

# **Teaching and Examination Regulations (TER)**

# **Faculty of Science**

# **Masterprogramme in Environment and Resource Management**

Academic year: 2019-2020

A: Faculty section

B1: Programme specific section – general provisions
 B2: Programme specific section – content of programme

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#### **Section A: Faculty Section**

#### 1. General provisions

#### Article 1.1 Applicability of the Regulations

academic year in which the student was first enrolled for the programme. These Regulations apply to the teaching and examinations for the following Master's degree programmes:  Artificial Intelligence Bioinformatics and System Biology Biomedical Sciences Biomolecular Sciences Business Analytics Computer Science Drug Discovery and Safety Earth Sciences Ecology Environment and Resource Management Global Health (research) Health Sciences Hydrology Information Sciences Management, Policy Analysis and Entrepreneurship in the Health and Life Sciences Mathematics Medical Natural Sciences Neurosciences (research) Parallel and Distributed Computer Systems	(9.38 ub b)
<ul> <li>Science Business and Innovation</li> </ul>	
<ul> <li>Stochastics and Financial Mathematics</li> </ul>	
2. These Regulations enter into force with effect from 1 September 2019.	Advice OLC, approval FGV (9.38 ub b)
3. An amendment to the Teaching and Examination Regulations is only permitted to	Advice OLC,
concern an academic year already in progress if this does not demonstrably damage the interests of students.	approval FGV (9.38 sub b)

#### Article 1.2 Definitions

The following definitions are used in these Regulations (in alphabetical order):

a. academic year: the period beginning on 1 September and ending on 31 August of the following

calendar year;

b. CvB: the Executive Board of Vrije Universiteit Amsterdam.

c. Double degree programme joint programme in the context of cooperation between Vrije Universiteit

Amsterdam and the educational institution within and outside the EU, as to gain a double university degree; of the VU and the educational institution concerned; though not being the same as a 'joint degree programme' according to the art. 7.3c

WHW';

d. EC (European Credit): an EC credit with a workload of 28 hours of study;

e. educational component: a unit of study of the programme within the meaning of the WHW;

f. examination: the final examination of the Master's programme;

g. exemption Exemption from an examination/ practical/ fieldwork based on an earlier

successfully completed examination, or knowledge / skills of a similar content,

level and scope gained outside higher education;

h. FGV: Faculty joint assembly – assembly of the faculty student council and faculty staff



council:

i. interim examination: an assessment of the student's knowledge, understanding and skills relating to a

course component. The assessment is expressed in terms of a final mark. An interim examination may consist of one or more partial examinations. A resit

always covers the same material as the original interim examination;

j. joint degree: a degree awarded by an institution together with one or more institutions in the

Netherlands or abroad, after the student has completed a study programme (a degree programme, a major or a specific curriculum within a degree programme)

for which the collaborating institutions are jointly responsible;

k. OLC: programme committee; l. period: a part of a semester;

m. practical exercise: the participation in a practical training or other educational learning activity,

aimed at acquiring certain (academic) skills. Examples of practical exercises are:

o researching and writing a thesis or dissertation

carrying out a research assignmenttaking part in fieldwork or an excursion

o taking part in another educational learning activity aimed at acquiring

specific skills, or

o participating in and completing a work placement;

n. premaster student those who enroll in a premaster programme;

o. Programme: the totality and cohesion of the course components, teaching activities/methods,

contact hours, testing and examination methods and recommended literature;

p. SAP/SLM: the student information system (Student Lifecycle Management);

q. semester: the first (September - January) or second half (February - August) of an

academic year;

r. study guide: the guide for the study programme that provides further details of the courses,

provisions and other information specific to that programme. The Study Guide is

available electronically at: <a href="https://www.vu.nl/studiegids">https://www.vu.nl/studiegids</a>

s. subject see 'educational component';

t. substituting course/educational see under d (double degree programme). A course obtained at the

component educational institute, within the context of cooperation, that is mentioned in the

diploma supplement as such; not being an 'exemption'.

u. thesis/internship work placement a component comprising research into the literature and/or contributing to

scientific research, always resulting in a written report;

v. university: Vrije Universiteit Amsterdam;

w. WHW: the Dutch Higher Education and Research Act (Wet op het Hoger Onderwijs en

Wetenschappelijk Onderzoek);

x. workload: the workload of the unit of study to which an interim examination applies,

expressed in terms of credits = EC credits (ECTS = European Credit and Transfer Accumulation System). The workload for 1 year (1,680 hours) is 60 EC credits.

The other terms have the meanings ascribed to them by the WHW.

#### 2. Study programme structure

#### Article 2.1 Structure of academic year and educational components

1.	The study programme will be offered in a year divided into two semesters.	Ordinance CvB, see appendix 3
2.	Every semester consists of three consecutive periods of eight, eight and four weeks.	Ordinance CvB, see appendix 3



3. An educational component comprises 6 EC or a multiple thereof.	Ordinance CvB,
	see appendix 3
4. By way of exception to paragraph 3, Section B may stipulate that a unit of study	Ordinance CvB,
comprises 3 EC or a multiple thereof. The Faculty Board requests permission from the	see appendix 3
Executive Board.	

#### Article 2.2 Refusal or termination of registration / (iudicium abeundi)

1.	Pursuant to the provisions of Article 7.42a of the Act, the Faculty Board or the	WHW
	Examination Board may, in exceptional circumstances, request the Executive Board to	
	terminate or refuse a student's registration on a programme. This may be the case if the	
	student's conduct or statements demonstrate his or her unsuitability to work in the	
	relevant field or discipline, or to take part in the programme's practical training	
	component.	
2.	If a student is suspected of being unsuitable as described in paragraph 1, the	WHW
	Examination Board or the Faculty Board will examine the case, and the student will be	
	informed of this immediately. The Examination Board or the Faculty Board will only	
	issue a recommendation after careful consideration of the interests involved and	
	following a hearing with the student concerned.	

#### 3. Assessment and Examination

#### Article 3.1 Signing up for education and interim examinations

1.	Every student must sign up to participate in the educational components of the programme, the examinations and resits. The procedure for signing up is described in an	Ordinance CvB, see appendix 3
	annex to the Student Charter.	
2.	Signing up may only take place in the designated periods.	Ordinance CvB, see appendix 3
3.	If a student does not pass the examination and the resit of a component, he/ she is obliged to take the whole component again. This rule does not apply to practical exercises and programmes that make use of component marks that retain their validity. For further regulations see Section B of the programme involved.	Advice OLC, approval FGV (7.13 x)

#### Article 3.2 Type of examination

1.	At the student's request, the Examination Board may permit a different form of interim	Advice OLC,
	examination than that stipulated in the course catalogue. If applicable, more detailed	Approval FGV (7.13 l)
	regulations on this are included in the Rules and Guidelines for the Examination Board.	(7.131)
2.	In an educational component is no longer offered in the academic year following its	Advice OLC,
	termination, at least one opportunity will be provided to sit the interim examination(s) or	approval FGV
	parts thereof and a transitional arrangement will be included in the programme-specific	(7.13 j)
	section for the subsequent period.	

### Article 3.3 Oral interim examinations

1.	An oral assessment is public unless the Examinations Board on request determines	Advice OLC;
	otherwise.	approval FGV
	other wise.	(7.13 l and n)
2.	An oral examination will be taken in the presence of a second examiner.	Advice OLC,
	·	approval FGV
		(art. 9.38 par. b)

#### Article 3.4 Determining and announcing results

1.	The examiner determines the result of a written interim examination as soon as possible,	Ordinance CvB,
	but at the latest within fifteen working days. By way of departure from that stipulated in	see appendix 3
	the first clause, the marking deadline for theses, internships / work placements and final	
	assignments is no longer than twenty working days. The examiner will then immediately	
	ensure that the marks are registered and also ensures that the student is immediately	
	notified of the mark, taking due account of the applicable confidentiality standards.	



<ol> <li>a. The examiner determines the result (i.e. mark) of an oral examination as soon as possible, though within one working day, after the examination has finished and infor the student accordingly. The third clause of the first paragraph applies.</li> <li>b. The examiner determines the result of an interim examination no later than five working days before the next (interim) examination will be held.</li> </ol>	Advice OLC; approval FGV (7.13 o)
<ol><li>In the case of alternative forms of oral or written examinations, the Examination Boar determines in advance how and by what deadline the student will be informed of the results.</li></ol>	rd Advice OLC; approval FGV (7.13 o)
4 A student can submit a request for reassessment to the examiner. A request for reassessment does not affect the time period for lodging an appeal.	Advice OLC; approval FGV (9.38 sub b)
5. Together with the result of an examination, the student's attention will also be drawn to their right to inspect the assessed work and have a post-examination discussion as stipulated in Art. 3.9, as well as his/her option to lodge a complaint before the Examination Board, and if necessary, to appeal to the Examinations Appeals Board (in Dutch: COBEX).	

#### Article 3.5 Examination opportunities

	······································	
1.	a. Per academic year, two opportunities to take examinations per educational	Ordinance CvB,
	component will be offered.	see appendix 3
b.	. The options for retaking practical components, work placements and theses are detailed	
	in the relevant work placement manual, teaching regulations or graduation regulations.	
2.	The most recent mark will apply in the event of a resit. A retake is allowed for both	Ordinance CvB,
	passed and failed units of study.	see appendix 3
3.	The resit for a (partial) interim examination must not take place within ten working	Advice OLC;
	days of the announcement of the result of the (partial) examination being resat.	approval FGV
		(7.13 j)
4.	The Examination Board may allow a student an extra opportunity to sit an	Ordinance CvB,
	examination if that student:	see appendix 3
	a) is lacking only those credits to qualify for his or her degree;	
	b) has failed the examination during all the previously offered attempts, unless	
	participation in an examination was not possible for compelling reasons.	
Τ	The extra opportunity can only be offered if it concerns a written examination, a paper or	
	a take home examination. This provision excludes the practical assignments and the	
	Master's thesis. Requests for an additional examination opportunity must be submitted	
	to the Examination Board no later than 15 July. If necessary, the method of	
	examination may deviate from the provisions in the study guide.	

#### Article 3.6 Marks

Marks are given or	n a scale from	n 1 to 10 with no m	ore than one deci	mal point.	Ordinance CvB,
				1	see appendix 3
2. The final marks are	e given in wl	hole or half points.			Ordinance CvB,
					see appendix 3
3. Final marks between	en 5 and 6 w	ill be rounded off to	o whole marks: uj	to 5.5 rounded down;	Ordinance CvB,
from 5.5 rounded u	ıp. To pass a	course, a 6 or high	er is required.		see appendix 3
In case the examination	on of a comp	onent consists of tv	vo or more parts,	each of which are	
graded separately.	the (weighte	d) mean of these ma	arks (meaning: th	e final mark) must be	
rounded off using t	, 0	· *			
Tourided off doing		, wore.			
	From	Up to	Grade		
	1,00	1,25	1		
	1,25	1,75	1,5		
	1,75	2,25	2,0		
	2,25	2,75	2,5		



	2,75	3,25	3,0		
	3,25	3,75	3,5		
	3,75	4,25	4,0		
	4,25	4,75	4,5		
	4,75	5,50	5,0		
	5,50	6,25	6,0		
	6,25	6,75	6,5		
	6,75	7,25	7,0		
	7,25	7,75	7,5		
	7,75	8,25	8,0		
	8,25	8,75	8,5		
	8,75	9,25	9,0		
	9,25	9,75	9,5		
	9,75	10,0	10		
4. The Examination	Board can allo	w to use symbols	rather than numbe	rs such as	Ordinance CvB,
		=			see appendix 3
pass, fail, (un)satisfa				•	
any (interim) exar	nination, the ex	xamıner will regis	ter the mark 'ns' (	c.q. no show).	

#### Article 3.7 Exemption

1.	At the written request of the student, the Examination Board may exempt the student from taking one or more examination components, if the student:  a) has passed a course component of a university or higher professional education programme that is equivalent in terms of content and level;  b) has demonstrated through his/her work and/or professional experience that he/she has sufficient knowledge and skills with regard to the relevant course component.  The Examination Board will make a decision within six weeks after receiving the request.	Advice OLC; approval FGV (7.13 r)
2.	The Master's thesis, the final work placement (c.q. internship) and the final project (c.q. final paper) are excluded from this exemption possibility.	Advice OLC; approval FGV (9.38 sub b)
3.	A maximum of 18 EC for a one one-year master programme and 36 EC for a one two-year master programme can be accumulated through granted exemption. The substituting courses (educational components) are not included.	Advice OLC, approval FGV (art. 7.13 par. 2, under r WHW jo art. 9.38 par. b)

#### Article 3.8 Validity period for results

1.	The validity period of interim examinations passed and exemption from interim	WHW
	examinations is unlimited, unless otherwise specified in Section B.	
2.	The validity period of a partial examination is limited to the academic year in which it	Advice OLC;
	was sat or until the end of the unit of study concerned, as stipulated for the relevant unit	approval FGV
	of study in Section B.	(9.38 sub b)

#### Article 3.9 Right of inspection and post-examination discussion

1.	For twenty working days after the announcement of the results of a written interim	Advice OLC;
	examination, the student can, on request, inspect his or her assessed work, the questions	approval FGV (7.13 p en q)
	and assignments set in it, as well as the standards applied for marking.  The place and time referred to in the previous clause will be announced at the time of the	
	interim examination on VUnet or Canvas.	
2.	If a collective post-examination discussion has been organized, individual post- examination discussions will be held only if the student has attended the collective	Advice OLC; approval FGV (7.13 q)



	discussion or if the student was unable to attend the collective discussion the of his or her own.	hrough no fault
I	3. Students who meet the requirements stipulated in paragraph 1 can submit a	
	individual post-examination discussion to the relevant examiner. The discu	assion shall take approval FGV (7.13 p en q)
	place at a time and location to be determined by the examiner.	(7.13 p en q)

#### Article 3.10 Fraud and plagiarism

1. The provisions of the Rules and Guidelines for the Examination Board apply in full.	Ordinance CvB	
2. Electronic detection software programmes may be used to detect plagiarism in texts.	Ordinance CvB	
In submitting a text, the student implicitly consents to the text being saved in the		
database of the detection programme concerned.		

#### 4. Academic student counselling and study progress

#### Article 4.1 Administration of study progress and academic student counselling

1.	The faculty board is responsible for the correct registration of the students' study results. After the assessment of an educational component has been registered, every student has the right to inspect the result for that component and also has a list of the results achieved at his or her disposal in VUnet.	Advice OLC; approval FGV (7.13 u)
b	Enrolled students are eligible for academic student counselling. Academic student counselling is in any case provided by:  a. The Student General Counselling Service  b. Student psychologists c. Faculty academic advisors	Advice OLC; approval FGV (7.13 u)

#### Article 4.2 Adaptations for students with a disability

	ie 1.2 Frauptations for stadents with a disability	
1.	A student with a disability can, at the moment of submission to VUnet, or at a later instance, submit a request to qualify for special adaptations with regard to teaching, practical training and interim examinations. These adaptations will accommodate the student's individual disability as much as possible, but may not alter the quality or degree of difficulty of a unit of study or an examination. In all cases, the student must fulfil the exit qualifications for the study programme.	Advice OLC; approval FGV (7.13 m)
2.	The request referred to in the first paragraph must be accompanied by a statement from a doctor or psychologist. If possible, an estimate should be given of the potential impact on the student's study progress. In case of a chronic disability a single (one time) request suffices.	Advice OLC; approval FGV (7.13 m)
3.	Students who have been diagnosed with dyslexia must provide a statement from a BIG, NIP or NVO registered professional who is qualified to conduct psychological evaluation.	Advice OLC; approval FGV (7.13 m)
4.	The faculty board, or on behalf of the faculty board, the educational director, or the programme director, decides on the adaptations concerning the teaching facilities and logistics. The Examination Board will rule on requests for adaptations with regard to examinations.	Advice OLC; approval FGV (7.13 m)
5.	In the event of a positive decision in response to a request as referred to in paragraph 1, the student will make an appointment with the study adviser to discuss the details of the provisions.	Advice OLC; approval FGV (7.13 m)
6.	A request for adaptations will be refused if it would place a disproportionate burden on the organization or the resources of the faculty or university were it upheld.	Advice OLC; approval FGV (7.13 m)
7.	If the disability justifies an extension of the interim examination time, the Examination Board will grant permission testifying to this entitlement to an extension. If a disability justifies other measures to be taken, the Examination Board will advice the Faculty Board on the necessary measures to be taken.	Advice OLC; approval FGV (7.13 m)
8.	The decision as referred to in paragraph 7, is valid for a maximum period of one year with the exception for the chronic diseases and disabilities.	Advice OLC; approval FGV



	(7.13 m)

#### 5. Hardship clause

#### Article 5.1 Hardship clause

In instances not regulated by the Teaching and Examination Regulations or in the event of demonstrable extreme unreasonableness and unfairness, the faculty board responsible for the	Advice OLC; approval FGV
study programme will decide, unless the matter concerned is the responsibility of the	(9.38 sub b)
Examinations Board.	

#### Article 5.2. Publication

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

Approved by authorized representative advisory body FGOV of the Faculty of Science on 3 September 2019.

Adopted by the Faculty Board on 30 August 2019.



### **Section B1: Programme specific – general provisions**

#### 6. General programme information and characteristics

#### Article 6.1 Study programme information

1.	The programme Environment and Resource Management with the CROHO number 60045 is offered on a full-time basis.	Advice OLC; approval FGV (7.13 i)
2.	The language of instruction is English.	Advice OLC;
		approval FGV (9.38 sub b)

Article 6.2 Teaching formats used and modes of assessment

Article 0.2 Teaching formats used and modes of assessment	A 1 ' OT C
1. The degree programme uses the following teaching formats:	Advice OLC;
• Lectures;	approval FGV (7.13 x)
• Tutorials;	(7.13 A)
• Games;	
The programme uses the teaching formats as specified in the study guide.	
2. The degree programme uses the following modes of assessment:	Advice OLC;
Written examination;	approval FGV
• Paper;	(7.131)
• Assignments;	
Report;	
• Presentation;	
Simulation;	
• Pitch;	
Paper review;	
Peer review;	
• Summary;	
• Factsheets.	
The modes of assessment used per educational component are specified in the study guide.	

#### 7. Further admission requirements

#### Article 7.1 Intake date(s)

1. The programm	e starts on September 1.	Advice OLC;
	•	approval FGV
		(9.38 sub b)

#### Article 7.2 Admission requirements

1.	Admission to the Master's programme is possible for an applicant who has obtained a	Partly legal
	Bachelor's degree obtained at an institution of academic higher education. First	provison &
	degrees may be in both natural and social sciences; however, the previous study	ordinance CvB, see appendix 3.
	programme of students must show affinity to environmental problems. Criteria for	Admission
	admission are:	requirements
	<ul> <li>BSc degree from a well-regarded university;</li> </ul>	excepted from
	• GPA of 7/10 and higher or equivalent;	participation in WHW
	• English language proficiency, including sufficient scores for each test	"11"
	component as specified in Article 4.a.3 of Application and Registration	
	Regulation 2019-2020, chapter: Admission Requirements for Master's	
	programmes;	



	<ul> <li>Proven interest in environmental issues by courses taken and/or work experience, expressed in a motivation statement or curriculum vitae;</li> <li>Other information such as reference letters, course descriptions, students' thesis or reports.</li> </ul>	
2.	The Admissions Board will investigate whether the applicant meets the admission requirements.	Legal provision
	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.	
3.	In addition to the requirements referred to in the first paragraph, the Admissions Board can also assess requests for admission in terms of (at least two of) the following criteria: a. talent and motivation; b. level of relevant knowledge and understanding; c. proficiency in methods and techniques; d. academic attitude and critical thinking; e. e. proficiency in the language(s) of instruction.	Partly legal provison & ordinance CvB, see appendix 3. Admission requirements excepted from participation in WHW

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

spec	cianzations	_
1.	In deviation from the language proficiency requirements as stated in the Application and	Advice OLC;
	registration regulation (RAI) an applicant should demonstrate that he or she has	approval FGV
	sufficient level of proficiency in English by meeting at least one of the following	(9.38 sub b)
	standards, no more than two (2) years before the start of the programme at the VU:	
	- (academic) IELTS (>6.5): 6.5	
	<ul> <li>Minimum Sub-score Listening 6.</li> </ul>	
	<ul> <li>Minimum Sub-score Reading 6.0</li> </ul>	
	<ul> <li>Minimum Sub-scoreWriting 6.0</li> </ul>	
	<ul> <li>Minimum Sub-score Speaking 6.0</li> </ul>	
	- TOEFL paper based test (> 580): 580	
	- TOEFL internet based test (> 92): 92-93	
	<ul> <li>Minimum Sub-score Reading 18</li> </ul>	
	<ul> <li>Minimum Sub-score Listening 19</li> </ul>	
	<ul> <li>Minimum Sub-score Speaking 19</li> </ul>	
	Minimum Sub-scoreWriting 23	
	- The Cambridge Certificate of Proficiency in English (CPE) of the Cambridge	
	Certificate of Advanced English (CAE), score: A, B, or C	



Article 7.4 Pre-Master's programme

	C / :   I TO IVIUSTOI	1 0	(TD 0) 1	A 1 : OLG
1.		Bachelor's degree of a university of applied science (l		Advice OLC;
	that corresponds to	a sufficient extent with the subject area covered by the	he Master's	approval FGV
	programme can rec	quest admission to the pre-Master's programme.		(9.38 sub b)
	b) Students with a Bachelor's degree from an institution of academic higher education			
	in a field that does	not sufficiently corresponds with the subject area cov	ered by the	
	Master's programm	ne can request admission to the pre-Master's program	me.	
2.	The pre-Master's p	rogramme comprises 30 EC and is made up of the fo	llowing 5 units	Advice OLC;
	of study:			approval FGV
	Ž			(9.38 sub b)
	Coursecode	Course	EC	
	E_IBA3_GCS	Grand Challenges for Sustainability	6 EC	
	AB_1229	Governance of Global Sustainability	6 EC	
	AB_1230	Sustainability and environmental change	6 EC	
	E_IBA3_SSCM	Sustainable Supply Chain Management	6 EC	
	AB_1231	Designing Solutions for Global Sustainability	6 EC	
3.	A successfully con	npleted pre-Master's programme serves as proof of ac	lmission to the	Legal provision
	specified Master's	programme in the subsequent academic year.		
4.	A candidate can on	ly participate in one pre-Master's programme at the	Vrije	Ordinance CvB,
	Universiteit.			see appendix 3

#### 8. Interim examinations and results

Article 8.1 Sequence of interim examinations

1.	Students may participate in interim examinations [or practical exercises] of the components below only if they have passed the interim examination or examinations for the components mentioned hereinafter:	Advice OLC; approval FGV (7.13 h, s & t)
	<ul> <li>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.</li> </ul>	

Article 8.2 Validity period for results

1.	See Article 3.8 of the Teaching and Examination Regulations, section A. No further specific provisions.	Advice OLC; approval FGV (7.13)
2.	A student may request the Examination Board to extend the validity of an exam. If the exam shows that a student's knowledge is insufficient or outdated, or if the student's skills and insights evaluated in the exam are demonstrably outdated, the Examination Board may impose a supplementary examination, impose a replacement examination or refuse to extend the period of validity.	Legal provision
3.	In situations where a limited period of validity applies, the period of validity of examinations may be extended in the event of extenuating circumstances as stipulated in WHW Article 7.51, paragraph 2, with at least the period of allocated financial assistance specified in WHW Article 7.15, paragraph 1.	Legal provision

#### Article 8.3 Maximum Exemption(s)

A maximum of 18 EC of the curriculum can be accumulated through granted exemptions, based on previous results within other master's programmes.	Advice OLC, approval FGV (7.13 par. 2, under r jo art.
	9.38 sub b)



### Article 8.4 Degree

Degree Students who have successfully completed their Master's final Examination are	Legal provision,
awarded a Master of Science degree (MSc). The degree awarded is stated on the diploma	WHW
Track name will be stated on the diploma, if one has successfully completed at least 24 EC	
of the specific track; otherwise no track name will be stated on the diploma.	



#### Section B2: Programme specific – content of programme

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

#### Article 9.1 Workload

Ī	1.	The programme has a workload of 60 EC, including a compulsory units of study (48	Advice OLC;
		EC) and specialization tracks (12 EC)	(7.13 a)

#### Article 9.2 Specializations

The programme has the following four specializations:	Advice OLC;
Energy and Climate;	(7.13 a)
Ecosystems Services and Biodiversity;	
Water and Society;	
Environmental Studies.	

#### Article 9.3 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;
- 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 9.4 Exit qualifications

At all events, a graduate of the ERM master programme will demonstrate 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.

Approval OLC (7.13 c)

Advice OLC;

(7.13 a)

#### A graduate of the ERM will have:

- 1. knowledge and understanding of the relevant key concepts, theories and methodologies in the field of environment and resource management;
- 2. in-depth knowledge of the theories and methodologies of at least one area in the field of environment and resource management by specializing in (a) ecosystem services and



biodiversity (b) energy and climate; (c) water and society; and (d) environmental studies;

Understand the concept of sustainable development and the relationships between
resource utilization, environmental pressure, production and consumption processes,
societal processes and responses and is able to apply combinations of concepts and
theories in a local, national or global context;

Applying Knowledge and Understanding: The ERM graduate an 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.

- 4. Can integrate knowledge from various disciplines and understands the interrelationships in sustainable development processes;
- 5. Is able to understand, and to apply various methods for investigating and assessing environmental problems, for example economic analysis, scenario analysis, stakeholder analysis and spatial analysis and is aware of the value and the scope of these tools;
- 6. Can independently develop and execute scientific research of societal relevance.
  - a. Is able to formulate a problem based on empirical data or literature study and design a scientific approach for researching and investigating the problem;
  - b. Has the skills to apply methodologies and techniques when conducting independent research;
  - Is able to independently acquire and compile relevant information on environmental problems by doing literature study, modelling and/or empirical data collection;
  - d. Is able to analyze and interpret research data and to understand, translate and evaluate these data in the context needed;
  - e. Can formulate recommendations and/or policy advise based on the conclusions of the research;

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.

- 7. Can recognize and acknowledge the different perspectives of relevant stakeholders on society and the environment, and is capable of taking these perspectives into account in a balanced manner;
- 8. Can reflect on core problems and solutions in the general domain of environment and resource management as well as the domain of the chosen specialization, and is able to form an opinion and to contribute to both scientific and practitioners' discussions;
- 9. Can reflect on the trade-offs between economic, social and environmental issues that play a role in environment and resource management;



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.

- 10. Can operate in diverse (e.g. multidisciplinary, international and/or intercultural) teams at a level that is at the frontier of research in Environment and Resource Management by active and constructive participation in discussions, debates, and meetings;
- 11. Can clearly communicate in English, both orally and in writing, while making appropriate use of visual material, including digital aids;
  - To the scientific community, the conclusions from their research, and the knowledge and rationale underpinning these. Communication may be in the form of a research report, poster presentation, or oral presentation;
  - To a general audience, the purpose of their research, their findings and the significance of these. Communication may be in the form of pitches, stories and debates.

Learning Skills: Has the learning skills to continue to study in a manner that may be largely self- directed and autonomous.

- 12. Has the knowledge of and competences for working in a multidisciplinary team, in particular the ability to compare and integrate insights and approaches from various environmental scientific disciplines;
- 13. Is able to reflect critically, but constructively on one's own as well as peers' papers, presentations and general functioning in groups, and is able to accept, consider and put to advantage the feedback of others;
- 14. Understands his/her personal stronger and weaker points, affinities, development potential and preferences in relation to the discipline chosen and the related professional potential;
- 15. Can familiarize oneself with new topics related to the field of study within a short timeframe.

#### 10. Curriculum structure

#### Article 10.1 Composition of the programme

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



#### Article 10.2 Compulsory educational components

 $\label{thm:component} A\ detailed\ description\ per\ educational\ component\ can\ be\ found\ in\ the\ Study\ Guide.$ 

MSc ERM, compulsory courses	Course code	EC	Level	Advice OLC;
Causes and Consequences of Environm. Ch.	AM_1049	6	400	(7.13 a)
Methods of Environment and Res. Man.	AM_1135	6	400	
Research Workshops	AM_1136	6	400	
Research Project ERM Research Project ERM	AM_468017 AM_468017	18 18	500 500	
Environmental Economics for ERM	AM_468020	6	400	
Environmental Policy	AM_468021	6	400	

MSc ERM spec. Energy and Climate	Course code	EC	Level	Advice OLC;
Energy and Climate Governance	AM_1155	6	400	(7.13 a)
Sustainable Energy Analysis	AM_468018	6	400	

MSc ERM spec. Ecosystems Services	Course code	EC	Level	Advice OLC;
Value of Ecosystem Services	AM_468024	6	400	(7.13 a)
Governance of Ecosystem Services	AM_468025	6	400	

MSc ERM spec. Water and Society	Course code	EC	Level	Advice OLC;
Water Governance	AM_1192	6	400	(7.13 a)
Water Management	AM_468023	6	400	

MSc ERM spec. Environmental Studies	Course code	EC	Level	Advice OLC;
At least 6 EC from the courses offered in the other three specialization pathways.			ays.	(7.13 a)
Remaining 6 EC can be chosen from the courses offered in the other three specialization pathways and the electives mentioned under article 10.3 (Electives).				

Article 10.3 Elective educational components

1. The student can take one or more of the following electives without prior consent from the				
Examination Board:		(7.13 a)		
AM_ERMenvSVk	course code	nr of EC	level	
Energy and Climate Governance	AM_450188	6	400	
Sustainable Energy Challenges	AM_468018	6	400	
Water Management	AM_468023	6	400	
Value of Ecosystem Services	AM_468024	6	400	
Governance of Ecosystem Services	AM_468025	6	400	
Water Governance	AM_1155	6	400	
Sustainable Energy Analysis	AM_468018	6	400	
AM_ERM-EnvSK	course code	nr of EC	level	
Selected Issues: GEG	S_SIGEG	6	500	
Theories and Approaches in IR	S_TAIR	6	400	
Workshop Global Environmental Governance	S_WGEG	12	600	
Ecohydrology	AM_450014	6	400	
Ecosystem Services and Scientific Advocacy	AM_1053	6		
Current Sustainable Energy Technologies	X_422582	6	500	
Economics of Climate Change	400			
2. If the student wishes to take a different educational component than listed, advance			Advice OLC;	
permission must be obtained in writing from the Examinations Board.				(7.13 a)

#### Article 10.4 Practical exercise

Not applicable



#### Article 10.5 Participation in practical training 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 or she must repeat the practical training, or the Examinations Board may have one or more supplementary assignments issued.	Approval OLC (7.13 d)	
2.	In the case of a tutorial, the student must attend at least 100 % of the practical sessions. Should the student attend less than 100 %, he or she must repeat the practical training, or the Examinations Board may have one or more supplementary assignments issued.	Approval OLC (7.13 d)	

#### 11. Evaluation and transitional provisions

#### Article 11.1 Evaluation of the education

The education provided in this programme is evaluated in decordance with the (attached)	Approval OLC
evaluation plan. The faculty evaluation plan offers the framework.	(7.13 a1)

#### 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)

#### **Specialisation courses**

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			
AM_450188 Energy and Climate Governance	AM_450188 Energy and Climate		
From 1 September 2016 on students obtain the new course, unless they passed the former			
course.			

The specialization course below has been replaced in academic year 2015-2016.		
New component Former component		
AM_1155 Energy Governance (6 EC)	AM_468019 Energy system transition (6 EC)	
From 1 September 2015 on students obtain the new course, unless they passed the former		

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

Advice and approval by the Programme Committee of Environment and Resource Management, on 25 June 2019.

Approved by the Faculty Joint Assembly, on 3 September 2019.

Adopted by the board of the Faculty of Science, on 30 August 2019.



#### 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 B1: Programme specific – general provisions

6. General programme information and characteristics				
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. Further admission requirements				
Article 7.2 Admission requirements	7.30b paragraph 2			
8. Interim examinations and results				
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

9. Programme objectives, specializations and exit qualifications				
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	objective 7.13 paragraph 2 sub a			
Article 9.4 Exit qualifications	7.13 paragraph 2 sub b, c			
10. Curriculum structure				
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 training and tutorials	cle 10.5 Participation in practical training and tutorials 7.13 paragraph 2 sub d			
11. Evaluation and transitional provisions				
Article 11.1 Evaluation of the education	7.13 paragraph 2 sub a1			
Article 11.2 Transitional provisions	7.13 paragraph 2 sub a			



# $\begin{array}{ll} \textbf{Appendix II} & \textbf{Overview of rights to prior consultation (advice) and rights to approve OLC and } \\ \textbf{FGV} \end{array}$

(Dutch only)

Onderwerpen Onderwijs – en Examenregeling (OER) 7.13 paragraph 2 WHW		FGV		OplC	
		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 artikelen 7.8b, zesde lid, en 7.9, vijfde lid (BSA)					
g. ten aanzien van welke masteropleidingen toepassing is gegeven aan artikel 7.4a, achtste lid (verhoogde studielast)					
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 artikel 7.9b, plaatsvindt (excellentietraject binnen een					
opleiding)					
x. de feitelijke vormgeving van het onderwijs					
alle overige onderwerpen die in de OER zijn geregeld maar die niet als zodanig zijn genoemd in art. $7.13$ WHW onder a $t/m$ $x$ .					

De lettering komt overeen met de lettering van artikel 7.13 lid 2 WHW



### Appendix III Ordinances VU CvB and Binding Guidelines (richtlijn)

Section B1, article:	Concerns:	CvB ordinance / guideline
7.2.1	Admission criteria; at least WO Bachelor's	Richtlijn Bachelor en Masteronderwijs, revised
	degree	on 6 June 2017
7.2.3	Additional admission criteria; type of criteria	Richtlijn Bachelor en Masteronderwijs, revised
		on 6 June 2017
Section B1, article:	Concerns:	CvB ordinance / guideline
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

