

# Programme-specific part of the Education and Examination Regulations 2024-2025

## Graduate School of Geosciences: Master's degree programme in Science & Innovation

The programme of the starting year of the student is the leading programme. If the programme is adjusted, the transitional arrangements (conversion of former courses) will be published in the new Education and Examination Regulations.

The Master's degree programme *Science & Innovation* offers the programmes *Innovation Sciences* and *Sustainable Business and Innovation*.

### Art. 2.1 – Admission requirements

1. The following conditions for admission apply:

Admission to the **Innovation Sciences** programme is granted to students with a Dutch or foreign diploma confirming that they have acquired the knowledge, insight and skills at the university Bachelor's level.

Furthermore, students need to prove that they have gained the following specific knowledge, insight and skills:

- a) knowledge in the field of *Science and Innovation Management, Natural Sciences or Life Sciences* at the advanced level of the major *Science and Innovation Management, Natural Sciences or Life Sciences* at Utrecht University (or equivalent to that level)
- b) knowledge of emerging technology issues and complex multidisciplinary problems
- c) insight into *Science and Innovation Management, Natural Sciences or Life Sciences* at the advanced level of the major *Science and Innovation Management, Natural Sciences or Life Sciences* at Utrecht University (or equivalent to that level)
- d) academic and research skills at the advanced level of the major *Science and Innovation Management, Natural Sciences or Life Sciences* at Utrecht University (or equivalent to that level)

Admission to the **Sustainable Business and Innovation** programme is granted to students with a Dutch or foreign diploma confirming that they have acquired the knowledge, insight and skills at the university Bachelor's level. Furthermore, students need to prove that they have gained the following specific knowledge, insight and skills:

- a) knowledge in the field of *Science and Innovation Management, Environmental Sciences, Environmental Studies or Economics* at the advanced level of the major *Science and Innovation Management, Environmental Sciences, Environmental Studies or Economics* at Utrecht University (or equivalent to that level)
- b) knowledge of sustainable development and innovation sciences
- c) basic knowledge of natural sciences at Bachelor's level, including *Mathematics* and/or *Chemistry* and/or *Physics*
- d) insight into *Science and Innovation Management, Environmental Sciences, Environmental Studies or Economics* on the advanced level of the major *Science and Innovation Management, Environmental Sciences, Environmental Studies or Economics* at Utrecht University (or equivalent to that level)
- e) academic and research skills at the advanced level of the major *Science and Innovation Management, Environmental Sciences, Environmental Studies or Economics* at Utrecht University (or equivalent to that level)

2. Students will be selected based on objective standards regarding:

- a) their previous academic performance in a relevant subject area
- b) relevant skills
- c) their command of the language or languages used in the programme
- d) the following additional selection criteria with proven relevance for the opinion on the suitability of the candidate:
  - motivation
  - average grade

This information is used to consider whether the student concerned will be able to complete the Master's Programme successfully within the set time period.

The admission requirements have been formulated clearly and transparently so that candidates know in advance what requirements must be met in order to qualify for selection.

### Art. 3.1 – Aim of the degree programme

1. The degree programme aims to:

- provide students with specialised knowledge, skills and understanding in the field of *Science and Innovation* so that they can achieve the final qualifications as mentioned in Article 3.1.2

- prepare students for professional employment in one or more disciplines of *Science and Innovation*
- prepare students for training as researchers in the field of *Science and Innovation*

2. Graduates in *Science and Innovation*

1. have advanced knowledge and understanding of the dynamics and challenges of *Science and Innovation* in the context of both organisations and society at large
2. can conduct research on the dynamics and challenges of *Science and Innovation* in a creative and independent way
3. can apply knowledge and research methods as well as problem-solving abilities in broader contexts related to the dynamics and challenges of *Science and Innovation*
4. have insight into the complex interactions between science, innovative technology and society and are able to reflect critically on the roles of science and technology in society
5. have professional and academic skills, particularly in relation to the dynamics and challenges of *Science and Innovation*
6. can apply knowledge and understanding in such a way that they demonstrate a professional approach to their work
7. can communicate their conclusions, as well as the knowledge, reasons and considerations underlying these conclusions, to an audience of specialists and non-specialists alike
8. are able to study and work independently and explore new areas of interest in the field of the programme or related fields and demonstrate a professional approach to their work

More programme-specific qualifications are listed in the prospectuses of the different programmes.

**Art. 3.6 – Components of the Master’s programme**

1. Appendices 1 and 2 describe the required courses of the programmes, including the course load per course.
2. Students may choose optional courses. The course load of the optional courses are listed in appendices 1 and 2. The rules for choosing optional courses are listed in appendix 3.
3. The prospectus gives a detailed description of the content and type of courses in the different programmes, including prior knowledge that is required to participate successfully.

**Art. 4.2 – Course admission requirements**

The Executive Board decides the order in which the required components of a Master’s degree programme must be completed. This has been listed in Appendix 4.

**art. 4.7 –Evaluation of the quality of education**

1. The Director of Education monitors the quality of education, and ensures that both the courses and the curriculum are evaluated. The Director takes into consideration the advice and suggestions given by the Education Committee regarding improving and ensuring the quality of the programme.
2. Students are informed of the outcomes of the course and curriculum evaluations.

# Appendices

## Appendix 1: Exam programme Innovation Sciences

### 1. Compulsory components (105 EC)

-	Innovation Management	7.5 EC
-	Innometrics	7.5 EC
-	Quantitative Innovation Analytics	7.5 EC
-	Innovation Systems and Processes	7.5 EC
-	Societal Challenges and Innovation Theory	7.5 EC
-	Qualitative Innovation Analytics	7.5 EC
-	Consultancy Project IS and SBI	15 EC
-	Master's thesis	45 EC

### 2. Optional components (15 EC)

Students should select optional courses for a total of 15 EC. At least 7.5 EC of this should be credits from natural science courses.

### 3. Conversion of former courses

Not applicable in 2024-2025

## Appendix 2: Exam programme Sustainable Business & Innovation

### 1. Compulsory components (105 EC)

-	Innovation Management	7.5 EC
-	Understanding and Assessing Technologies for Sustainability	7.5 EC
-	Corporate Sustainability and Change Management	7.5 EC
-	Sustainability Assessment and Management Tools	7.5 EC
-	Governance and Sustainability Transitions	7.5 EC
-	Sustainable Business Research Methods	7.5 EC
-	Consultancy Project IS and SBI	15 EC
-	Master's thesis	45 EC

### 2. Optional components (15 EC)

Students should select optional courses for a total of 15 EC.

### 3. Conversion of former courses

Not applicable in 2024-2025

## Appendix 3: Rules for choosing elective courses

1. Students in the Master's programme choose elective courses from another or their own Master's programme. Courses that are obligatory in the exam programme cannot be used as elective courses.
2. For Innovation Sciences: at least 7.5 EC of the electives should be credits from natural science courses.
3. Honours programmes for Master's students (e.g. Young Innovators, GHIS, Leadership Programme) do not count towards the electives in the programme.
4. Electives as mentioned in the student's academic progress review in Osiris are pre-approved by the programme leader and by the Board of Examiners. Students can enrol for those courses via Osiris. It remains the student's responsibility to make sure that the points mentioned under 7 d-f are met. If the course is from another department than the Copernicus Institute, it may be that other students have priority and that they are therefore placed on a waiting list.
5. It is possible to choose other courses than the pre-approved courses mentioned in Osiris. Any non-pre-approved elective courses must be subjected in advance to the programme leader and the Board of Examiners for approval. The programme leader will advise the Board in this matter.
6. The application for a non-pre-approved elective is done by a written request (form) to the programme leader. Written information on the content, the level, and the study load of the course (preferably by means of a copy of the course's description from the course catalogue) must be attached. The 'Application Form Elective courses Copernicus' can be found in the Blackboard communities Innovation Sciences and Sustainable Business and Innovation.

7. The programme leader tests the proposed elective course(s) on the following criteria:
- It must be thematically linked to the Master's programme;
  - It concerns a course at master level (M);
  - There is no overlap in content with courses still to be taken or already taken.  
The student is responsible for making sure that:
  - The course is available to students of the IS/SBI programme;
  - The student fulfills the entrance requirements of the course (if applicable). Actual participation is only possible if students satisfy the course's entrance conditions; in case of doubt they should contact the course coordinator first;
  - The course is not taught in the same period and timeslot as another course the student has selected.
8. If the programme leader has declared that the elective course(s) meet the criteria under 7a-c (by signing the application form or sending an email confirming the approval), the student sends the signed application form (and email if applicable) and the course information to the Board of Examiners via Osiris Case. The Board of Examiners takes the final decision on whether or not the elective is approved.
9. In the programme's course schedule, room has been reserved for taking electives. However, the student is free to deviate from this planning, e.g. because they wish to take an interesting elective course in another period. If this causes delay in the study planning, the responsibility is for account of the student! Students are therefore advised to take their electives in the reserved periods and timeslots, or use a part of the time planned for their internship and/or Master's thesis.

#### Appendix 4: Entrance requirements and course exclusions 2024-25

##### Innovation Sciences:

<b>Course</b>	<b>Entrance requirement</b>
Sustainable Food Systems (GEO4-2005)	Letter of acceptance of a Master's programme
Consultancy Project IS and SBI (GEO4-2007)	- Letter of acceptance MSc Innovation Sciences or Sustainable Business and Innovation & Passed at least three out of four examinations of <ul style="list-style-type: none"> <li>- Innovation Management (GEO4-2268)</li> <li>- Quantitative Innovation Analytics (GEO4-2270)</li> <li>- Innovation Systems and Processes (GEO4-2257)</li> <li>- Innometrics (GEO4-2259)</li> </ul> Recommended pre-requisites: <ul style="list-style-type: none"> <li>- Qualitative Innovation Analytics (GEO4-2260)</li> <li>- Societal Challenges &amp; Innovation Theory (GEO4-2258)</li> </ul>
Innovation and International Development (GEO4-2009)	Letter of acceptance MSc Sustainable Development or MSc Innovation Sciences or MSc Sustainable Business & Innovation or MSc Energy Science or MSc Water Science and Management.
Imagining the Future for Transformation (GEO4-2010)	Letter of acceptance of a Master's programme
Data Analytics for Sustainability (GEO4-2011)	Letter of acceptance MSc Sustainable Development or MSc Innovation Sciences or MSc Sustainable Business & Innovation or MSc Energy Science or MSc Water Science and Management. Recommended pre-requisites: knowledge of R and Python
Changemaking Journeys: Transformational leadership for societal impact' (GEO4-2013)	Letter of acceptance MSc Sustainable Development or MSc Innovation Sciences or MSc Sustainable Business & Innovation or MSc Energy Science or MSc Water Science and Management.
Master's Thesis IS (GEO4-2239X)	- Letter of acceptance MSc Innovation Sciences - Passed at least five out of six examinations of: <ul style="list-style-type: none"> <li>- Innovation Management (GEO4-2268)</li> <li>- Innovation Systems and Processes (GEO4-2257)</li> </ul>

	<ul style="list-style-type: none"> <li>- Societal Challenges &amp; Innovation Theory (GEO4-2258)</li> <li>- Innometrics (GEO4-2259)</li> <li>- Qualitative Innovation Analytics (GEO4-2260)</li> <li>- Quantitative Innovation Analytics (GEO-2270)</li> </ul>
Innovation Systems and Processes (GEO4-2257)	Letter of acceptance of a Master's programme
Societal Challenges & Innovation Theory (GEO4-2258)	Letter of acceptance of a Master's programme Recommended prerequisites: <ul style="list-style-type: none"> <li>- Innovation Systems and Processes (GEO4-2257), and</li> <li>- Innovation Management (GEO4-2268)</li> </ul>
Innometrics (GEO4-2259)	Letter of acceptance of a Master's programme
Qualitative Innovation Analytics (GEO4-2260)	Letter of acceptance of a Master's programme. Not for SBI students
Innovation Management (GEO4-2268)	Letter of acceptance MSc Innovation Sciences or Sustainable Business and Innovation
Tailor made course IS (GEO4-2269)	- Letter of acceptance MSc Innovation Sciences - At least 45 EC passed within the programme
Quantitative Innovation Analytics (GEO4-2270)	Followed the course: <ul style="list-style-type: none"> <li>- Innometrics (GEO4-2259)</li> </ul> Recommended pre-requisite: <ul style="list-style-type: none"> <li>- Innovation Management (GEO4-2268)</li> </ul>
Techniques of Futuring (GEO4-5501)	Letter of acceptance of a Master's programme

#### Sustainable Business and Innovation:

<b>Course</b>	<b>Entrance requirement</b>
Sustainable Food Systems (GEO4-2005)	Letter of acceptance of a Master's programme
Consultancy Project IS and SBI (GEO4-2007)	<ul style="list-style-type: none"> <li>- Letter of acceptance MSc Sustainable Business and Innovation or Innovation Sciences</li> <li>- Passed at least three out of four examinations of: <ul style="list-style-type: none"> <li>• Innovation Management (GEO4-2268)</li> <li>• Understanding and Assessing Technologies for Sustainability (GEO4-2608)</li> <li>• Sustainability assessment and management tools (GEO4-2602)</li> <li>• Corporate Sustainability and Change Management (GEO4-2610)</li> </ul> </li> <li>- Recommended pre-requisites: <ul style="list-style-type: none"> <li>• Sustainable Business Research Methods (GEO4-2609)</li> <li>• Governance and Sustainability Transitions (GEO4-2611)</li> </ul> </li> </ul>
Innovation and International Development (GEO4-2009)	Letter of acceptance MSc Sustainable Development or MSc Innovation Sciences or MSc Sustainable Business & Innovation or MSc Energy Science or MSc Water Science and Management.
Imagining the Future for Transformation (GEO4-2010)	Letter of acceptance of a Master's programme
Data Analytics for Sustainability (GEO4-2011)	Letter of acceptance MSc Sustainable Development or MSc Innovation Sciences or MSc Sustainable Business & Innovation or MSc Energy Science or MSc Water Science and Management. Recommended pre-requisites: knowledge of R and Python
Changemaking Journeys: Transformational leadership for societal impact' (GEO4-2013)	Letter of acceptance MSc Sustainable Development or MSc Innovation Sciences or MSc Sustainable Business & Innovation or MSc Energy Science or MSc Water Science and Management.
Innovation Management (GEO4-2268)	Letter of acceptance MSc Innovation Sciences or Sustainable Business and Innovation
Sustainability assessment and management tools (GEO4-2602)	Letter of acceptance MSc Sustainable Business and Innovation or MSc Innovation Sciences or

	MSc Sustainable Development or MSc Water Science and Management Recommended pre-requisites: Understanding and Assessing Technologies for Sustainability (GEO4-2608)
Master's Thesis (GEO4-2606) cohort 2021 and earlier	<ul style="list-style-type: none"> <li>- Letter of acceptance MSc Sustainable Business and Innovation</li> <li>- Passed at least five out of six examinations of: <ul style="list-style-type: none"> <li>• Business and Sustainability Challenges (GEO4-2601) or Innovation Management (GEO4-2268)</li> <li>• Understanding and Assessing Technologies for Sustainability (GEO4-2608)</li> <li>• Toolbox 1: Environmental assessment and management approaches (GEO4-2602)</li> <li>• Toolbox 2: CS implementation: theory and practice (GEO4-2603)</li> <li>• Governance and Change Management for Sustainability (GEO4-2604)</li> <li>• Qualitative Innovation Analytics (GEO4-2260) or Sustainable Business Research Methods (GEO4-2609)</li> </ul> </li> </ul>
Master's Thesis (GEO4-2606) cohort 2022 and later	<ul style="list-style-type: none"> <li>- Letter of acceptance MSc Sustainable Business and Innovation</li> <li>- Passed at least five out of six examinations of: <ul style="list-style-type: none"> <li>• Innovation Management (GEO4-2268)</li> <li>• Understanding and Assessing Technologies for Sustainability (GEO4-2608)</li> <li>• Sustainability assessment and management tools (GEO4-2602)</li> <li>• Corporate Sustainability and Change Management (GEO4-2610)</li> <li>• Governance and Sustainability Transitions (GEO4-2611)</li> <li>• Sustainable Business Research Methods (GEO4-2609)</li> </ul> </li> </ul>
Tailor made course SBI (GEO4-2607)	<ul style="list-style-type: none"> <li>- Letter of acceptance MSc Sustainable Business and Innovation</li> <li>- At least 45 EC passed within the programme.</li> </ul> <p>Recommended pre-requisites: All first year SBI courses</p>
Understanding and Assessing Technologies for Sustainability (GEO4-2608)	Letter of acceptance MSc Sustainable Business and Innovation or MSc Innovation Sciences
Sustainable Business Research Methods (GEO4-2609)	Letter of acceptance MSc Sustainable Business and Innovation
Corporate Sustainability and Change Management (GEO4-2610)	Letter of acceptance MSc Sustainable Business and Innovation  Recommended pre-requisites: Innovation Management (GEO4-2268)
Governance and Sustainability Transitions (GEO4-2611)	Letter of acceptance MSc Sustainable Business and Innovation
Techniques of Futuring (GEO4-5501)	Letter of acceptance of a Master's programme