

# **Teaching and Examination Regulations**

## **Masterprogramme in Mathematics Faculty of Science**

**Academic year 2018-2019**

B1. Programme specific section - general provisions B2.  
Programme specific section – content of programme

## Index

<b>Section B1: Programme specific – general provisions .....</b>	<b>3</b>
<b>6. General programme information and characteristics.....</b>	<b>3</b>
Article 6.1 Study programme information.....	3
Article 6.2 Teaching formats used and modes of assessment.....	3
<b>7. Further admission requirements.....</b>	<b>3</b>
Article 7.1 Intake date(s).....	3
Article 7.2 Admission requirements.....	3
Article 7.3 English language requirement for English-language Master's programmes.....	4
Article 7.4 Pre-Master's programme.....	4
<b>8. Interim examinations and results.....</b>	<b>5</b>
Article 8.1 Sequence of interim examinations .....	5
Article 8.2 Validity period for results.....	5
Article 8.3. Degree .....	5
<b>Section B2: Programme specific – content of programme .....</b>	<b>6</b>
<b>9. Programme objectives, specializations and exit qualifications.....</b>	<b>6</b>
Article 9.1 Workload.....	6
Article 9.2 Specializations .....	6
Article 9.3 Programme objective .....	6
Article 9.4 Exit qualifications .....	6
<b>10. Curriculum structure .....</b>	<b>7</b>
Article 10.1 Composition of the programme .....	7
Article 10.2 Compulsory educational components .....	7
Article 10.3 Elective educational components.....	9
Article 10.5 Participation in practical exercise .....	14
<b>11. Evaluation and transitional provisions .....</b>	<b>14</b>
Article 11.1 Evaluation of the education .....	14
Article 11.2 Transitional provisions.....	14
<b>Appendix I Overview of articles that must be included in the OER.....</b>	<b>15</b>
<b>Appendix II .....</b>	<b>16</b>
<b>Table of right of advice and right of approval by the OLC and FGV .....</b>	<b>16</b>
<b>Appendix III Ordinances VU CvB and Binding Guidelines (richtlijn) .....</b>	<b>17</b>

## Section B1: Programme specific – general provisions

### 6. General programme information and characteristics

#### Article 6.1 Study programme information

1. The programme Mathematics CROHO number 66980 is offered on a full-time, part-time basis.	Advice OLC; approval FGV (7.13 i)
1a. The language of instruction is English	Advice OLC; approval FGV (9.38 b)
2. A unit of study comprises 3 EC or a multiple thereof. The units offered by Mastermath may have a different size (8 EC).	

#### Article 6.2 Teaching formats used and modes of assessment

1. The programme uses the teaching formats as specified in the Study Guide.	Advice OLC; approval FGV (7.13 x)
2. The modes of assessment used per educational component are specified in the Study Guide.	Advice OLC; approval FGV (7.13 l)

### 7. Further admission requirements

#### Article 7.1 Intake date(s)

Lid 1 The programme starts twice a year: on September 1 and on February 1.	Advice OLC; approval FGV (9.38 b)
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#### Article 7.2 Admission requirements

<p>1. Admission to the Master's programme is possible for an applicant who has obtained a Bachelor's degree at an institution of academic higher education, which demonstrates the following knowledge, understanding and skills:</p> <p>a. Equivalent to a Bachelor's degree in Mathematics or Technical Mathematics from a Dutch university and whose English-language proficiency is at least equivalent to pre-university final-exam level (VWO in the Netherlands).</p> <p>b. An applicant with a university Bachelor's degree in a field other than that specified in paragraph 1 may be admitted to the programme by the Examination Board if the following conditions have been met:</p> <ul style="list-style-type: none"> <li>• the applicant's prior education, including any supplementary work, contains at least 90 credits of mathematics;</li> <li>• the applicant has reached a final attainment level for stochastics, mathematical analysis or algebra and geometry equivalent to the Bachelor's in Mathematics as taught at Vrije Universiteit Amsterdam;</li> <li>• the applicant's prior education meets the qualifications of a university Bachelor's degree programme as defined in the Dublin descriptors;</li> <li>• the applicant's English-language proficiency is at least equivalent to pre-university final-exam level (VWO in the Netherlands).</li> </ul> <p>c. Notwithstanding the provisions of paragraphs 7.2.1.a and 7.2.1.b an applicant may also be admitted to the Biomedical (B) track subject to the following conditions and on the approval of the Examination Board:</p>	Partly legal provision & ordinance CvB, see appendix 3. Admission requirements excepted from participation in WHW
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<ul style="list-style-type: none"> <li>• the applicant is in possession of a university Bachelor's degree;</li> <li>• the applicant's prior education, including any supplementary work, contains at least 60 credits of mathematics and at least 30 credits in the Life Sciences;</li> <li>• the applicant has demonstrable knowledge of Linear Algebra, Differential Equations and General Statistics;</li> <li>• the applicant's prior education meets the qualifications of a university Bachelor's degree programme as defined in the Dublin descriptors;</li> <li>• the applicant's English-language proficiency is at least equivalent to pre-university final-exam level (VWO in the Netherlands).</li> </ul> <p>d. The Teacher (T) track is only open to applicants with an HBO degree in Mathematics Teacher Training, with Mathematics at the Grade 2 qualification level. Graduates of the T track will receive a Master's degree in Mathematics and a Grade 1 teaching qualification. An applicant may be admitted to the T track subject to the following conditions and on the approval of the Examination Board:</p> <ul style="list-style-type: none"> <li>• the applicant is in possession of an HBO Bachelor's degree from a Mathematics teacher training programme, including a Grade 2 teaching qualification in Mathematics;</li> <li>• demonstrable mathematical knowledge corresponding to the following subjects (from the VU Bachelor's in Mathematics): <ul style="list-style-type: none"> <li>a) X_401104: Basic Concepts of Mathematics</li> <li>b) X_400638: Linear Algebra 1</li> <li>c) X_400298: Mathematical Modelling 1</li> <li>d) XB_41008: Calculus 2</li> <li>e) X_400622: Probability Theory</li> <li>f) X_400299: Mathematical Modelling 2</li> </ul> </li> <li>• academic skills at university Bachelor's level, as demonstrated by completing the subjects listed above, for example.</li> <li>• English-language proficiency is at least equivalent to pre-university final-exam level (VWO in the Netherlands).</li> </ul>	
2. The Admissions Board will investigate whether the applicant meets the admission requirements.	Legal provision

#### Article 7.3 English language requirement for English-language Master's programmes

<p>1. The proficiency requirement in English as the language of instruction can be met if no longer than two years before the start of the programme, the applicant has successfully completed one of the following examinations with at least the scores indicated:</p> <ul style="list-style-type: none"> <li>- IELTS: 6.5</li> <li>- TOEFL paper based test: 580</li> <li>- TOEFL internet based test: 92</li> <li>- Cambridge Advanced English: A, B or C.</li> </ul>	Landelijke gedragscode Internationale studenten
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#### Article 7.4 Pre-Master's programme

1. Students with a Bachelor's degree in a field that corresponds to a sufficient extent with the subject area covered by the Master's programme can request admission to the pre-Master's programme.	advies OLC; instemming FGV (9.38 b)
2. The pre-Master's programme comprises 30 EC and is made up on an individual basis.	advies OLC; instemming FGV (9.38 b)

3. A successfully completed pre-Master's programme serves as proof of admission to the specified Master's programme in the subsequent academic year.	advies OLC; instemming FGV (9.38 b)
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## 8. Interim examinations and results

### Article 8.1 Sequence of interim examinations

1. Before starting the Master Project Mathematics (X_400355), the student must have earned all other programme credits. A shortfall of 6 credits is permissible.	Advice OLC; approval FGV (7.13 h, s & t)
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### Article 8.2 Validity period for results

As laid down in article 3.8	Advice OLC; approval FGV (7.13 k)
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### Article 8.3. Degree

Degree Students who have successfully completed their Master's final Examination are awarded a Master of Science degree. The degree awarded is stated on the diploma. The track name will be stated on the diploma, either "Algebra and Geometry", or "Analysis and Dynamical Systems", or "Stochastics", or "Biomedical Mathematics", or "Education", or "Teachers".
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## Section B2: Programme specific – content of programme

### 9. Programme objectives, specializations and exit qualifications

#### Article 9.1 Workload

1. The programme has a workload of 120 EC	Advice OLC; (7.13 a)
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#### Article 9.2 Specializations

<p>The programme has the following specializations:</p> <ol style="list-style-type: none"> <li>1) Algebra and Geometry</li> <li>2) Analysis and Dynamical Systems</li> <li>3) Stochastics</li> <li>4) Biomedical Mathematics</li> <li>5) Education</li> <li>6) Teachers</li> </ol>	Advice OLC; (7.13 a)
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#### Article 9.3 Programme objective

<p>The programme aims are for the student to acquire sufficient knowledge, skills and insight within the field of Mathematics, and any related disciplines, to be able to operate as an independent professional at an academic level (including teaching), and to be a suitable candidate for a subsequent course of study leading to a career in scientific research. Another aim of the programme is to develop students' understanding of the interrelationships between academic disciplines, as well as their sense of social responsibility.</p>	Advice OLC; (7.13 a)
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#### Article 9.4 Exit qualifications

<p>The graduate:</p> <ul style="list-style-type: none"> <li>• has developed thorough theoretical and practical knowledge in the field of contemporary mathematics;</li> <li>• has insight into the development and the heuristics of contemporary mathematics, and has gained research experience in a sub-field of mathematics;</li> <li>• is capable, within a reasonable period of time, of becoming conversant in other sub-fields of mathematics;</li> <li>• is capable of formulating a plan for a research project based on a broad research question;</li> <li>• is capable of analysing and formulating research results, and of drawing conclusions from them;</li> <li>• is capable of writing a report and of participating in a discussion on a topic related to the field of study;</li> <li>• is capable of studying the professional literature (including international publications) in relevant sub-fields, and of utilizing the relevant content;</li> <li>• has sufficient knowledge of, and insight into, the social role of contemporary mathematics to decide on a responsible choice of profession and professional practice;</li> <li>• is capable of imparting knowledge to others and of delivering a lecture both to specialists and to a wider audience.</li> </ul> <p>The graduate who focuses on scientific research is able to:</p> <ul style="list-style-type: none"> <li>• study and combine mathematical literature from various sources, and augment the field of mathematics with contributions of their own;</li> </ul>	Approval OLC (7.13 c)
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<ul style="list-style-type: none"> <li>contextualize the results and conclusions obtained, within the framework of results obtained by others.</li> </ul> <p>The graduate who intends to pursue a career in communication or education:</p> <ul style="list-style-type: none"> <li>is able to acquire new knowledge in the field of communication and education;</li> <li>is qualified to teach in pre-university education (if the teacher-training programme has been successfully completed).</li> </ul> <p>The graduate who intends to pursue a career in a business setting or for an organization is able to:</p> <ul style="list-style-type: none"> <li>define a solution-based scientific question from a problem of a quantitative nature in the organization or business;</li> <li>implement such questions in the form of targeted research;</li> <li>interpret and present data obtained from analyses conducted at different scales and different levels of abstraction.</li> </ul> <p>The graduate who focuses on scientific research in the Life Sciences is able to:</p> <ul style="list-style-type: none"> <li>define a solution-based mathematical question from a problem of a quantitative nature in the Life Sciences;</li> <li>contextualize the results and conclusions obtained, within the framework of biomedical research.</li> </ul>	
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## 10. Curriculum structure

### Article 10.1 Composition of the programme

1. The programme comprises at least a package of compulsory components and an individual Master's thesis or academic internship.	Ordinance CvB, see appendix 3
2. Additionally the programme can offer: - Practical exercises - Electives	Advice OLC; (7.13 a)
3. Educational components are categorized as specialized (400), research oriented (500) and highly specialized (600) level.	Ordinance CvB, see appendix 3

### Article 10.2 Compulsory educational components

A detailed description per educational component can be found in the Study Guide.

#### Algebra and Geometry Track

Educational component	course code	nr of EC	level	Advice OLC; (7.13 a)
Master seminar in Algebra and Geometry	XMU_41011	6	400	
Scientific Writing in English	X_400512	3	400	
Master Project Mathematics	X_400355	36	600	

#### Analysis and Dynamical Systems Track

Educational component	course code	nr of EC	level	Advice OLC; (7.13 a)
Master seminar in Analysis and Dynamical Systems	XMU_41013	6	400	
Scientific Writing in English	X_400512	3	400	
Master Project Mathematics	X_400355	36	600	

**Stochastics Track**

Educational component	course code	nr of EC	level	Advice OLC; (7.13 a)
Scientific Writing in English	X_400512	3	400	
Master Project Mathematics	X_400355	36	600	
Measure Theoretic Probability	X_400244	6	400	
Master Seminar in Stochastics	XM_41011	6	400	
Asymptotic Statistics	X_400323	8	500	
Stochastic Processes	X_400339	8	400	

**Biomedical Mathematics Track**

Educational component	course code	nr of EC	level	Advice OLC; (7.13 a)
Dynamical Systems	X_400429	8	400	
Statistical Models	X_400418	6	400	
Mathematical Biology	X_400504	8	400	
Scientific Writing in English	X_400512	3	400	
Master Project Mathematics	X_400355	36	600	

**Education Track****Master Leraar VHO Wiskunde (60 EC required)**

Educational component	course code	nr of EC	level	Advice OLC; (7.13 a)
Didactiek 1	O_MLDIDAC_1 Or O_MFDIDAC_1	6	400	
Praktijk 1	O_MLPRAK_1 Or O_MFPRAK_1	6	400	
Praktijkonderzoek 1	O_MLPROZ_1 Or O_MFPROZ_1	3	400	
Didactiek 2	O_MLDIDAC_2 Or O_MFDIDAC_2	6	400	
Praktijk 2	O_MLPRAK_2 Or O_MFPRAK_2	9	400	
Praktijkonderzoek 2	O_MLPROZ_2 Or O_MFPROZ_2	6	400	
Peergroup 1	O_MLPEERGR_1	0	400	
Didactiek 3	O_MLDIDAC_3 Or O_MFDIDAC_3	9	400	
Praktijk 3	O_MLPRAK_3 Or	15	400	



	O_MFPRAK_3			
Peergroup 2	O_MLPEERGR_2	0	400	

**Compulsory courses Mathematics (24 EC required)**

Educational component	course code	nr of EC	level	Advice OLC; (7.13 a)
Master Project Mathematics (T, E track)	X_405037	24	600	

**Teachers Track****Compulsory courses (66 EC required)**

Educational component	course code	nr of EC	level	Advice OLC; (7.13 a)
Analyse 3	X_400627	6	300	
Dynamische Systemen	X_400637	6	300	
Measure Theory	X_401028	6	300	
Statistics	X_400004	6	300	
Complexe Analyse	X_400386	6	300	
Numerical Methods	X_401039	6	300	
Statistical Data Analysis	X_401029	6	300	
Master Project Mathematics (T,E track)	X_405037	24	600	

[Article 10.3 Elective educational components](#)**Algebra and Geometry Track**

Students in the Algebra and Geometry Track may choose elective Mathematics courses from the Mastermath program (excluding the Mastermath teacher courses) or from the local VU and UvA programs (for these local courses, see the lists below). They must choose 3 core courses from the list below, and 2 advanced courses from the list below. In addition they may choose 15 EC of electives outside of Mathematics.

<b>Compulsory choice core courses, 3 out of 6 (22 EC required)</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Algebraic Geometry 1	XMM_40001	8	400	
Algebraic Topology	X_400600	8	400	
Quivers	XMU_0003	6	400	
Algebraic Methods in Combinatorics	XMM_40003	8	400	
Lie Groups and Lie Algebras	XMM_40008	8	500	
Riemann Surfaces	X_400325	8	400	

<b>Compulsory choice advanced courses, 2 out of 9 (12 EC required)</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Advanced Algebraic Geometry: Abelian Varieties		8	500	
Algebraic Geometry 2	XMM_40002	8	500	
Algebraic Topology 2	XMM_0017	8	500	
Algebraic Topology in Dynamical Systems		8	500	
Topology in Physics	XMM_0003	8	400	

<b>Suggested basic courses</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Algebraic Geometry 1	XMM_40001	8	400	
Algebraic Topology	X_400600	8	400	
Quivers	XMU_0003	6	400	
Algebraic Methods in Combinatorics	XMM_40003	8	400	
Lie Groups and Lie Algebras	XMM_40008	8	500	
Riemann Surfaces	X_400325	8	400	
Algebraic Number Theory				
Commutative Algebra				
Cryptology				

### Analysis and Dynamical Systems Track

Students in the Analysis and Dynamical Systems Track may choose elective Mathematics courses from the Mastermath program (excluding the Mastermath teacher courses) or from the local VU and UvA programs (for these local courses, see the lists below). They must choose 3 core courses from the list below, and 2 advanced courses from the list below. In addition they may choose 15 EC of electives outside of Mathematics.

<b>Compulsory choice core courses, 3 out of 4 (12 EC required)</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Dynamical Systems	X_400429	8	400	
Functional Analysis	X_400328	8	500	
Partial Differential Equations	X_400330	8	500	
Numerical Linear Algebra	X_400329	8	400	

<b>Compulsory choice advanced courses, 2 out of 9 (12 EC required)</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Symmetries and Conservation Laws of Nonlinear PDE		8	500	
Algebraic Topology in Dynamical Systems		8	500	
Control of Infinite Dimensional Systems		6	500	
Advanced Complex Analysis		8	500	
Nonlinear Waves	XM_40010	8	500	
Inverse Problems in Imaging	XM_0004	8	500	
Numerical Methods for Time Dependent PDEs		8	500	
Geometric PDE		8	500	
Symplectic Geometry		8	500	
Geometric Functional Analysis and its Applications		8	500	

<b>Suggested basic courses</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Differential Geometry	X_400509	8	400	
Dynamical Systems	X_400429	8	400	
Functional Analysis	X_400328	8	500	
Mathematical Biology (not in 18/19)	X_400504	8	400	
Parallel Algorithms	X_418011	8	400	
Partial Differential Equations	X_400330	8	500	
Numerical Linear Algebra	X_400329	8	400	
Systems and Control		6	400	
Applied Finite elements		6	400	
Numerical Bifurcation Analysis of Large-scale Systems		8	400	
Riemann surfaces	X_400325	8	400	
Stochastic Differential Equations	X_400454	6	500	

### Stochastics Track

Students in the Stochastics Track may choose elective Mathematics courses from the Mastermath program (excluding the Mastermath teacher courses) or from the local VU and UvA programs (for these local courses, see the lists below). They must choose 2 advanced courses from the list below. In addition they may choose 15 EC of electives outside of Mathematics.

<b>Compulsory choice advanced courses, 2 out of 9 (12 EC required)</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Percolation: from Introduction to Frontiers of Current Research (not every year)	XMM_0012	8	500	
Queues and Levy Fluctuation Theory	XMU_0002	6	400	
Statistical Theory for High and Infinite Dimensional Models	XMM_0008	8	500	
Statistics for High-Dimensional Data (not every year)	X_405113	6	400	
Interest Rate Models	X_418091	6	500	
Portfolio Theory	X_400535	6	500	
Statistics for Networks	X_405110	6	600	
Stochastic Networks		6		
Interacting Particle Systems: Theory and Applications		8	500	
Bayesian Statistics		8	500	

<b>Suggested basic courses</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Applied Stochastic Modeling	X_400392	6	400	
Applied Statistics		8	400	
Data-driven decision making in operations research		6	400	
Forensic Probability and Statistics	XMM_0005	8	500	
Functional Analysis	X_400328	8	400	
Machine Learning Theory		8	400	
Probabilistic and Extremal Combinatorics		8	400	
Queuing Theory	X_400397	8	400	

Simulation Methods in Statistics	X_400258	6	400
Statistical Models	X_400418	6	400
Stochastic Simulation	XMU_0001	6	400
Stochastic Differential Equations	X_400454	8	500
Stochastic Integration	X_400470	8	400
Stochastic Optimization	X_400336	6	400
Uncertainty quantification and data assimilation		6	400

### Biomedical Mathematics Track

Students in the Biomedical Mathematics Track may choose elective Mathematics courses from the Mastermath program (excluding the Mastermath teacher courses) or from the local VU and UvA programs (for these local courses, see the lists below). They must choose 30 EC of Life Science courses. In addition they may choose 9 EC of electives outside of Mathematics.

<b>Compulsory choice, 1 out of 2 (6 EC required)</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Master Seminar in ADS	XM_41013	6	400	
Master Seminar in Stochastics	XM_41011	6	400	

<b>Suggested Life Science courses (30 EC required)</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
From Molecule to Mind	AM_1190	6	400	
Algorithms in Sequence Analysis	X_405050	6	400	
Mechanics and Thermodynamics in the cell	X_422589	6	400	
Basic Models of Biological Networks	X_418154	6	400	
Advanced Modeling in Systems Biology	X_418155	6	500	

<b>Suggested Mathematics courses</b>				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Asymptotic Statistics	X_400323	8		
Functional Analysis	X_400328	8		
Introduction to Numerical Bifurcation Analysis of ODE's and maps (not every year)	X_418116	8		
Partial Differential Equations	X_400330	8		
Statistics for Networks	X_405110	6		
Inverse Problems in Imaging	XMM_0004			
Nonlinear Waves	XMM_40010			
Stochastic Differential Equations	X_400454			
Stochastic Processes	X_400339			

### Education Track

Students in the Education Track must choose 24 EC of elective Mathematics courses from the Mastermath program (excluding the Mastermath teacher courses) or from the local VU and UvA programs (for these local courses, see the lists below). In addition they may choose 12 EC of electives outside of Mathematics.

### Teachers Track

Students in the Teachers Track may choose elective Mathematics courses from the Mastermath program (excluding the Mastermath teacher courses) or from the local VU and UvA programs (for these local courses, see the lists below).

Local VU courses				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Advanced Machine Learning		6		
Applied Analysis: Financial Mathematics	X_400076	6	400	
Applied Stochastic Modeling	X_400392	6	400	
Coding and Cryptography	X_405041	6	500	
Control of Infinite Dimensional Systems	XM_0053	6		
Entrepreneurship in data science and analytics		6		
Optimization of Business Processes	X_400422	6	400	
Performance analysis of networked systems				
Statistical Models	X_400418	6	400	
Statistical Data Analysis	X_401029	6	300	
Statistics for Networks	X_405110	6	600	
Stochastic Optimization	X_400336	6	400	
Stochastic Processes for Finance	X_400352	6	400	

Local UvA courses				Advice OLC; (7.13 a)
Name of educational component	course code	nr of EC	level	
Advanced Topics in Stochastic Analysis				
Data Driven Decision Making in Operations Research				
Interest Rate Models	X_418091	6	500	
Mirror Symmetry				
Portfolio Theory	X_400535	6	500	
Queues and Levy Fluctuations	XMU_0002	6	400	
Quivers	XMU_0003	6	500	
Simulation Methods in Statistics	X_4000258	6	400	
Stochastic Integration		8	400	
Stochastic Simulation	XMU_0001	6	400	
Stochastic Networks				
Topics in Number Theory				
Uncertainty Quantification and Data Assimilation				

**Article 10.5 Participation in practical exercise**

In the case of a practical training, the student must attend at least ... % of the practical sessions. Should the student attend less than ... %, he/she must repeat the practical training, or the Examinations Board may have one or more supplementary assignments issued.	Approval OLC (7.13 d)
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**11. Evaluation and transitional provisions****Article 11.1 Evaluation of the education**

1. The education provided in this programme is evaluated in accordance with the evaluation plan. The faculty evaluation plan offers the framework.	Approval OLC (7.13 a1)
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**Article 11.2 Transitional provisions**

By way of departure from the Teaching and Examination Regulations currently in force, the following transitional provisions apply for students who started the programme under a previous set of Teaching and Examination Regulations: ..... .....	Advice OLC (7.13 a)
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Advice and approval by the Programme Committee, on June 22, 2018

Approved by the Faculty Joint Assembly, on June 26, 2018

Adopted by the board of the Faculty of Science on June 26, 2018.

**Appendix I****Overview of articles that must be included in the OER**

*Based on Section 7.13, paragraph 2, of the WHW and other Sections of the Act.*

## Section A: Faculty section

<b>2. Study programme structure</b>	
Article 2.1 Structure of academic year and educational components	7.13 paragraph 2 sub e
<b>3. Assessment and Examination</b>	
Article 3.2 Type of examination	7.13 paragraph 2 sub h, l, j
Article 3.3 Oral interim examinations	7.13 paragraph 2 sub l, n
Article 3.4 Determining and announcing results	7.13 paragraph 2 sub o
Article 3.5 Examination opportunities	7.13 paragraph 2 sub h, j
Article 3.7 Exemption	7.13 paragraph 2 sub r
Article 3.8 Validity period for results	7.13 paragraph 2 sub k
Article 3.9 Right of inspection and post-examination discussion	7.13 paragraph 2 sub p, q
<b>4. Academic student counselling and study progress</b>	
Article 4.1 Administration of study progress and academic student counselling	7.13 paragraph 2 sub u
Article 4.2 Adaptations for students with a disability	7.13 paragraph 2 sub m

## Section B1: Programme specific – general provisions

<b>6. General programme information and characteristics</b>	
Article 6.1 Study programme information	7.13 paragraph 2 sub i, r
Article 6.2 Teaching formats used and modes of assessment	7.13 paragraph 2 sub l, x
[option:] Article 6.3 Academic student counselling	7.13 paragraph 2 sub u
<b>7. Further admission requirements</b>	
Article 7.2 Admission requirements	7.30b paragraph 2
<b>8. Interim examinations and results</b>	
Article 8.1 Sequence of interim examinations	7.13 paragraph 2 sub h, s, t
[option 1:] Article 8.2 Validity period for results	7.13 paragraph 2 sub k
[option 2:] Article 8.2 Validity period for results	7.13 paragraph 2 sub k

## Section B2: Programme specific – content of programme

<b>9. Programme objectives, specializations and exit qualifications</b>	
Article 9.1 Workload	7.13 paragraph 2 sub g
Article 9.2 Specializations	7.13 paragraph 2 sub a
Article 9.3 Programme objective	7.13 paragraph 2 sub a
Article 9.4 Exit qualifications	7.13 paragraph 2 sub b, c
<b>10. Curriculum structure</b>	
Article 10.1 Composition of the programme	7.13 paragraph 2 sub a
Article 10.2 Compulsory educational components	7.13 paragraph 2 sub a
[Optional] Article 10.3 Elective educational components	7.13 paragraph 2 sub a
[Optional] Article 10.4 Practical exercise	7.13 paragraph 2 sub d
Article 10.5 Participation in practical exercise	7.13 paragraph 2 sub d
<b>11. Evaluation and transitional provisions</b>	
Article 11.1 Evaluation of the education	7.13 paragraph 2 sub a1
Article 11.2 Transitional provisions	7.13 paragraph 2 sub a

**Appendix II**

## Table of right of advice and right of approval by the OLC and FGV

*(translation to English at a later stage)*

Onderwerpen Onderwijs – en Examenregeling (OER) 7.13 paragraph 2 <b>WHW</b>	FGV		OpIC	
	I	A	I	A
a. de inhoud van de opleiding en van de daaraan verbonden examens				
a1. de wijze waarop het onderwijs in de desbetreffende opleiding wordt geëvalueerd				
b. de inhoud van de afstudeerrichtingen binnen een opleiding				
c. de kwaliteiten op het gebied van kennis, inzicht en vaardigheden die een student zich bij beëindiging van de opleiding moet hebben verworven				
d. waar nodig, de inrichting van praktische oefeningen				
e. de studielast van de opleiding en van elk van de daarvan deel uitmakende onderwijseenheden				
f. de nadere regels, bedoeld in de Articleen 7.8b, zesde paragraph, en 7.9, vijfde paragraph (BSA)				
g. ten aanzien van welke masteropleidingen toepassing is gegeven aan Article 7.4a, achtste paragraph ( <i>verhoogde studielast</i> )				
h. het aantal en de volgtijdelijkheid van de tentamens alsmede de momenten waarop deze afgelegd kunnen worden				
i. de voltijdse, deeltijdse of duale inrichting van de opleiding				
j. waar nodig, de volgorde waarin, de tijdvakken waarbinnen en het aantal malen per studiejaar dat de gelegenheid wordt geboden tot het afleggen van de tentamens en examens				
k. waar nodig, de geldigheidsduur van met goed gevolg afgelegde tentamens, behoudens de bevoegdheid van de examencommissie die geldigheidsduur te verlengen				
l. of de tentamens mondeling, schriftelijk of op een andere wijze worden afgelegd, behoudens de bevoegdheid van de examencommissie in bijzondere gevallen anders te bepalen				
m. de wijze waarop studenten met een handicap of chronische ziekte redelijkerwijs in de gelegenheid worden gesteld de tentamens af te leggen				
n. de openbaarheid van mondeling af te nemen tentamens, behoudens de bevoegdheid van de examencommissie in bijzondere gevallen anders te bepalen				
o. de termijn waarbinnen de uitslag van een tentamen bekend wordt gemaakt alsmede of en op welke wijze van deze termijn kan worden afgeweken				
p. de wijze waarop en de termijn gedurende welke degene die een schriftelijk tentamen heeft afgelegd, inzage verkrijgt in zijn beoordeelde werk				
q. de wijze waarop en de termijn gedurende welke kennis genomen kan worden van vragen en opdrachten, gesteld of gegeven in het kader van een schriftelijk afgenomen tentamen en van de normen aan de hand waarvan de beoordeling heeft plaatsgevonden				
r. de gronden waarop de examencommissie voor eerder met goed gevolg afgelegde tentamens of examens in het hoger onderwijs, dan wel voor buiten het hoger onderwijs opgedane kennis of vaardigheden, vrijstelling kan verlenen van het afleggen van een of meer tentamens				
s. waar nodig, dat het met goed gevolg afgelegd hebben van tentamens voorwaarde is voor de toelating tot het afleggen van andere tentamens				
t. waar nodig, de verplichting tot het deelnemen aan praktische oefeningen met het oog op de toelating tot het afleggen van het desbetreffende tentamen, behoudens de bevoegdheid van de examencommissie vrijstelling van die verplichting te verlenen, al dan niet onder oplegging van vervangende eisen				
u. de bewaking van studievoortgang en de individuele studiebegeleiding				
v. indien van toepassing: de wijze waarop de selectie van studenten voor een speciaal traject binnen een opleiding, bedoeld in Article 7.9b, plaatsvindt ( <i>excellencietraject binnen een opleiding</i> )				
x. de feitelijke vormgeving van het onderwijs				
<i>alle overige onderwerpen die in de OER zijn geregeld maar die niet als zodanig zijn genoemd in art. 7.13 WHW onder a t/m x.</i>				

*De lettering komt overeen met de lettering van Article 7.13 paragraph 2 WHW*



**Appendix III**

## Ordinances VU CvB and Binding Guidelines (richtlijn)

<b>Section A, article:</b>	<b>Concerns:</b>	<b>CvB ordinance / guideline</b>
2.1.1, 2.1.2	Year planning two semesters 8-8-4 (uniforme jaarkalender VU-UvA)	29-9-2008 (period 2009-2015) 22-05-2014 (periode 2016-2025)
2.1.3, 2.1.4	Educational components	Richtlijn Bachelor en Masteronderwijs, revised on 6 June 2017
3.1	Compulsory signing up	CvB ordinance 30-09-2010, prior consent USR.
3.4.1	Determination and publication of the results (1) Grading deadline exams 10 workdays (2) Theses 20 workdays	(1) Richtlijn Bachelor en Masteronderwijs, revised on 6 June 2017 (2) Quality demand 11 from the VU assessment policy, CvB ordinance 15-05-2012
3.5.1	Two possibilities to take examinations per year	Richtlijn Bachelor en Masteronderwijs, revised on 6 June 2017
3.5.2	Retake: most recent grade is valid. A pass can be retaken	Taken from the UvA guidelines, as part of the harmonization, CvB ordinance 24-02-2014
3.5.4	Extra retake last year	Included in (prior) model OER 16-17 following a request from committee O&O and adopted by CvB op 27-10-2015
3.6	Grades	CvB ordinance 30-09-2010, with University council's consent. As a result of harmonization UvA, the guideline: 5.5 is a pass, has been added. CvB ordinance 24-02-2014.
<b>Section B1, article:</b>	<b>Concerns:</b>	<b>CvB ordinance / guideline</b>
7.2.1	Admission criteria; at least WO Bachelor's degree	Richtlijn Bachelor en Masteronderwijs, revised on 6 June 2017
7.2.3	Additional admission criteria; type of criteria	Richtlijn Bachelor en Masteronderwijs, revised on 6 June 2017
<b>Section B1, article:</b>	<b>Concerns:</b>	<b>CvB ordinance / guideline</b>
10.1	Composition programme	Richtlijn Bachelor en Masteronderwijs, revised on 6 June 2017
10.2	Categorization of components	Richtlijn Bachelor en Masteronderwijs, revised on 6 June 2017