

Model Teaching and Examination Regulations

MASTER's Degree Programme

M Environment and Resource Management

B. Programme-specific section

Academic year 2016-2017

Section B: Programme-specific section

1. General provisions

- Article 1.1 Definitions
- Article 1.2 Degree programme information
- Article 1.3 Intake dates

2. Programme objectives and exit qualifications

- Article 2.1 Programme objective
- Article 2.2 Exit qualifications

3. Further admission requirements

- Article 3.1 Admission requirements
- Article 3.2 Pre-Master's programme
- Article 3.3 Limited programme capacity [or: not applicable (n.a.)]
- Article 3.4 Final deadline for registration
- Article 3.5 Dutch language requirement for Dutch-language Master's programmes
- or
- Article 3.5 English language requirement for English-language Master's programmes
- Article 3.6 Free curriculum

4. Curriculum structure

- Article 4.1 Composition of programme
- Article 4.2 Compulsory units of study
- Article 4.3 Practical training [or: n.a.]
- Article 4.4 Electives [or n.a.]
- Article 4.5 Sequence of examinations
- Article 4.6 Participation in practical training and tutorials [of: n.a.]
- Article 4.7 Maximum exemption [or: n.a.]
- Article 4.8 Validity period for results
- Article 4.9 Degree

5. Transitional and final provisions

- Article 5.1 Amendments and periodic review
- Article 5.2 Transitional provisions
- Article 5.3 Publication
- Article 5.4 Effective date

Section B: Programme-specific section

1. General provisions

Article 1.1 Definitions

In addition to the definitions as laid down in article 1 of TER part A, the following abbreviations are also used in TER part B:

Examination	Abbr.
<i>Exam</i>	E
<i>Report, essay</i>	R
<i>Presentation</i>	Pres
<i>Practical</i>	Prac
<i>Assignment</i>	A
<i>Field Work</i>	FW

Teaching method	Abbr.
<i>Lecture</i>	HC
<i>Seminar</i>	WC
<i>Study group</i>	WG
<i>Computer Lab</i>	CPR
<i>Practical</i>	PR
<i>Field Work</i>	VW
<i>Excursion</i>	EXC
<i>Training</i>	TR

Article 1.2 Degree programme information

1. The programme Environment and Resource Management with the CROHO number 60045 is offered on a full-time, basis, and the language of instruction is English.
2. The programme has a workload of 60 EC.
3. A unit of study comprises 6 EC or a multiple thereof.

Article 1.3 Intake dates

The programme is offered starting in the first semester of the academic year only. The intake date mentioned in this paragraph ensure(s) that a programme can be completed within the nominal study duration set for the programme.

2. Programme objectives and exit qualifications

Article 2.1 Programme objective

The programme aims to deliver ERM graduates who are able to:

1. Assess the relevance of environmental issues in the context of both the natural and the social sciences;
2. Position environmental issues within the context of sustainable development;
3. Carry out in-depth research and analysis of environmental issues, starting from a set of concepts, theories and research methods based on either the natural or the social sciences, or from a twofold approach;
4. Independently set up an investigation into an environmental issue, to carry out this investigation, to report on the progress, and to formulate recommendations for further intervention and research;

5. Make a profound contribution at an academic level to the transition to a sustainable society, on the basis of acquired substantive and methodical knowledge, skills in the field of the integration of knowledge, and reporting and advisory skills;
6. Communicate both in a scientific and a non-scientific context about environmental issues and the way to deal with those issues, to assume scientifically sound points of view in that connection, and to argue those points of view;
7. Critically reflect on environmental issues, the contribution of environmental scientists in that respect, and the associated questions of complexity and uncertainty;
8. Assume the role of an environmental professional, acting as a researcher, an advisor and/or an operative for academic, government or private (profit and non-profit) organizations.

Article 2.2 Exit qualifications

In all events, a graduate of the degree programme will have the following:

1. Knowledge and Understanding: The ERM graduate has demonstrated knowledge and understanding of the complexity of environmental problems and solutions that is founded upon and extends or enhances in a multidisciplinary approach the level that is typically associated with Bachelor's level, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context.
2. Applying Knowledge and Understanding: The ERM graduate can apply his/her knowledge, understanding and problem solving abilities in new or unfamiliar environments within broader or multidisciplinary context of sustainability related to environment and resource management; has the ability to integrate knowledge of multiple disciplines with the purpose of handling complexity of environmental problems and designing effective solutions.
3. Making Judgements: The ERM graduate can formulate judgments based on incomplete or limited information, that include reflection on social and ethical responsibilities linked to the application of the students' own knowledge and judgments.
4. Communication: The ERM graduate can communicate conclusions, the knowledge and the rationale that underpin these, to an audience of specialists and non-specialists in a clear and unambiguous manner.
5. Learning Skills: Has the learning skills to continue to study in a manner that may be largely self-directed and autonomous.
6. Specific final attainment levels related to 1-5 are described in detail in the ERM Critical Reflection 2013.

3. Further admission requirements

Article 3.1 Admission requirements

1. Admission to the Master's programme is possible for an individual who can demonstrate that he/she has the following knowledge, understanding and skills at the Bachelor's degree level, obtained at an institution of academic higher education. First degrees may be in both natural and social sciences; however, the previous study programme of students must show a clear and solid link to environmental problems. Criteria for admission are:
 - BSc degree from a well-regarded university;
 - GPA of 7/10 and higher or equivalent ;
 - VU requirements for English language proficiency, including sufficient scores for each test component;
 - Proven interest in environmental issues by courses taken and/or work experience, expressed in a motivation statement;
 - Other information such as reference letters, course descriptions, students thesis or reports, curriculum vitae.
2. The Admissions Board will investigate whether the interested person meets the admission requirements.
6. When the programme commences, the candidate must have fully completed the Bachelor's programme or pre-Master's programme allowing admission to this Master's programme.

Article 3.2 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.
2. The pre-Master's programme comprises 30 EC and is made up of 3 compulsory units and 2 units of choice as listed below under option 1 and 2.

Compulsory units
1)Systeem Aarde (AB_450067; 6 EC)
2)Introduction to Environmental Sciences (AB_1105; 6 EC)
3)Methodologie van sociaal-wetenschappelijk onderzoek (S_MTSWO; 6EC)

Option I	Option II
Inleiding Economie I (AB_450214; 6 EC)	Economie, markt en overheid (S_EMO)
Bestuur en Beleid (S_BBL; 6EC)	Bestuur en Beleid (S_BBL; 6EC) OR Bestuur, politiek en samenleving (S_BPS)

3. Proof of a successfully completed pre-Master's programme serves as proof of admission to the Master's programme specified within it in the subsequent academic year.

Article 3.3 Limited programme capacity

Not applicable

Article 3.4 Final deadline for registration

A candidate must submit a request to be admitted to the programme through Studielink before 1 May in the case of Dutch students, before 1 April in the case of EU students and before 1 February in the case of non-EU students. Under exceptional circumstances, the Examinations Board may consider a request submitted after this closing date.

Article 3.5 English language requirement for English-language Master's programmes

1. The proficiency requirement in English as the language of instruction can be met by the successful completion of one of the following examinations or an equivalent:
 - IELTS: 6.5
 - TOEFL paper based test: 580
 - TOEFL internet based test: 92-93
 - Cambridge Advanced English: A, B or C.
2. Exemption is granted from the examination in English referred to in the first paragraph to students who, within two years of the start of the programme:
 - met the requirements of the VU test in English language proficiency TOEFL ITP, with at least the scores specified in paragraph 1, or
 - had previous education in secondary or tertiary education in an English-speaking country as listed on the VU website, or
 - have an English-language 'international baccalaureate' diploma

Article 3.6 Free curriculum

1. Subject to certain conditions, the student has the option of compiling a curriculum of his/her own choice which deviates from the curricula prescribed by the programme.
2. The concrete details of such a curriculum must be approved beforehand by the most appropriate Examinations Board.
3. The free curriculum is put together by the student from the units of study offered by Vrije Universiteit Amsterdam or another institution of higher education and must at least have the size, breadth and depth of a regular Master's programme.
4. The following conditions must have been met in order to be eligible for the Master's degree:
 - a. at least 40 EC must be obtained from the regular curriculum,
 - b. the level of the programme must match the objectives and exit qualifications that apply for the programme for which the student is enrolled.

4. Curriculum structure

Article 4.1 Composition of programme

1. The programme consists of the following components:
 - a. compulsory units of study (48 EC)
 - b. specialisation tracks (12 EC)

Article 4.2 Compulsory units of study

Abbreviations of teaching method and type of test are defined in Article 1.1

The compulsory units of study are:

AM_ERM-V MSc ERM, compulsory courses						
Course code	Name	EC	Period	Teaching Method	Type of test	Level
AM_1049	Causes and Consequences of Environm. Ch.	6	1	CPR, WG, HC	E, A, Pres	400
AM_1135	Methods of Environment and Res. Man.	6	4	EXC, WC, CPR, WG, HC	E, A, Pres	400
AM_1136	Research Workshops	6	4	WC, HC, WG		400
AM_468017	Research Project ERM	18	Ac. Jaar	WC	R, Prac	500
AM_468020	Environmental Economics for ERM	6	2	WC, WG	E, A	400
AM_468021	Environmental Policy	6	2	WC, HC	E, A	400
AM_ERM-EC MSc ERM spec. Energy and Climate						
Course code	Name	EC	Period	Teaching Method	Type of test	Level
AM_1155	Energy Governance	6	3	WC		400
AM_468018	Sustainable Energy Analysis	6	1	WC, HC	E, Pres	400
AM_ERM-EcoSe MSc ERM spec. Ecosystems Services						
Course code	Name	EC	Period	Teaching Method	Type of test	Level
AM_468024	Value of Ecosystem Services	6	1	EXC, HC	E, R, Pres	400
AM_468025	Governance of Ecosystem Services	6	3	WC, HC	E, R, Pres	400
AM_ERM-WS MSc ERM spec. Water and Society						
AM_1192	Water Governance	6	3			400
AM_468023	Water Management	6	1	CPR, HC	E, R	400

MSc ERM spec. Environmental Studies

At least 12 EC from the courses offered in the other three specialisation pathways and the electives mentioned under article 4.4 (Electives)

Article 4.3 Practical exercise

Not applicable.

Article 4.4 Electives

The student can take the following electives:

AM_ERM-EnvSK optional modules						
AM_1124	Modern Climate and Geo-ecosystems	6	1	EXC, WC	E, R	400
AM_450004	Climate Modelling	6	3	WC, CPR	E, A, Pres	400
AM_450330	Sedimentary Environments and Climate	6	1	EXC, WC	E, R	400
S_SIGEG	Ar.	6	2	WG		500
S_TAIR	Selected Issues: GEG	6	1	HC, WG		400
S_WGEG	Theories and Approaches in IR	12	4	WG		600
	Workshop Global Environmental Governance					

AM_ERMenvSVk choose at least one of these courses						
AM_450188	Climate and Policy	6	3	WC		400
AM_468018	Sustainable Energy Analysis	6	1	WC, HC	E, Pres	400
AM_468019	Energy System Transitions	6	3	WG		400
AM_468023	Water Management	6	1	CPR, HC	E, R	400
AM_468024	Value of Ecosystem Services	6	1	EXC, HC	E, R, Pres	400
AM_468025	Governance of Ecosystem Services	6	3	WC, HC	E, R, Pres	400
AM_1155	Energy Governance	6	3	WC		400
AM_468018	Sustainable Energy Analysis	6	1	WC, HC	E, Pres	400
AM_468024	Value of Ecosystem Services	6	1	EXC, HC	E, R, Pres	400
AM_468025	Governance of Ecosystem Services	6	3	WC, HC	E, R, Pres	400
AM_1192	Water Governance	6	3			400
AM_468023	Water Management	6	1	CPR, HC	E, R	400

If the student wishes to take a different course than the units of study listed, advance permission must be obtained in writing from the Examinations Board.

Article 4.5 Sequence of examinations

Students may participate in examinations for the units below only if they have passed the examination or examinations for the units mentioned:

- Research Project: after passing 18 EC in the ERM curriculum on February 15, as well as participation in the "Methods of Environmental and Resource Management" course and the "Research Workshops" course.

Article 4.6 Participation in practical exercise and tutorials

1. In the case of a practical training, the student must attend at least 100 % of the practical sessions. Should the student attend less than 100 %, he/she must repeat the practical training, or the examiner may have one or more supplementary assignments issued.
2. In the case of tutorials with assignments, the student must attend at least 100 % of the tutorials. Should the student attend less than 100 %, he/she must repeat the study group, or the Examinations Board may have one or more supplementary assignments issued.
3. In exceptional circumstances, the Examinations Board may, at the request of the student, permit an exemption from this requirement if, in the opinion of the Board, the assessment of the intended skills is also possible with a lesser percentage of participation, with or without the imposition of supplementary requirements.

Article 4.7 Maximum exemption

A maximum of 18 EC of the curriculum can be accumulated through granted exemptions.

Article 4.8 Validity period for results

As laid down in article 4.8 of TER part A.

Article 4.9 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. If it is a joint degree, this will also be stated on the diploma.

5. Transitional and final provisions

Article 5.1 Amendments and periodic review

1. Any amendment to the Teaching and Examination Regulations will be adopted by the faculty board after taking advice from the relevant Board of Studies. A copy of the advice will be sent to the authorized representative advisory body.
2. An amendment to the Teaching and Examination Regulations requires the approval of the authorized representative advisory body if it concerns components not related to the subjects

of Section 7.13, paragraph 2 sub a to g and v of the WHW and the requirements for admission to the Master's programme.

3. An amendment to the Teaching and Examination Regulations can only pertain to an academic year that is already in progress if this does not demonstrably damage the interests of students.

Article 5.2 Transitional provisions

Notwithstanding the current Teaching and Examination Regulations, the following transitional provisions apply for students who started the programme under a previous set of Teaching and Examination Regulations:

1. Compulsory components

- a. The compulsory components below have been replaced in academic year 2014-2015

New component	Former component
AM_1135 Methods of Environment and Resources Management (6 EC) <i>and</i> AM_1136 Research Workshops (6 EC)	AM_468012 Environmental and Energy Policy Tools (12 EC)

From 1 September 2014 on students obtain the new courses, unless they passed the former course.

Students who started their programme before academic year 2014-2015 are, under specified conditions, permitted to replace compulsory courses by another compulsory course from their former examination programme.

- b. For students who started in 2012-2013 or earlier:

Compulsory course	Permitted replacement course
AM_1049 Causes and Consequences of Environmental Change (6 EC)	AM_468011 Sustainability and Growth (6 EC)

From 1 September 2013 students obtain the new course, unless they passed the former

2. Specialisation course

- a. The specialization course below has been replaced in academic year 2015-2016

New component	Former component
AM_1155 Energy Governance	AM_468019 Energy system transition

From 1 September 2015 on students obtain the new course, unless they passed the former course.

- b. The specialization course below has been replaced in academic year 2016-2017

New component	Former component
AM_1192 Water Governance (6 EC)	AM_450188 Climate and Policy (6 EC)
AM_468023 Water Management (6 EC)	AM_468023 Water and Policy (6 EC)

3. Electives

- a. The electives below have been replaced in academic year 2014-2015

New component	Former component
AM_1124 Modern Climate and Geo-ecosystems (6 EC)	AM_450185 Modern Climate Systems (3 EC) and AM_450313 Modern Geo-ecosystems (3 EC)

From 1 September 2014 on students obtain the new course, unless they passed the former course.

- b. The courses below are no longer available in the programme but are still elective components for students who started their programme before academic year 2014-2015 and have passed the courses' examinations:

Courses ended in academic year 2013-2014

- AM_1015 Sustainable Land Management (6 EC)
- AM_450137 Aquatic Ecology (6 EC)
- AM_1029 International development issues in the context of sustainable development (6EC)

Courses ended in academic year 2012-2013

- SPPS&RM_O Philosophy of Political Science & Research Methods (5 EC)
- SPCP_O Political concepts and processes (5 EC)
- S_T&AIR_O Theories & Approaches of International Relations (5 EC)
- AM_468026 Workshop Governance for Sustainable Development (7 EC)

Courses ended in academic year 2011-2012

- AM_450227 Applied GIS (3 EC)

Courses ended in academic year 2010-2011

- 450014 Ecohydrology (6 EC)

3. **Total of 60 EC**

The final examination programme should always total at least 60 EC.

Article 5.3 Publication

1. The faculty board will ensure the appropriate publication of these Regulations and any amendments to them.
2. The Teaching and Examination Regulations will be posted on VUnet.

Article 5.4 Effective date

These Regulations enter into force with effect from 1 September 2016.

Advice from Board of Studies,
Wouter Botzen (Chair Programme Committee), on 7 June 2016
Philipp Pattberg (Chair Exam Committee), on 7 June 2016

Approved by authorized representative advisory body on 30 June 2016

Adopted by the Board of the Faculty of Earth and Life Sciences / of Sciences on 14 July 2016

Appendix I

List of articles that must be included in the OER pursuant to the WHW (articles in framed boxes):

Section A

Art. 1.1	7.13, para 1, WHW
Art. 2.1	7.13, para 2 sub w
Art. 3.2	7.13, para 2 sub e
Art. 4.2	7.13, para 2 sub h and l
Art. 4.3	7.13, para 2 sub n
Art. 4.4	7.13, para 2 sub o
Art. 4.5	7.13, para 2 sub j, h
Art. 4.7	7.13, para 2 sub r
Art. 4.8	7.13, para 2 sub k
Art. 4.9	7.13, para 2 sub p
Art. 4.10	7.13, para 2 sub q
Art. 4.11	7.13, para 2 sub a
Art. 5.1	7.13, para 2 sub u
Art. 5.2	7.13, para 2 sub m

Section B

Art. 1.2	7.13, para 2 sub i
Art. 2.1	7.13, para 1 sub b, c
Art. 2.2	7.13, para 2 sub c
Art. 3.1	7.25, para 4
Art. 4.1	7.13, para 2 sub a
Art. 4.2	7.13, para 2 sub e, h, j, l
Art. 4.3	7.13, para 2 sub t
Art. 4.4	7.13, para 2 sub e, h, j, l
Art. 4.5	7.13, para 2 sub s
Art. 4.6	7.13, para 2 sub d
Art. 4.8	7.13, para 2 sub k