

Appendices Master's degree programme Energy and Environmental Sciences (EES) (art. 1.3)

Appendix I: Learning Outcomes of the degree programme (art. 1.3)

General Aims

The general aims of the master's degree programme EES are:

- to prepare students for an independent professional career; in this context this means being able to carry out fundamental or applied scientific research, as well as applying state of the art scientific knowledge in a wide variety of practical situations;
- to provide a learning environment for enabling students to develop skills, knowledge and insight in a specialization area of the field of study. to have students develop the ability to clearly and concisely communicate the acquired knowledge to others;
- to let students develop the ability to critically reflect, taking into account social and ethical aspects.

The aims of the programme result in the following learning outcomes:

Specific academic knowledge and skills for the master's degree programme EES.

The graduate is able:

- a) to analyze:
 1. Energy and resource use in societies and ecosystems and their impacts on the climate/planet;
 2. (Dis)advantages of the use of various energy sources using the people, planet, profit approach;
 3. Current and future developments in the energy/environmental research field;
 4. Policy developments in the energy/environment field.
- b) to assess whether changes in systems will affect energy and resource use and their consequences.
- c) to discuss the role of other academic (non-natural science) disciplines in the energy and/or environmental research field.
- d) to distinguish career perspectives within the energy/ environmental field.

General academic skills for the master's degree programme EES

The graduate is able:

1. to write a review about literature in relevant subfields.
2. to effectively gain information within the field of Energy and Environmental Sciences (EES).
3. to formulate a research plan based on a general problem description in a subfield of EES.
4. to analyze and assess state-of-the-art research information and draw conclusions from these results.
5. to collaborate in a multidisciplinary team.
6. to communicate his/her findings to the scientific community (oral presentation, written reports and debates).
7. to design, conduct and evaluate experiments/scenarios/other scientific methods.
8. to evaluate his/her own results and conclusions compared to knowledge in the literature.
9. to function scientifically in a situation in which knowledge and research skills within the field of EES are required.
10. to consider its own position in society to come to a sensible choice of profession.

Appendix II: Specializations of the degree programme (art. 2.2)

Appendix III: Content of the degree programme (art. 2.3)

Appendix V: Entry requirements and compulsory order of examinations (art. 3.4)

Energy and Environmental Sciences

module	ECTS	entry requirements	assessment	practical
Impacts of Energy and Material Systems (IEMS)	5	-	see OCASYS	see OCASYS
Sustainable Use of Ecosystems (SUE)	5	-	see OCASYS	see OCASYS
Society and Sustainability (S&S)	5		see OCASYS	see OCASYS
Systems Integration and Sustainability (SIS)	5		see OCASYS	see OCASYS
Data analysis and statistical methods (DASM)	5		see OCASYS	see OCASYS
Specialization/Electives **	35	see OCASYS	see OCASYS	see OCASYS
1 st Research Project	30	IEMS, SUE, S&S, SIS, DASM, specialization modules	plan, process, presentation, written report	research
2 nd Research Project	30	IEMS, SUE, S&S, SIS, DASM, specialization and optional courses, 1 st Research Project	plan, process, presentation, written report	research

** depending on the student's background and the topic of the training and/or master thesis more courses can be obligatory (and less optional), the Board of Examiners will decide on this.

Appendix IV: Electives of the degree programme (art. 2.4)

The Specialization and Electives comprise 35 EC.

Depending on the student's background and the topic of the training and/or master thesis a package of specialization courses and electives is composed as part of the MSc EES programme. The contents of this specialization and electives are discussed with a senior staff member (tutor) and have to be approved by the tutor and the Board of Examiners. The Board of Examiners has to approve the individual package of specialization and optional courses.

Appendix VI Admission requirements (art. 5.1.1; 5.2) Requirements for admission to the Msc Energy and Environmental Sciences:

Holders of the following Bachelor's degrees from the University of Groningen are considered to have sufficient knowledge and skills and will be admitted to the Master's degree programme in Energy and Environmental Sciences on that basis:

- a Bachelor's degree in Biology
- a Bachelor's degree in Life Science and Technology
- a Bachelor's degree in Pharmacy
- a Bachelor's degree in Chemistry
- a Bachelor's degree in Chemical Engineering
- a Bachelor's degree in Physics
- a Bachelor's degree in Applied Physics
- a Bachelor's degree in Astronomy
- a Bachelor's degree in Mathematics
- a Bachelor's degree in Applied Mathematics
- a Bachelor's degree in Computing Science
- a Bachelor's degree in Industrial Engineering and Management
- a Bachelor's degree in Artificial Intelligence

Appendix VII

Application deadlines for admission (art. 5.6.1)

Deadline of Application	Non-EU students	EU students
Nanoscience	February 1st 2017	May 1 st 2017
Behavioural and Cognitive Neurosciences	May 1st 2017	May 1st 2017
Biomolecular Sciences (topprogramme)	May 1st 2017	May 1st 2017
Evolutionary Biology (topprogramme)	May 1st 2017	May 1st 2017
Remaining FMNS Masters	May 1st 2017	May 1st 2017

Decision deadlines (art. 5.6.3)

Deadline of Decision	Non-EU students	EU students
Nanoscience	June 1st 2017	June 1st 2017
Behavioural and Cognitive Neurosciences	June 1st 2017	June 1st 2017
Biomolecular Sciences (topprogramme)	June 1st 2017	June 1st 2017
Evolutionary Biology (topprogramme)	June 1st 2017	June 1st 2017
Remaining FMNS Masters	November 1st 2017	November 1st 2017