

MSc Governance of Sustainability

CROHO-number 60965

The MSc programme is instituted in the Faculty of Science of Leiden University, herein referred to as the Faculty, and taught in The Hague by the Institute of Public Administration and Leiden University College, Faculty of Governance and Global Affairs, and by the Institute of Environmental Sciences, Faculty of Science”;

The duration of the programme is two years (120 EC). Students who complete the programme receive the degree Master of Science in Governance of Sustainability.

The goal of the master programme Governance of Sustainability is to provide students with a thorough basis in natural sciences and in governance needed to handle the grand challenges regarding sustainability. Students learn how to analyse these complex issues from both perspectives and how to integrate these perspectives in order to develop and improve the quality of governance solutions needed to achieve a sustainable society. In addition, you will acquire a variety of skills required to cope with wicked sustainability problems and to develop oneself into a future ‘change agent’.

Learning outcomes

Knowledge and understanding

The student has:

- a) Thorough knowledge of the technical and scientific aspects of the key sustainability issues. These issues include:
 - i) materials and circular economy;
 - ii) biodiversity and ecosystems;
 - iii) climate and energy;
 - iv) toxicity and water.
- b) Thorough knowledge of the key concepts and theories that are relevant to understanding governance processes. These include:
 - i) institutions and policy cycles;
 - ii) decision making and governance networks;
 - iii) global governance and multi-level analysis;
 - iv) policy framing.

The student is able to:

- a) recognize normative and culture positions of all actors involved in the governance of sustainability – both academics and practitioners.
- b) select and apply a wide variety of social science and natural science methods to evaluate sustainability issues, among others:
 - i) Material Flow Analysis (MFA);
 - ii) Geographic Information Systems (GIS);
 - iii) Environmental Input Output Analyses;
 - iv) Discourse analyses;
 - v) Network analyses;
 - vi) Stakeholder analyses;
 - vii) Univariate and multivariate statistical analyses;
 - viii) Qualitative analyses (interviewing, observing, coding);
 - ix) Multi-level analysis
- c) explain why sustainability issues are wicked problems, starting from an integrated analysis of both the natural and the social sciences.
- d) understand how sustainability issues are constrained and enabled by multilevel and multistakeholder governance settings and policy processes.
- e) explain which theories, concepts, and data from the natural sciences is -or could be- applied in transnational, national and local governance processes.
- f) analyse a complex sustainability issue and combine knowledge and methods from various disciplines to come to an integrated proposal for governance solution for the issue at hand.

- g) formulate integrated and innovative solutions and implementation pathways regarding sustainability issues.

Skills

The student is able to:

- a) operate within a transdisciplinary and diverse international context, by applying the following skills: critical thinking, synthesizing, reflecting, arguing, debating and intercultural skills.
- b) design and carry out in-depth research on sustainability issues, starting from a set of concepts, theories and research methods based on either the natural or the social sciences, or from a combined approach.
- c) execute integrative scientific research projects (design, organize, execute, analyse and report).
- d) convincingly communicate results from scientific research about sustainability issues to both specialist and non-specialist audiences
- e) argue a well-considered stance on the governance of sustainability issues, making use of the relevant disciplines.
- f) able to be a governance broker and is able to work with and for others, can create commitment for action, has a sense of responsibility and intercultural sensitivity, and demonstrates leadership.
- g) recognise, respect and use individual and cultural differences within a team.

Judgement

A student is able to:

- a) make an integral and critical assessment of available scientific knowledge and knowledge about governance processes to make judgements about sustainability issues.
- b) compare different transnational, national and local governance settings, policy approaches and institutions to address sustainability issues and apply the most suitable approach.
- c) critically reflect on ethical and normative dimensions regarding the governance of sustainability issues and the associated questions of complexity and uncertainty.
- d) act according to the different normative and culture positions of all actors involved in the governance of sustainability.

Learning skills

A student:

- a) Has a positive attitude and openness towards self-directed and life-long learning.
- b) Is able to design and plan their own learning processes by virtue of continuous reflection on personal knowledge, skills, attitudes and performance.
- c) Is able to study independently and explore new areas of interest regarding the governance of sustainability issues.

Admission to the programme

The programme starts in September and February. Admission in September is however preferred. The two faculty boards will jointly appoint the Board of Admissions. The Board of Admissions consists of two members: one staff member from each faculty. The Board of Admissions will judge the qualifications of the applicants on the basis of their previous training.

Confirmation of admission

The Faculty Board provides confirmation of admission if the student meets the entry requirements specified below.

Confirmation of admission must be applied for according to the rules set out in the Regulations for Admission to Master's Programmes.¹

¹[Regulations for Admission to Master's Programmes](#)

Admission to the programme

Pursuant to Article 7.30b (1) of the Act the following candidates may be admitted to the programme:

holders of a bachelor's degree from a research university in the Netherlands, or from a foreign research university of similar level.

The Board of Admissions may, on request, admit persons to the programme who do not hold a bachelor's degree from a research university in the Netherlands, or from a foreign research university of similar level, but who can demonstrate to the satisfaction of the Board of Admissions that they possess the same level of knowledge, understanding and skills as holders of such a bachelor's degree, possibly under further conditions, without prejudice to the conditions specified below.

This may, amongst others, apply to holders of a degree from a University of Applied Sciences (hoger beroepsonderwijs, hbo) in the Netherlands, or from a foreign University of Applied Sciences of similar level and length of studies. The hbo diploma has to be obtained with a grade point average of at least 7.5.

Dutch and English languages²

As further clarification of Article 2.5 in this master's Course and Examination Regulations concerning command of the language of instruction, a student who wishes to be admitted to an English-taught master's programme must have one of the following diplomas or must meet the criteria of:

- An International Baccalaureate diploma (or other with English A);
- A diploma of secondary or higher education completed in the US, the United Kingdom, Ireland, New Zealand, Australia or Canada (with the exception of French-taught education in Canada);
- A diploma of an English-taught university degree programme completed at a Dutch research university;
- A pre-university education (vwo) diploma.
- A high school (or higher) diploma determined by SEA (Admissions Office) in an EER country, where English has been studied up to and including the final year of the programme, and where the level of English can be considered comparable to Dutch vwo (pre-university education).

If a student who wishes to be admitted does not meet the abovementioned language requirements, at least one of the following language requirements can be set:

- IELTS: minimum overall score of 6.5, with a minimum of 6.0 for each of the components Listening, Reading, Writing and Speaking
- TOEFL: internet based 90 (minimum 20 component score)
- Cambridge C2 Proficiency (CPE) or C1 Advanced (CAE): a score of at least 180 (minimum 169 component score)

Qualitative admission requirements

In addition to the aforementioned requirements, the following qualitative admission requirements apply for the programme pursuant to Article 7.30b (2) of the Act:

- a. Demonstrable knowledge of environmental sustainability issues. Environmental sustainability refers to the capacity of the Earth to produce vital renewable resources and to allow long-term environmental quality (and the governance thereof). This may include activities at an academic level in the field of environmental sustainability issues. Eligible are activities carried

² Letter of the Minister of Education, Culture and Science of 11 July 2018, decision on costs of standardised tests (costs of standardised tests, including language tests, are to be paid by the study programme from the academic year 2019-2020). This applies for all students. If possible, the Minister will make a decision on a different procedure for students with a diploma from outside the Netherlands.

out in the context of bachelor education, such as internships and research projects or student assistance activities.

- b. Demonstrable experience with inter- or trans-disciplinary education and research. Eligible are elective courses, a minor, major, internship or a summer course (minimal bachelor level) on topics that are outside his or her own primary discipline. For instance, this may be a minor in terms of sustainability such as the minor Sustainable Development of CML or the minor Science and Technology in Society (coordinated by the Centre for Science and Technology Studies, Faculty of Social Sciences).
- c. Passed one or multiple courses in quantitative methods or quantitative modelling, including statistical methods, equivalent to a minimum of 8 EC.

Applicants need to provide the Board of Admissions with a letter which, in relation to the qualitative admission requirements specified above, elaborates on relevant course modules, summer courses, internships, or other relevant experiences at a sufficient academic level.

The admission process may include an interview with the Board of Admissions, should this be necessary to clarify whether the applicant has the same level of knowledge, understanding and skills as holders of a degree from a research university in the Netherlands, or from a foreign research university of similar level and meets the aforementioned qualitative requirements.

The deadline for the fulfilment of qualitative admission requirements mentioned above is before the start of the academic year in which the student starts the programme. However, applicants need to elaborate on the qualitative admission requirements in their motivation letter when applying for the programme.

Maximum capacity

Not applicable

Deficiencies

Holders of a bachelor's degree from a Dutch or foreign research university with x (may vary from 1 to 15) ECTS of deficiencies, may be admitted to the programme, as long as it may reasonably be expected that they will meet the entry requirements within a reasonable period of time.

Students who still have such deficiencies when admitted to the programme may participate in the programme but may not sit any final examinations or examinations that the Faculty Board has specified in its decision to grant admission.

For the admission of candidates with deficiencies referred to above, the Board of Admissions assembles a catch-up programme with examination opportunities.

If a student is admitted to the programme and must sit examinations to meet the entry requirements, these are not considered part of the curriculum of the Master's programme.

Bridging programmes (Pre-master's)

For holders of a bachelor's degree who do not sufficiently meet the admission requirements the Board of Admissions may impose a Pre-Master's programme, tailored to the individual background of the prospective student, before admission into the MSc programme.

Special tracks

The master's programme does not offer special tracks.

Programme

The programme consists of compulsory courses (78 EC), electives (12 EC) and a Research project (30 EC). The programme is outlined below.

	Level	EC
Transdisciplinary skills	500	6

Thematic course 1: Governance of Materials & Circular Economy	500	12
Thematic course 2: Governance of Biodiversity & Ecosystems	500	12
Thematic course 3: Governance of Climate change & Energy Transition	500	12
Qualitative Research skills	500	6
Thematic course 4: Governance of Water & Toxicity	500	12
Quantitative Research skills	500	6
Sustainability Challenge	600	12
Thesis Preparation Course	600	6
Thesis Research Project	600	24
Electives		12

Electives

Students have to complete at least 12 EC of electives. The electives have to be approved by the Board of Examiners before the start of the study components and must meet the following criteria:

1. The elective course should be on MSc level;
2. The elective course should not show a (considerable) overlap with or replace compulsory courses or other chosen electives;
3. The elective course should:
 - a. Deepen the understanding in governance, or
 - b. Deepen the understanding in natural science aspects of sustainability, or
 - c. Improve non-transferable or transferable skills needed to become a knowledge broker or change agent, or
 - d. Gather topical knowledge on the masters' thesis research.
4. The elective course cannot be more than 12 EC.

Compulsory and optional components

- If a large difference exists between the expected and actual enrolment of students in a mandatory component, the programme management can decide to change the format of teaching methods and assessment.
- If a large difference exists between the expected and actual enrolment of students in a non-mandatory, elective component, the institute's board that offers this elective component may decide not to offer this component or to offer it in a different form; in this case, students will be informed before the start of the component and will be offered an alternative.

Validity of interim examinations

The validity period of a partial grade is limited until the end of the academic year in which the interim examination was obtained.