



Programme-specific Section of the Curriculum for the MSc Programme in Climate Change at the Faculty of Science, University of Copenhagen 2013 (Rev. 2025)

Contents

1 Title, affiliation and language	2
2 Academic profile.....	2
2.1 Purpose.....	2
2.2 General programme profile	2
2.3 General structure of the programme.....	3
2.4 Career opportunities	3
3 Description of competence profiles	3
3.1 Impacts, Mitigation and Adaptation	3
3.2 The Physical Climate System.....	4
4 Admission requirements	5
4.1 Bachelor's degrees that automatically fulfil the academic requirements	5
4.2 Other Bachelor's degrees	5
4.3 Other applicants.....	5
4.4 Language requirements	5
4.5 Supplementary subject elements	6
5 Prioritisation of applicants	6
6 Structure of the programme.....	6
6.1 Impacts, Mitigation and Adaptation	6
6.2 The Physical Climate System.....	8
7 Exemptions.....	10
8 Commencement etc.	10
Appendix 1 The recommended academic progression	11
Appendix 2 Interim arrangements	13
2 General changes for students admitted in the academic year 2023/24	13
3 General changes for students admitted in the academic year 2022/23	14
Appendix 3 Description of objectives for the thesis	16

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 Climate Change leads to a Master of Science (MSc) in Climate Change with the Danish title: *Cand.scient. (candidatus/candidata scientiarum) i klimaforandringer*.

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 (*geografi*).

1.4 Language

The language of this MSc Programme is English.

2 Academic profile

2.1 Purpose

The MSc Programme in Climate Change educates graduates who are capable of addressing the long-term, interdisciplinary challenges posed by climate change. Understanding global climate change, its causes, impact on human living conditions and the environment, the options available to us for limiting climate change and the strategies available to adapt to it, requires insights into a broad spectrum of scientific disciplines and their common interfaces and interaction. The programme addresses the global climate challenge by bringing together expert knowledge, excellent research environments and academically dedicated students with a view to developing a unique international study environment within the competences demanded by the labour market and society.

2.2 General programme profile

The MSc Programme in Climate Change combines natural and social science approaches to the study of climate change, its causes and effects, how we can deal with it and adapt to it. The programme provides graduates with knowledge and competences to take up job functions associated with local, national and international efforts to deal with climate change, one of the greatest current challenges to modern society.

The MSc Programme in Climate change is an inter-disciplinary platform, involving joint teaching and supervision of students by staff from many disciplines and departments, and through an integrated introduction, involving also project-/ problem-oriented work of a mandatory interdisciplinary character.

The student can choose between two different specialisations, acquiring expertise within a cluster of related subjects. Within each specialisation the student can choose between different subject elements covering a range of topics. In addition, the student is allowed to follow supplementary courses within other disciplines.

Climate change, impacts, mitigation, and adaptation are the key subject areas of the programme.

2.3 General structure of the programme

The MSc Programme is set at 120 ECTS.

The MSc Programme in Climate Change consists of the following elements:

- Specialisation, 120 ECTS, including the thesis.

The student must choose one of the following specialisations:

- Impacts, Mitigation and Adaptation
- The Physical Climate System

2.4 Career opportunities

The MSc Programme in Climate Change qualifies students to become professionals within business functions and/or areas such as:

- A PhD programme
- Governmental agencies and municipalities which develop plans for climate change mitigation and adaptation.
- Consultancy companies carrying out Environmental Impact Assessment, develop, implement or monitor climate change mitigation and adaptation projects.
- Climate change research, teaching and information dissemination.
- Industry, developing environmental and energy technologies.
- NGOs and international organisations (incl. the UN) involved in climate change impacts assessment, mitigation and adaptation.

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 Impacts, Mitigation and Adaptation

Graduates holding an MSc in Climate Change with a specialisation in Impacts, Adaptation and Mitigation have acquired the following:

Knowledge about:

- The functioning of the climate system and the causes of climate change.
- The key physical processes of the climate system.
- The fundamental worldviews as they pertain to climate change.
- The most important social science approaches to analysing climate change, including economic and political scientific approaches.
- The consequences of climate change for human living conditions and access to land, water, energy, and food resources.
- The interplay between the natural science and social aspects of climate change.
- The interplay between the biosphere and the geosphere, nature's key cycles and their impact on climate change.

Skills in/to:

- Identify and analyse climate change related problems using methods from a wide range of disciplines
- Apply scientific terminology from different disciplines correctly
- Analyse complex multi- and interdisciplinary issues, including the ability to identify the most important components of a complex issue.

- Contribute, in a qualified manner, to designing and conducting scientific projects applying natural science and selected social science methodologies.
- Select and apply relevant social scientific tools to analyse drivers of climate change mitigation and adaptation solutions
- Express oneself in a scientifically correct language, argue in a scientific manner and contribute to scientific discussions at the border between natural, environmental and social sciences.
- Communicate complex academic subjects in writing and orally at different levels.

Competences in/to:

- Understand complex, multi and interdisciplinary climate change issues and to propose solutions.
- Discuss natural scientific, economic and justice aspects of climate change governance on a global, sectoral and local scale.
- Contribute to interdisciplinary issues on a scientific foundation employing natural and social science methodologies.
- Independently plan own learning strategy and outcome.
- Contribute constructively to collaborative contexts, e.g. in connection with project-based, interdisciplinary group work.
- Evaluate the feasibility of different climate change mitigation options from a socio-technical perspective

3.2 The Physical Climate System

Graduates holding an MSc in Climate Change with a specialisation in The Physical Climate System have acquired the following:

Knowledge about:

- The functioning of the climate system and the causes of climate change.
- The key physical processes of the climate system.
- The design, functionality, and purpose of climate models.
- The most important social science approaches to analysing climate change, including economic and political scientific approaches.
- The consequences of climate change for human living conditions and access to land, water, energy, and food resources.
- The interplay between the natural science and social aspects of climate change.
- The interplay between the biosphere and the geosphere, nature's key cycles and their impact on climate change.

Skills in/to:

- Identify and analyse climate change related problems using methods from a wide range of disciplines
- Apply scientific terminology from different disciplines correctly
- Analyse complex multi- and interdisciplinary issues, including the ability to identify the most important components of a complex issue.
- Contribute, in a qualified manner, to designing and conducting scientific projects applying selected natural science and social science methodologies.
- Understand and analyse the output from complex climate models and implement simple numerical climate models.

- Express oneself in a scientifically correct language, argue in a scientific manner and contribute to scientific discussions at the border between natural, environmental and social sciences.
- Communicate complex academic subjects in writing and orally at different levels.

Competences in/to:

- Understand complex, multi and interdisciplinary climate change issues and propose solutions.
- Identify the potentials and limitations of climate models and discuss their relevance for predicting future climate
- Contribute to interdisciplinary issues on a scientific foundation employing natural and social science methodologies.
- Independently plan own learning strategy and outcome.
- Contribute constructively to collaborative contexts, e.g. in connection with project-based, interdisciplinary group work.
- Identify technical/natural science solutions and/or expedient management solutions to climate-related problems.

4 Admission requirements

4.1 Bachelor's degrees that automatically fulfil the academic requirements

Applicants with one of the following Bachelor's degrees from the University of Copenhagen automatically fulfil the academic requirements for admission to the MSc Programme in Climate Change:

- Natural Resources (*naturressourcer*).
- Food Science (*fødevarevidenskab/fødevarer og ernæring*).
- Landscape Architecture (*landskabsarkitektur*).
- Biotechnology (*bioteknologi*).
- Physics (*fysik*).
- Chemistry (*kemi*).
- Biology (*biologi*).
- Geography and Geoinformatics (*geografi og geoinformatik*).
- Geology-Geoscience (*geologi-geoscience*).

4.2 Other Bachelor's degrees

Applicants with a Bachelor's degree, Professional Bachelor's degree or equivalent from Danish or international universities other than those listed in 4.1 are qualified for admission to the MSc Programme in Climate Change if the programme includes the following:

- Curriculum strongly directed towards topics of climate change (minimum 60 ECTS credits climate change related study elements).

4.3 Other applicants

The Faculty may also admit applicants who, after an individual academic assessment, are assessed to possess educational qualifications equivalent to those required in Subclauses 4.1-2.

4.4 Language requirements

Applicants must be able to document English proficiency corresponding to one of the following:

- upper secondary school degree, bachelor's degree or master's degree in English from Australia, Canada, Ireland, New Zealand, United Kingdom or USA.
- Nordic entrance examination with an English level comparable to the Danish level B or higher
- International Baccalaureate (IB) from an international school
- European Baccalaureate (EB) from one of the approved schools
- English B or A as Single Subject Course in Denmark
- Abiturzeugnis from Germany
- IELTS test score of minimum 6.5
- TOEFL test score of minimum 83
- Cambridge Advanced English (CAE) or Cambridge English: Proficiency (CPE) passed at level C1 or C2

4.5 Supplementary subject elements

The qualifications of an applicant to the MSc program are assessed exclusively on the basis of the qualifying Bachelor's degree. Supplementary subject elements passed between the completion of the Bachelor's programme and the admission to the MSc programme cannot be included in the overall assessment.

However, subject elements passed before the completion of the Bachelor's programme may be included in the overall assessment. This includes subject elements completed as continuing education as well as subject elements completed as part of a former higher education program. A maximum of 30 ECTS supplementary subject elements can be included in the overall assessment.

Subject elements passed before completing the Bachelor's programme which are to form part of the MSc programme to which the student has a legal right of admission (§15-courses) cannot be included in the overall assessment.

5 Prioritisation of applicants

There is no Bachelor's Programme with reserved access for this programme.

If the number of qualified applicants to the programme exceeds the number of places available, applicants will be prioritised according to the following criteria:

- Total number of ECTS in courses within climate change related study elements.
- Grade-point average achieved in qualifying degree.

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).

Before the beginning of the MSc Programme the student will choose a specialisation.

6.1 Impacts, Mitigation and Adaptation

The specialisation is set at 120 ECTS and consists of the following:

- Compulsory subject elements, 30 ECTS.
- Restricted elective subject elements
 - 37.5 ECTS (Thesis 30 ECTS)
 - 30 ECTS (Thesis 45 ECTS)

- Elective subjects
 - 22.5 ECTS (Thesis 30 ECTS)
 - 15 ECTS (Thesis 45 ECTS)
- Thesis, 30 ECTS or 45 ECTS

6.1.1 Compulsory subject elements

All of the following subject elements are to be covered (30 ECTS):			
Course Code	Course Title	Block	ECTS
NIGK13004U	Climate Change: An Interdisciplinary Challenge	Block 1+2	15 ECTS
NIFK24001U	Climate and Society	Block 1+2	15 ECTS

6.1.2 Restricted elective subject elements

37.5 ECTS are to be covered as subject elements from the following list (Thesis 30 ECTS):			
30 ECTS are to be covered as subject elements from the following list (Thesis 45 ECTS):			
Course Code	Course Title	Block	ECTS
NFYK14007U	Paleo-Climatology	Block 1	7.5 ECTS
NIFK16002U	Ethics, Environment and Society	Block 1	7.5 ECTS
NIFK14026U	Entrepreneurship and Innovation	Block 1	7.5 ECTS
NFYK15008U	Earth and Climate Physics	Block 1	7.5 ECTS
NIGK14056U	Climate Change and Water Resources	Block 2	7.5 ECTS
NBIK14001U	Climate Change and Biogeochemical Cycles	Block 2	7.5 ECTS
LPLK10381U	Climate Solutions	Block 2	15 ECTS
NIGK15011U	Geopolitics of Climate Change	Block 2	7.5 ECTS
NPLK14030U	Climate Change and Land Use	Block 2	7.5 ECTS
NFYK17002U	Climate Models and Observations	Block 2	7.5 ECTS
NIFK17004U	Environmental Justice	Block 2	7.5 ECTS
NNDK24000U	Science and Technology Communication	Block 2	7.5 ECTS
NFYK13000U	Climate Change Mechanisms and Tipping Points	Block 3	7.5 ECTS
NIFK13006U	The Economics of Climate Change	Block 3	7.5 ECTS
LNAK10072U	Global Environmental Governance	Block 3	7.5 ECTS
NIFK14029U	Motivation and Pro-Environmental Behaviour – Managing Change	Block 3	7.5 ECTS
NDAK16003U	Introduction to Data Science	Block 3	7.5 ECTS
NIGK25000U	Geoengineering	Block 4	7.5 ECTS
NIGK13012U	Human Adaptation to Climate Change and Variability	Block 4	7.5 ECTS
NIGK13005U	Energy Systems and Climate Mitigation	Block 4	7.5 ECTS
SGBK20007U	Climate Change and Biodiversity	Block 4	7.5 ECTS
NIFK14026U	Entrepreneurship and Innovation	Block 4	7.5 ECTS
JJUA55120U	Climate Change and the Law*	Block 1+2	15 ECTS

*The course is not offered in the academic year 2025/26.

6.1.3 Elective subject elements

15-22.5 ECTS are to be covered as elective subject elements.

- All subject elements at MSc level may be included as elective subject elements in the MSc Programme.
- BSc subject elements corresponding to 15 ECTS may be included in the MSc Programme.
- All courses at GLOBE Institute SUND, affiliated with a SCIENCE Study Board, are preapproved as elective courses.
- Projects. See 6.1.4 Projects.

6.1.4 Projects

Projects outside the course scope (PUK), projects in practice (PIP) and thesis preparation projects (PREP) may not exceed 45 ECTS of the programme.

- PUK may be included in the elective section of the programme with up to 15 ECTS. The primary supervisor must be employed at either SCIENCE or GLOBE Institute SUND. The regulations are described in Appendix 5 to the shared section of the curriculum.
- PIP may be included in the elective section of the programme with 15 ECTS. The primary supervisor must be employed at SCIENCE. The regulations are described in Appendix 4 to the shared section of the curriculum.
- PREP may be included in the elective section of the programme with up to 15 ECTS. The primary supervisor must be employed at either SCIENCE or GLOBE Institute SUND. The regulations are described in Appendix 6 to the shared section of the curriculum.

6.1.5 Thesis

The MSc Programme in Climate Change with a specialisation in Impacts, Mitigation and Adaptation includes a thesis corresponding to 30 ECTS or 45 ECTS, as described in Appendix 2 to the shared curriculum. The thesis must be written within the academic scope of the programme.

The primary supervisor must be employed at either SCIENCE or GLOBE Institute SUND.

6.1.6 Academic mobility

The curriculum makes it possible to follow subject elements outside the Faculty of Science.

The academic mobility for the MSc Programme in Climate Change with a specialisation in Impacts, Mitigation and Adaptation is placed in block 3+4 of the 1st year.

Academic mobility requires that the student follows the rules and regulations regarding pre-approval and credit transfer.

In addition, the student has the possibility to arrange similar academic mobility in other parts of the programme.

6.2 The Physical Climate System

The specialisation is set at 120 ECTS and consists of the following:

- Compulsory subject elements, 30 ECTS.
- Restricted elective subject elements
 - 37.5 ECTS (Thesis 30 ECTS)
 - 30 ECTS (Thesis 45 ECTS)
- Elective subjects,
 - 22.5 ECTS (Thesis 30 ECTS)
 - 15 ECTS (Thesis 45 ECTS)
- Thesis, 30 ECTS or 45 ECTS

6.2.1 Compulsory subject elements

All of the following subject elements are to be covered (30 ECTS):			
Course Code	Course Title	Block	ECTS
NIGK13004U	Climate Change – An Interdisciplinary Challenge	Block 1+2	15 ECTS
NFYK15008U	Earth and Climate Physics	Block 1	7.5 ECTS
NFYK17002U	Climate Models and Observations	Block 2	7.5 ECTS

6.2.2 Restricted elective subject elements

Course Code	Course Title	Block	ECTS
37.5 ECTS are to be covered as subject elements from the following list (Thesis 30 ECTS):			
30 ECTS are to be covered as subject elements from the following list (Thesis 45 ECTS):			
NFYK14007U	Paleo-Climatology	Block 1	7.5 ECTS
NIFK16002U	Ethics, Environment and Society	Block 1	7.5 ECTS
NIFK14026U	Entrepreneurship and Innovation	Block 1	7.5 ECTS
NDAA07012U	Scientific Computing	Block 1	7.5 ECTS
NIGK14056U	Climate Change and Water Resources	Block 2	7.5 ECTS
NBIK14001U	Climate Change and Biogeochemical Cycles	Block 2	7.5 ECTS
LPLK10381U	Climate Solutions	Block 2	15 ECTS
NIGK15011U	Geopolitics of Climate Change	Block 2	7.5 ECTS
NPLK14030U	Climate Change and Land Use	Block 2	7.5 ECTS
NFYK13011U	Applied Statistics: From Data to Results	Block 2	7.5 ECTS
NNDK24000U	Science and Technology Communication	Block 2	7.5 ECTS
NFYK13000U	Climate Change Mechanisms and Tipping Points	Block 3	7.5 ECTS
NIFK13006U	The Economics of Climate Change	Block 3	7.5 ECTS
LNAK10072U	Global Environmental Governance	Block 3	7.5 ECTS
NDAK16003U	Introduction to Data Science	Block 3	7.5 ECTS
NIGK25000U	Geoengineering	Block 4	7.5 ECTS
NIGK13005U	Energy Systems and Climate Mitigation	Block 4	7.5 ECTS
SGBK20007U	Climate Change and Biodiversity	Block 4	7.5 ECTS
NIFK14026U	Entrepreneurship and Innovation	Block 4	7.5 ECTS
NFYK22003U	Computational Atmosphere and Ocean Dynamics	Block 4	7.5 ECTS

6.2.3 Elective subject elements

15-22.5 ECTS are to be covered as elective subject elements.

- All subject elements at MSc level may be included as elective subject elements in the MSc Programme.
- BSc subject elements corresponding to 15 ECTS may be included in the MSc Programme.
- All courses at GLOBE Institute SUND, affiliated with a SCIENCE Study Board, are preapproved as elective courses.
- Projects. See 6.1.4 Projects.

6.2.4 Projects

Projects outside the course scope (PUK), projects in practice (PIP) and thesis preparation projects (PREP) may not exceed 45 ECTS of the programme.

- PUK may be included in the elective section of the programme with up to 15 ECTS. The main supervisor must be employed at either SCIENCE or GLOBE Institute SUND. The regulations are described in Appendix 5 to the shared section of the curriculum.
- PIP may be included in the elective section of the programme with 15 ECTS. The regulations are described in Appendix 4 to the shared section of the curriculum.
- PREP may be included in the elective section of the programme with up to 15 ECTS. The main supervisor must be employed at either SCIENCE or GLOBE Institute SUND. The regulations are described in Appendix 6 to the shared section of the curriculum.

6.2.5 Thesis

The MSc Programme in Climate Change with a specialisation in Impacts, Mitigation and Adaptation includes a thesis corresponding to 30 ECTS or 45 ECTS, as described in Appendix 2 to the shared curriculum. The thesis must be written within the academic scope of the programme.

The main supervisor must be employed at either SCIENCE or GLOBE Institute SUND.

6.2.6 Academic mobility

The curriculum makes it possible to follow subject elements outside the Faculty of Science.

The academic mobility for the MSc Programme in Climate Change with a specialisation in The Physical Climate System is placed in block 3+4 of the 1st year.

Academic mobility requires that the student follows the rules and regulations regarding pre-approval and credit transfer.

In addition, the student has the possibility to arrange similar academic mobility in other parts of the programme.

7 Exemptions

In exceptional circumstances, the university may grant exemptions from the rules in the curriculum specified solely by the university.

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 Amendment

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 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 – Impacts, Mitigation and Adaptation, Thesis 30 ECTS

	Block 1	Block 2	Block 3	Block 4
1 st year	Climate Change: An Interdisciplinary Challenge		Restricted elective	Restricted elective
	Climate and Society		Elective	Elective
2 nd year	Elective	Restricted elective	Thesis	
	Restricted elective	Restricted elective		

Table – Impacts, Mitigation and Adaptation, Thesis 45 ECTS

	Block 1	Block 2	Block 3	Block 4
1 st year	Climate Change: An Interdisciplinary Challenge		Restricted elective	Restricted elective
	Climate and Society		Elective	Elective
2 nd year	Restricted elective	Thesis		
	Restricted elective			

Table – The Physical Climate System, Thesis 30 ECTS

	Block 1	Block 2	Block 3	Block 4
1 st year	Climate Change: An Interdisciplinary Challenge		Restricted elective	Restricted elective
	Earth and Climate Physics	Climate Models and Observations	Elective	Elective
2 nd year	Elective	Restricted elective	Thesis	
	Restricted elective	Restricted elective		

Table – The Physical Climate System, Thesis 45 ECTS

	Block 1	Block 2	Block 3	Block 4
1st year	Climate Change: An Interdisciplinary Challenge		Restricted elective	Restricted elective
	Earth and Climate Physics	Climate Models and Observations	Elective	Elective
2nd year	Restricted elective	Thesis		
	Restricted elective			

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 2024/25

Students admitted to the MSc Programme in the academic year 2024/25 must finish the programme as listed in the curriculum above with the following exceptions.

1.1 Impacts, Mitigation and Adaptation

Restricted elective subject elements

37.5 ECTS are to be covered as subject elements from the following list (Thesis 30 ECTS):			
30 ECTS are to be covered as subject elements from the following list (Thesis 45 ECTS):			
Restricted elective subject elements offered as part of the specialisation in Impacts, Mitigation and Adaptation in this curriculum (see above)			
NNDK23001U	Problems and Promises of Big Data Analysis	Discontinued*	7.5 ECTS
SGBK20005U	Geoengineering	Discontinued*	7.5 ECTS

*See discontinued courses below.

1.2 The Physical Climate System

Restricted elective subject elements

37.5 ECTS are to be covered as subject elements from the following list (Thesis 30 ECTS):			
30 ECTS are to be covered as subject elements from the following list (Thesis 45 ECTS):			
Restricted elective subject elements offered as part of the specialisation in Impacts, Mitigation and Adaptation in this curriculum (see above)			
NNDK23001U	Problems and Promises of Big Data Analysis	Discontinued*	7.5 ECTS
SGBK20005U	Geoengineering	Discontinued*	7.5 ECTS
NFYK22001U	Advanced Computational Geophysics	Discontinued*	7.5 ECTS

*See discontinued courses below.

2 General changes for students admitted in the academic year 2023/24

Students admitted to the MSc Programme in the academic year 2023/24 must finish the programme as listed in the curriculum above with the following exceptions.

2.1 Impacts, Mitigation and Adaptation

Table - Impacts, Mitigation and Adaptation, Thesis 30 ECTS

Period	Block 1	Block 2	Block 3	Block 4
1 st year	Climate Change: An Interdisciplinary Challenge		Restricted elective	Restricted elective
	<i>Climate Change, Impacts, Adaptation and Mitigation*</i>		Elective	Elective
2 nd year	Elective	Restricted elective	Thesis	
	Restricted elective	Restricted elective		

Subject elements in italics have been discontinued. See discontinued courses below.

Table – Impacts, Mitigation and Adaptation, Thesis 45 ECTS

Period	Block 1	Block 2	Block 3	Block 4
1 st year	Climate Change – an Interdisciplinary Challenge		Restricted elective	Restricted elective
	<i>Climate Change, Impacts, Adaptation and Mitigation*</i>		Elective	Elective
2 nd year	Restricted elective	Thesis		
	Restricted elective			

Subject elements in italics have been discontinued. See discontinued courses below.

Restricted elective subject elements

37.5 ECTS are to be covered as subject elements from the following list (Thesis 30 ECTS):			
30 ECTS are to be covered as subject elements from the following list (Thesis 45 ECTS):			
Restricted elective subject elements offered as part of the specialisation in Impacts, Mitigation and Adaptation in this curriculum (see above)			
NNDK23001U	Problems and Promises of Big Data Analysis	Discontinued*	7.5 ECTS
SGBK20005U	Geoengineering	Discontinued*	7.5 ECTS

*See discontinued courses below.

2.2 The Physical Climate System

Restricted elective subject elements

37.5 ECTS are to be covered as subject elements from the following list (Thesis 30 ECTS):			
30 ECTS are to be covered as subject elements from the following list (Thesis 45 ECTS):			
Restricted elective subject elements offered as part of the specialisation in Impacts, Mitigation and Adaptation in this curriculum (see above)			
NNDK23001U	Problems and Promises of Big Data Analysis	Discontinued*	7.5 ECTS
SGBK20005U	Geoengineering	Discontinued*	7.5 ECTS
NFYK22001U	Advanced Computational Geophysics	Discontinued*	7.5 ECTS

*See discontinued courses below.

3 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.

3.1 Impacts, Mitigation and Adaptation

The specialisation is set at 120 ECTS and consists of the following:

- Compulsory subject elements, 30 ECTS.
- Restricted elective subject elements, 37.5 ECTS
- Elective subjects, 22.5 ECTS
- Thesis, 30 ECTS

Table – Impacts, Mitigation and Adaptation

Period	Block 1	Block 2	Block 3	Block 4
1 st year	Climate Change: An Interdisciplinary Challenge		Restricted elective	Restricted elective
	<i>Climate Change, Impacts, Adaptation and Mitigation*</i>		Elective	Elective
2 nd year	Elective	Restricted elective	Thesis	
	Restricted elective	Restricted elective		

Subject elements in italics have been discontinued. See discontinued courses below.

Restricted elective subject elements

37.5 ECTS (Thesis 30 ECTS) or 30 ECTS (Thesis 45 ECTS) are to be covered as subject elements from the following list:			
Restricted elective subject elements offered as part of the specialisation in Impacts, Mitigation and Adaptation in this curriculum (see above)			
NNDK23001U	Problems and Promises of Big Data Analysis	Discontinued*	7.5 ECTS
SGBK20005U	Geoengineering	Discontinued*	7.5 ECTS

*See discontinued courses below.

3.2 The Physical Climate System

The specialisation is set at 120 ECTS and consists of the following:

- Compulsory subject elements, 30 ECTS.
- Restricted elective subject elements, 37.5 ECTS
- Elective subjects, 22.5 ECTS
- Thesis, 30 ECTS

Table – The Physical Climate System

Period	Block 1	Block 2	Block 3	Block 4
1st year	Climate Change: An Interdisciplinary Challenge		Restricted elective	Restricted elective
	Earth and Climate Physics	Climate Models and Observations	Elective	Elective
2nd year	Elective	Restricted elective	Thesis	
	Restricted elective	Restricted elective		

Restricted elective subject elements

37.5 ECTS are to be covered as subject elements from the following list:			
Restricted elective subject elements offered as part of the specialisation The Physical Climate System in this curriculum (see above)			
NNDK23001U	Problems and Promises of Big Data Analysis	Discontinued*	7.5 ECTS
SGBK20005U	Geoengineering	Discontinued*	7.5 ECTS
NFYK22001U	Advanced Computational Geophysics	Discontinued*	7.5 ECTS

*See discontinued courses below

4 Discontinued courses

Course Code	Course Title	ECTS	Interim arrangement
NFYK22001U	Advanced Computational Geophysics	7.5	The course was restricted elective on The Physical Climate System in the academic year 2024/25 and earlier. Offered for the last time: 2024/25. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2025/26.

LNAK10069U	Climate Change, Impacts, Adaptation and Mitigation	15	The course was compulsory on Impacts, Adaptation and Mitigation in the academic year 2023/24 and 2022/23. Offered for the last time in 2023/24. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2024/25. The course is replaced by NIFK24001U Climate and Society, 15 ECTS
SGBK20005U	Geoengineering	7.5	The course was restricted elective on The Physical Climate System in the academic year 2024/25 and earlier. Offered for the last time: 2024/25. The course is identical to NIGK25000U Geoengineering, 7.5 ECTS
NNDK23001U	Problems and Promises of Big Data Analysis	7.5	The course was restricted elective in the academic year 2024/25 and earlier Offered for the last time in 2024/25. Last exam if applicable (cf. SCIENCE's Teaching and exam rules): 2025/26.

Appendix 3 Description of objectives for the thesis

After completing the thesis, the student should have:

Knowledge about:

- Scientific problems within the study programme's subject areas.
- A suitable combination of methodologies/theories based on international research for use in his/her work with the problem formulation.
- Theories/models on the basis of an organised value system and with a high degree of independence.

Skills in/to:

- 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:

- Initiate and perform academic work in a research context.
- Solve complex problems and carry out development assignments in a work context.