	Credits
191211110	Modelling and Simulation	5
191131700	System identification and parameter estimation	5
191210770	Digital Control Engineering	5
200900012	Integration project	5
201100137	Philosophy of Engineering: Ethics	2.5
191616043	Philosophy of Engineering: Science	2.5

# Article 5 – Specialisations and specialisation-linked subjects.

For each specialisation, courses are selected from the list of elective courses as described in Article 6, after consultation with the graduation supervisor of one of the chairs of the specialisation, and to be approved by the Examination Board.

The following specialisations are offered at the University of Twente:

- 1. Robotics and Mechatronics
- 2. Control Theory
- 3. Biomechatronics

# <u>Article 6 – Elective subjects</u>

The number of credits obtained in specialisation-linked courses, as explained in Article 5, is complemented to a total of 35 credits with elective subjects. In consultation with the graduation supervisor, courses from all three universities can be chosen. Available courses at the University of Twente are listed in the table below. Lists of available courses at the Technical Universities of Delft and Eindhoven are maintained in their Implementation Regulations and are made public at their website. The total programme of 35 credits has to be approved by the Examination Board. Courses, not on one of the course lists, can be chosen but should be explicitly approved by the Examination Board.

# Lists of Elective courses

Explanation of research theme abbreviations:

Fu:	Fundamentals	MT:	Mechatronics	CS:	Computer Science
ST:	System Theory	Tr:	Transportation	ES:	Embedded Systems
CT:	Control Theory	Ae:	Aerospace	MC:	Motion Control
PC:	Process Control	Ma:	Mathematics	NC:	Non-linear Control
BT:	Biotechnology	RM:	Robotics & Mechatronics	BM: AM:	Biomechatronics Automotive
				AIVI.	AUTOTTOTIVE

# Offered at the University of Twente:

Course code	Course name	EC	Fu	ST	Ма	RM	CS	ES	BM	СТ
191560671	Robust Control	5		х	Х	Х			х	Х
191561620	Optimal Control	5		Х	Х	Х				Х
191211060	Modern Robotics	5				Х				
191571090	Time Series Analysis	5		Х						Х
191210760	Advanced Programming	5				Х	Х	Х		
191211080	Systems Engineering	5		Х		Х		Х		

191211090	Real-Time Software Development	5				Х	Х	Х		
191211100	Mechatronic Design of Motion Systems	5				Х				
191561750	Infinite Dimensional Linear Systems	6		Х	Х					Х
WIMCCNES121	Modelling and control of complex			Х	Х					Х
	nonlinear engineering Systems	5								
191571200	Hybrid Dynamical Systems	5		Х			Х			
201200135	Random Signals and Filtering	5		Х		Х			Х	
201200215	Motion and vibration control	5				Х				Х
191131730	Dynamics of machines	5		Х		Х			Х	
191131360	Design Principles for precision mech.	5		Х		Х				
191210930	Measurement Systems for Mechatronics	5				Х			Х	
201400040	Dynamics & Control	5				Х			Х	
191210920	Optimal Estimation in Dynamic Systems	5		Х		Х			Х	
191561560	Systems and Control	6	Х	Х	Х					Х
191150480	Human movement control	5							Х	
193810070	Identification of human motor control	5							Х	
201200133	Biomechatronics	5							Х	
201300004	Robotics for Medical Applications	5							Х	
201500140	Introduction Project	5				Х			Х	Х

# Homologation courses

In its admission decision the admission committee can decide that units they shall stipulate must be included in the master's study (homologation courses). These homologation courses will replace electives in the master's programme such that the total number of credits of the homologation courses and electives again is at least 35.

# <u>Article 7 – Internship/ Individual Research Project/ Graduation Work</u>

- 1. Students need to complete an internship worth 20 credits, complemented with graduation work worth 40 credits. Students may not commence an internship until they have completed 45EC of the first year, including 20EC of the core programme referred to in Article 4.
- 2. The examination board can decide that a the internship will be replaced by an individual research project in one of the research groups participating in the programme. The study load of the project is 10EC. The remaining 10EC of the internship will be spent to elective courses. This decision will be taken if during the bachelor's programme the student acquired substantial working experience from one or more internships and the student lacks project experience in a research group.
- 3. Graduation work consists of a graduation project, a graduation report and a presentation. Students may not commence with their graduation project until they have completed all of the remaining components of the study programme.

#### Article 8 – Study Programme

1. Students must submit within three months after enrolling in the Master a complete Master curriculum to the Examination Board for approval.

<sup>&</sup>lt;sup>1</sup> This course is taught at the University of Groningen

2. Each individual amendment to an approved study programme must be resubmitted to the Examination Board for approval.

# Article 9a – Free degree programme

- Students can compile their own degree programme, with an associated degree audit. The
  degree programme, which requires <u>prior</u> approval by the Examination Board, must consist
  wholly or largely of components taught at one of the three universities within the framework of,
  or in support of, the programme. It may be supplemented by components taught within the
  framework of, or in support of, other degree programmes.
- 2. When applying to the Examination Board for the prior approval referred to in paragraph 1, students may be asked to provide details of their reasons for making this request.

# <u>Article 9b – Double / combined programme</u>

In some cases, a student can take the final assessment for two Master's programmes on the basis of a combined course programme satisfying the requirements of each individual programme.

- 1. The combined programme should satisfy the following requirements:
  - a. The course programme consists of the two course programmes, necessary to satisfy the requirements for the individual course programmes.
  - b. Outside the internship and the master's project, courses for not more than 20EC should be common to both course programmes. These 20EC also include courses for which an exemption was granted in one course programme, based on a result earned as a part of the other programme.
  - c. If both programmes contain an internship, these internships can be combined into a single internship if this single internship satisfies the requirements of both individual programmes. This internship should have a study load not less than 20EC.
  - d. If the master's projects of both programmes are combined, the combined project must involve an exceptional study load, equalling at least 75% of the sum of the study loads of the master's projects of the individual programmes.
- 2. The student completes the combined programme by completing the two course programmes from which it has been assembled. For completing these two course programmes the rules from the respective Education and Examination Regulations apply.

#### Article 10 – Practical exercises

- 1. Practical exercises, as described in Article 1 subsection f of the Teaching and Examination Regulations, are assessed in accordance with the method described in the test scheme of the subject in question.
- 2. Students who fail to complete the practical exercises will be barred from sitting the examination, unless stated otherwise in the test scheme of the subject in question.

# Article 11 – The form of the examinations

1. Examinations will be administered in accordance with the details set out in the test scheme of the subject in question.

2. Examinations held by another programme within the framework of another programme are administered in accordance with the procedure set out in, or pursuant to, the Teaching and Examination Regulations of that other programme.

# Article 12 – The frequency, terms and sequence of examinations

- 1. Written and oral examinations are held immediately after the teaching period for the course to which the examination in question relates.
- 2. Written examination resits are held as follows:
  - examination after teaching period 1: resits after teaching period 2
  - examination after teaching period 2: resits after teaching period 3
  - examination after teaching period 3: resits after teaching period 4
  - examination after teaching period 4: resits before September 1st.
- 3. Participation in practical exercises is governed by the timetables drawn up for this purpose.

# Article 13 – Hardship clause

- 1. In case of a demonstrable and predominant unconscionableness or unfairness, the Examination Board can allow to deviate from the rules in this regulation.
- 2. If it concerns the admission of a candidate to the master's study, in which case a bachelor's study has not been fully completed because of an exceptional and smarting situation, the admission committee will seek advice from the Committee Personal Circumstances.

# Article 14 – Transitional regulations

Not applicable.