



# **Programme-specific Section of the Curriculum for the MSc Programme in Geography and Geoinformatics with a minor subject at the Faculty of Science, University of Copenhagen 2010 (Rev. 2025)**

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## 1 Title, affiliation and language

A shared section that applies to all BSc, part-time MSc and MSc Programmes at the Faculty of Science is linked to this programme-specific curriculum.

### 1.1 Title

The MSc Programme in Geography and Geoinformatics with a minor subject leads to a Master of Science (MSc) in Geography and Geoinformatics and minor in [the minor subject] with the Danish title: *Cand.scient. (candidatus/candidata scientiarum) i geografi og geoinformatik med sidefag i [the minor subject]*.

It will appear from the diploma that the study programme has been completed as an MSc in two subjects and, provided that the requirements pertaining to the Upper Secondary School course packages (*gymnasiefagpakkerne*) have been met, that academic qualifications (*faglig competence*) for teaching at the Danish Upper Secondary School in the subjects have been achieved.

### 1.2 Affiliation

The programme is affiliated with the Study Board of Geosciences and Management, and the students can both elect, and be elected, to this study board.

### 1.3 Corps of external examiners

The following corps of external examiners is used for the central parts of the MSc Programme:

- Corps of External Examiners for Geography and Geoinformatics (*geografi*).

### 1.4 Language

The language of this MSc Programme is English.

## 2 Academic profile

### 2.1 Purpose

Graduates in Geography and Geoinformatics with a minor subject are able to apply geographical methods of working in a critical manner and communicate academic problems and model solutions to geographers and to other partners and users. The breadth and interdisciplinary nature of the programme enables them to engage in and manage complex tasks and projects related to a wide range of societal challenges and sustainable development. They are also able to understand and work with people from different scientific backgrounds, and act as bridge-builders between the natural and social sciences.

### 2.2 General programme profile

The MSc programme includes a thesis, which is an independent experimental, field-based or theoretical study within a clearly defined area of the geographical fields of study. Geography and Geoinformatics is the key subject area of the programme.

### 2.3 General structure of the programme

The MSc Programme is set at 120 or 150 ECTS depending on whether the minor subject is within the field of sciences or not.

Exercise and Sport Sciences is in this regard considered as being outside the field of science.

The MSc Programme in Geography and Geoinformatics with a minor subject consists of the following elements:

- Basic study program, 120 ECTS including the thesis.

- Extension of the minor subject, 30 ECTS, if the minor subject is outside the field of science.

There are no defined specialisations in this MSc Programme.

## 2.4 Career opportunities

The MSc Programme in Geography and Geoinformatics with a minor subject qualifies students to become professionals within business functions and/or areas such as:

- Upper secondary school teacher in Geography and the minor subject.
- Consultants and advisors in private consultancy firms or non-governmental organizations.
- Public administration in municipalities or ministries, e.g., as urban, rural, regional or environmental planner.
- Specific sectors such as communication, real estate development and finance, e.g. as sustainability advisors, and development advisors on Global South issues in the UN-system and other aid organizations, including consultancies and NGO's.
- A PhD programme.
- As teachers in geography in other educational institutions.

## 3 Description of competence profiles

Students following the MSc Programme acquire the knowledge, skills and competences listed below. Students will also acquire other qualifications through elective subject elements and other study activities.

### 3.1 Competence profile

Graduates holding an MSc in Geography and Geoinformatics with a minor subject have acquired the following:

#### Knowledge about:

- Insights into the advanced theories and methodologies of the geographical field of study.
- Analysing and taking a critical approach to natural, environmental or societal structures and changes and the process-related and spatial aspects of such changes.
- Detailed knowledge about the student's field(s) of specialisation.

#### Skills in/to:

- Take a scientific, problem-oriented and critical approach to geographically relevant issues within aspects of nature, the environment and society.
- Work at a high scientific level within the geographical field of study or the graduate's fields of specialisation.
- Have an understanding of the special identity and application-oriented perspectives of the geographical field of study, for example in relation to the job market.

#### Competences in/to:

- Identifying and preparing proposals to solving complex geographical problems in terms of theory, methodology and empiricism based on independently acquired knowledge at a high level.
- Expression and argumentation in scientifically correct language, and ability to engage in a scientific discussion and communicate scientific knowledge at various levels.
- Integrating, discussing and putting into perspective theoretical, methodological and empirical choices, for example demonstrating reflective and critical thinking about the

choices made and the possibilities and limitations of science in relation to a specific problem.

- Critically assessing own academic abilities and the relationship between own field of study and other fields of study, for example being able to assess and relate literature within one field to literature within other contiguous academic fields of study.
- Independently managing and carrying out large-scale data collection and analysis.
- Independently planning own learning strategy, learning outcomes and learning situation and entering into different learning and collaborative contexts, for example with students/graduates within other fields of study.

## 4 Admission requirements

The admission requirements for the MSc Programme in Geography and Geoinformatics with a minor subject is the same as the admission requirements listed in paragraph 4 in “Programme-specific Section of the Curriculum for the MSc Programme in Geography and Geoinformatics” supplemented with the following:

- At least 105 ECTS from the Upper Secondary School course package (*gymnasiefagpakken*) are included in the BSc programme.
- At least 45 ECTS from the minor subject is included in the BSc programme.
  - If the minor subject is *within* the field of sciences (with the exception of Exercise and Sport Sciences) the 45 ECTS must be contained in the minor subject Upper Secondary School course package (*den reducerede gymnasiefagpakke*).

## 5 Prioritisation of applicants

With a Bachelor’s degree in Geography and Geoinformatics (*geografi og geoinformatik*) from University of Copenhagen the student is granted reserved access and guaranteed a place on the MSc Programme in Geography and Geoinformatics with a minor subject if the student applies in time to begin the MSc Programme within three years of the completion of the Bachelor's degree.

If the number of qualified applicants to the programme exceeds the number of places available, the applicants will be prioritised according to paragraph 5 in “Programme-specific Section of the Curriculum for the MSc Programme in Geography and Geoinformatics”.

## 6 Structure of the programme

The compulsory subject elements, restricted elective subject elements and the thesis constitute the central parts of the programme (Section 30 of the Ministerial Order on Bachelor and Master’s Programmes (Candidatus) at Universities).

### 6.1 Programme components

The programme is set at 120/150 ECTS and consists of the following:

- Compulsory subject elements, 7.5 ECTS.
- Restricted elective subject elements, 37.5 ECTS.
- The minor subject
  - 45 ECTS (minor subject within the field of science)
  - 75 ECTS (minor subject outside the field of science)
- Thesis, 30 ECTS.

### 6.1.1 Compulsory subject elements within the major subject

All of the following subject elements are to be covered (7.5 ECTS):

Course Code	Course Title	Block	ECTS
NNDK22001U	Videregående fagdidaktik i naturvidenskabelige fag	Block 2	7.5 ECTS

### 6.1.2 Restricted elective subject elements within the major subject

37.5 ECTS are to be covered as subject elements from the following lists:

Course Code	Course Title	Block	ECTS
NIGK23004U	Environment, Society and Development in the Global South	Block 1	7.5 ECTS
NIGK14009U	Land Use Transitions in the Global South	Block 1	7.5 ECTS
NGEK10015U	The Dynamics of City Regions: Social and Economic Change	Block 1	7.5 ECTS
NGEK10002U	Applied GIS and Geoinformatics for Urban Spatial Analysis	Block 1	7.5 ECTS
NIGK17010U	Remote Sensing of the Bio-Geosphere	Block 1	7.5 ECTS
NIGK17014U	Coastal Geoscience	Block 1	7.5 ECTS
NIGK17013U	Ecosystems, Climate and Climate Change	Block 1	7.5 ECTS
NIGK23013U	Urban and Rural Transformation: Uneven Geographies in the Global North	Block 2	7.5 ECTS
NIGK23007U	Glacial Geoscience	Block 2	7.5 ECTS
NGEK10024U	Globalisation and Dynamics in Global Value Chains	Block 2	7.5 ECTS
NIGK17016U	Environmental Soil Science	Block 2	7.5 ECTS
NIGK15001U	Advanced Geoinformatics	Block 2	7.5 ECTS
NIGK17011U	Spatial and Temporal Pattern Analysis	Block 2	7.5 ECTS
NIGK23009U	Rural Landscapes: Transformation and Governance	Block 2	7.5 ECTS
NGEK11006U	International Migration - Flows, Networks and Diasporas	Block 3	7.5 ECTS
LFKK10278U	Project Management	Block 3	7.5 ECTS
NIGK21000U	Numerical Modelling in Coastal, Estuarine and Marine Environments	Block 3	7.5 ECTS
NIGK15027U	Surface Hydrology	Block 3	7.5 ECTS
NIGK17012U	Remote Sensing in Land Science Studies	Block 3	7.5 ECTS
LNAK10066U	Planlægning i det åbne land	Block 3	7.5 ECTS
NIGK15002U	Aerial and Near-field Remote Sensing	Block 3	7.5 ECTS
NIGK20001U	Rural-Urban Transformations in the Global South	Block 4	7.5 ECTS
NIGK15005U	Ecological Modelling	Block 4	7.5 ECTS
NIGK23005U	Carbon Storage and Biological Interactions in Soil	Block 4	7.5 ECTS
NIGK14008U	VVM i praksis	Block 4	7.5 ECTS
NIGK15021U	Programming, Customization and Automation in GIS	Block 4	7.5 ECTS
NIGK22000U	Satellite Image Processing and Analysis in the Big Data Era	Block 4	7.5 ECTS
NIGK15022U	Project Course in Geography and Geoinformatics	Block 1-5	7.5 ECTS
NFKK14006U	Project in Practice	Block 1-5	15 ECTS
NIGK15006U	Field and Methods Course in Geography and Geoinformatics	Block 1-5	15 ECTS

### 6.1.3 Restricted elective subject elements within the minor subject

45 ECTS are to be covered as subject elements from the minor subject if the minor subject is within the field of science.

75 ECTS are to be covered as subject elements from the minor subject if the minor subject is not within the field of science.

If the student lacks less than 45 or 75 ECTS of the minor subject when the MSc Programme begins the difference must be covered as elective subject elements.

#### **6.1.4 Elective subject elements**

The elective subjects are generally covered by the subject elements which the student follows on the minor subject.

- It is, however, possible to release elective subject elements if the academic minimum requirements for the minor subjects have been met – this will, e.g., be the case if one or both of the following two conditions are present:
  - A subject element forms part of both the major and minor Upper Secondary School course packages (*gymnasiefagpakker*). The subject element should only be passed once, and the student has full freedom of choice in terms of the remaining ECTS.
  - If less than 45 or 75 ECTS within the minor subject are missing when entering the MSc Programme.
- BSc subject elements corresponding to 15 ECTS may be included in the MSc Programme as elective subjects.
- Projects. See 6.1.5 Projects.

#### **6.1.5 Projects**

- Projects outside the course scope (PUK) may be included in the elective section of the programme with up to 15 ECTS. The regulations are described in Appendix 5 to the shared section of the curriculum.
- Projects in practice (PIP) may be included in the elective or restricted elective section of the programme with 15 ECTS. PIP may not exceed 15 ECTS in total of the programme. PIP may be written as a combination of the restricted elective and elective section of the programme. The regulations are described in Appendix 4 to the shared section of the curriculum.
- Thesis preparation projects (PREP) may not be included in the elective section of the programme. The regulations are described in Appendix 6 to the shared section of the curriculum.

#### **6.1.6 Thesis**

The MSc Programme in Geography and Geoinformatics includes a thesis corresponding to 30 ECTS, as described in Appendix 2 to the shared curriculum. The thesis must be written within the academic scope of the programme.

#### **6.1.7 Academic mobility**

The academic mobility is generally covered by the subject elements which the student follows on the minor subject.

The student has the possibility to arrange academic mobility in parts of the programme. This requires that the student follows the rules and regulations regarding pre-approvals and credit.

## **7 Exemptions**

In exceptional circumstances, the study board may grant exemptions from the rules in the curriculum specified solely by the Faculty of Science.

## **8 Commencement etc.**

### **8.1 Validity**

This subject specific section of the curriculum applies to all students enrolled in the programme – see however Appendix 2.

## **8.2 Transfer**

Students enrolled on previous curricula may be transferred to the new one as per the applicable transfer regulations or according to an individual credit transfer by the study board.

## **8.3 Amendments**

The curriculum may be amended once a year so that any changes come into effect at the beginning of the academic year. Amendments must be proposed by the study board and approved by the Dean.

Notification about amendments that tighten the admission requirements for the programme will be published online at [www.science.ku.dk](http://www.science.ku.dk) one year before they come into effect.

If amendments are made to this curriculum, an interim arrangement may be added if necessary to allow students to complete their MSc Programme according to the amended curriculum.

## Appendix 1 The recommended academic progression

The table illustrates the recommended academic progression. The student is allowed to plan an alternative progression within the applicable rules.

**Table – MSc Programme in Geography and Geoinformatics with a minor subject within SCIENCE**

Period	Block 1	Block 2	Block 3	Block 4
1st year	Minor subject	Minor subject	Minor subject	Minor subject
	Minor subject	Minor subject	Restricted elective	Restricted elective
2nd year	Restricted elective	Advanced Course in Science Teaching	Thesis	
	Restricted elective	Restricted elective		

**Table – MSc Programme in Geography and Geoinformatics with a minor subject outside SCIENCE**

Period	Block 1	Block 2	Block 3	Block 4
1st year	Minor subject	Minor subject	Minor subject	Minor subject
	Minor subject	Minor subject	Minor subject	Minor subject
2nd year	Restricted elective	Advanced Course in Science Teaching	Minor subject	Minor subject
	Restricted elective	Restricted elective	Restricted elective	Restricted elective
3rd year	Thesis			



## Appendix 2 Interim arrangements

The Shared Section that applies to all BSc, part-time MSc and MSc Programmes at the Faculty of Science applies to all students.

The interim arrangements below only consist of parts where the current curriculum differs from the rules and regulations that were previously valid. Therefore, if information about relevant rules and regulations are missing, it can be found in the curriculum above.

### 1 General changes for students admitted in the academic year 2022/23

Students admitted to the MSc Programme in the academic year 2022/23 must finish the programme as listed in the curriculum above with the following exceptions:

#### Restricted elective subject elements

37.5 ECTS are to be covered as subject elements from the following lists:

Restricted elective subject elements offered as part of this curriculum (see above)			
NIGK17008U	Environment, Society and Development	Discontinued*	7.5 ECTS
NIGK17015U	Transformation of Cities and Landscapes: Globalisation and Local Strategies	Discontinued*	7.5 ECTS
NIGK17017U	Glacial, Fluvial and Estuarine Geoscience	Discontinued*	7.5 ECTS
NGEK10018U	Countryside Planning: Policies, Processes and Regulation	Discontinued*	7.5 ECTS
NGEK10027U	Project Management and Planning	Discontinued*	7.5 ECTS
NIGK22001U	Use of Stable Isotopes for Advanced Studies of Environmental and Soil Biogeochemical Processes	Discontinued*	7,5 ECTS

\* See course specific changes below.

### 2 General changes for students admitted in the academic year 2021/22

Students admitted to the MSc Programme in the academic year 2021/22 must finish the programme as listed in the curriculum above with the following exceptions:

#### Compulsory subject elements within the major subject

All of the following subject elements are to be covered (7.5 ECTS):

Course Code	Course Title	Block	ECTS
NNDK15002U	Geografiens didaktik	Discontinued*	7.5 ECTS

\*See course specific changes below

#### Restricted elective subject elements

37.5 ECTS are to be covered as subject elements from the following list:

Restricted elective subject elements within the major subject offered as part of this curriculum, see above			
NIGK17007U	Advanced Soil Science and Isotope Geochemistry	Discontinued*	7.5 ECTS
NIGK17008U	Environment, Society and Development	Discontinued*	7.5 ECTS
NIGK17015U	Transformation of Cities and Landscapes: Globalisation and Local Strategies	Discontinued*	7.5 ECTS
NIGK17017U	Glacial, Fluvial and Estuarine Geoscience	Discontinued*	7.5 ECTS
NGEK10018U	Countryside Planning: Policies, Processes and Regulation	Discontinued*	7.5 ECTS
NGEK10027U	Project Management and Planning	Discontinued*	7.5 ECTS
NIGK22001U	Use of Stable Isotopes for Advanced Studies of Environmental and Soil Biogeochemical Processes	Discontinued*	7,5 ECTS

\*See course specific changes below

### 3 Discontinued courses

Course Code	Course Title	ECTS	Interim arrangement
NIGK17007U	Advanced Soil Science and Isotope Geochemistry	7.5	The course was restricted elective in the academic year 2021/22. Offered for the last time: 2021/22.
NGEK10018U	Countryside Planning: Policies, Processes and Regulation	7.5	The course was restricted elective in the academic year 2022/23 and 2021/22. Offered for the last time: 2022/23. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2023/24.
NIGK17008U	Environment, Society and Development	7.5	The course was restricted elective in the academic year 2022/23 and 2021/22. Offered for the last time: 2022/23. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2023/24.
NNDK15002U	Geografiens didaktik	7.5	The course was compulsory in the academic year 2021/22. Offered for the last time: 2021/22. The course is in this curriculum replaced by NNDK22001U Advanced Course in Science Education 7.5 ECTS.
NIGK17017U	Glacial, Fluvial and Estuarine Geoscience	7.5	The course was restricted elective in the academic year 2022/23 and 2021/22. Offered for the last time: 2022/23. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2023/24.
NGEK10027U	Project Management and Planning	7.5	The course was restricted elective in the academic year 2022/23 and 2021/22. Offered for the last time: 2022/23. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2023/24.
NIGK17015U	Transformation of Cities and Landscapes: Globalisation and Local Strategies	7.5	The course was restricted elective in the academic year 2022/23 and 2021/22. Offered for the last time: 2022/23. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2023/24.
NIGK22001U	Use of Stable Isotopes for Advanced Studies of Environmental and Soil Biogeochemical Processes	7.5	The course was restricted elective in the academic year 2022/23. Offered for the last time: 2022/23. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2023/24.

## Appendix 3 Description of objectives for the thesis

After completing the thesis, the student should have:

### Knowledge about:

- Advanced theories and methodologies of the geographical field of study.
- Scientific problems within the study programme's subject areas and the student's field(s) of specialisation.
- A suitable combination of methodologies/theories based on international research for use in his/her work with the problem formulation.
- A critical approach to natural, environmental or societal structures and changes and the process-related and spatial aspects of such changes.

### Skills in/to:

- Take a scientific, problem-oriented and critical approach to geographically relevant issues within aspects of the nature, the environment or society.
- Work at a high scientific level within the geographical field of study and the student's field(s) of specialisation.
- Apply and critically evaluate theories/methodologies, including their applicability and limitations.
- Assess the extent to which the production and interpretation of findings/material depend on the theory/methodology chosen and the delimitation chosen.
- Discuss academic issues arising from the thesis.
- Draw conclusions in a clear and academic manner in relation to the problem formulation and, more generally, considering the topic and the subject area.
- Discuss and communicate the academic and social significance, if any, of the thesis based on ethical principles.

### Competences in/to:

- Initiating and performing academic work in a research context.
- Identifying, proposing and preparing proposals to solving complex geographical problems in terms of theory, methodology and empiricism based on independently acquired knowledge at a high academic level.
- Integrating, discussing and putting into perspective theoretical, methodological and empirical choices, for example demonstrating reflective and critical thinking about the choices made and the possibilities and limitations of science in relation to a specific problem.
- Solving complex problems and carrying out development assignments in a work context.