Effects of climate change on Arctic livelihoods and living conditions, 2-10 ECTS

Climate Now goes Arctic
An interdisciplinary course

Are you interested about the Arctic?
The course is given jointly by University of Helsinki, Agricultural University of Iceland, University of Iceland, Aarhus University, Lund University, Estonian University of Life Sciences, University of Eastern Finland, University of Oulu, Technical University of Denmark, University of Greenland, and Greenland Climate Research Centre.

The course is given in four parts. Parts I-III are studied online, and part IV is given as a two-week intensive course in two locations, Nuuk and Reykjavík.

Parts I and II are open for everyone interested. Students for parts III and IV are selected based on the grade of the learning diary of part I and the project report of part II.

Parts I-II (2+1 ECTS): January – March 16, 2018
Part III (2 ECTS): April 3 – June 29, 2018
Part IV (5 ECTS): July 1-12, 2018

Please note that accomplishing parts I and II takes roughly 80 hours of working time, so start early enough!

Application deadline is 31 January 2018.

Summary of the content and expected learning outcomes of each part

Part I (January 8 – March 16, 2018, 2 ECTS)

- Studying climate.now material and online lectures individually and independently (www.climatenow.fi).
- Part I can be started anytime before or after 8 January, but technical support is only available starting on 8 January 2018.
- Passing the multiple choice questions, course assignments, and writing a learning diary based on the given template.
- Deadline for the tasks: Friday 16 March 2018, 9:00am EET.
  - Please note that if you wish to apply to parts III and IV, submissions after the deadline are not allowed!
- Expected learning outcomes:
The student gets the basic knowledge about climate change as a scientific phenomenon, as well as about mitigating it and adapting to it.

The student understands the basics of how climate functions and is able to define causes and consequences of climate change.

The student can explain what measures can be taken to mitigate climate change and how it is possible to adapt to it.

The student is able to look at climate change from various perspectives and make connections between the environment, the economy and different parts of society.

The student recognises climate change as a global, human and ethical challenge.

The student reflects on his or her own role in climate change and is able to apply what has been learned on the course to his or her own field of study.

The student can look for solutions to the climate challenge in a variety of ways and examine the different perspectives, solutions, sources of information and the current debate about climate change from a critical point of view.

Part II (January 8 – March 16, 2018, 1 ECTS)

- Individual project work about given topics related to ice in the Arctic according to given guidelines.
- Part II can be started anytime before or after January 8, but support is only available starting on 8 January 2018.
- It is strongly recommended that part I is completed before starting part II.
- Deadline for the project report: Friday 16 March 2018, 9:00am EET.
  - Please note that if you apply to parts III and IV, late returns are not allowed!
- Expected learning outcomes:
  - The student will get insight into the Arctic from his or her own field of study.

After part II: selection process

- Students for parts III and IV are selected based on the learning diary including assignments (part I) and project report (part II).
- Only students who have accomplished parts I and II by the deadline are considered in the selection.
- The balance between genders, fields of study, phases of studies, and universities/institutes is also considered in the selection process.

Part III (April 3 – June 29, 2018, 2 ECTS)

- Students are divided in groups of four based on the topics in part II.
- Each group prepares a project according to the given guidelines.
- To provide background information for the group project, a set of online lectures about the Arctic will be provided.
- Expected learning outcomes: see part IV.

Part IV (1-12 July 2018, 5 ECTS)

- Work in groups continues during the Arctic Summer School in Nuuk and Reykjavik.
- Short presentations of the groups in the beginning.
- Discussions in groups and joint discussions are emphasized; short summaries of the online lectures will be provided during the course.
- Four field trips:
  - Kobbefjord field station
  - Kapisillit local community (overnight trip)
  - Ecosystem sites in Southern Iceland
  - Local community in Iceland
• Presentations and blog posts in the end.
• Expected learning outcomes:
  
  **Knowledge and understanding**
  o The student will be able to summarize changes in the cryosphere and the effects on society, and has obtained knowledge of methodologies in social and natural sciences.
  o Students can explain both challenges and new opportunities (e.g. new shipping channels, accessing previously unreachable oil and gas sources, tourism) offered by climate change.

  **Competence and skills**
  o The student has improved her ability to communicate her research.
  o The student has improved her ability to communicate with scientists from other disciplines.

  **Judgement and approach**
  o The student has a wider knowledge of the methods used in social and natural sciences and a better understanding of scientific result from other disciplines.

**Practical information**

**Timing**

The course is given in four parts, and it is possible to take only part I or parts I and II. A successful completion of parts I and II is a requirement to continue to parts III and IV, and the number of students on parts III and IV is limited.

The timeline:

- Parts I and II: January 8 – March 16, 2018
- Part III: April 3 – June 29, 2018
- Part IV: July 1-12, 2018

Parts I and II are studied independently by the student using online material. It is allowed to start parts I and II already before the starting date, but technical support will be only available from January 8 onwards.

**Credits and accrediting body**

- Part I (2 ECTS): ATM302 Climate change now
  o Graded on the scale 1-5 based on the learning diary
- Part II (1 ECTS), part III (2 ECTS), part IV (5 ECTS): ATM369 Effects of climate change on Arctic livelihoods and living conditions
  o One mark will be given
  o Graded on the scale 1-5
  o Part II has a grading matrix.

University of Helsinki is the accrediting body.

**Exam and assessment**

- Part I: successful completion of the online assignments, learning diary
- Part II: successful submission of a report
- Part III: successful submission of a group report
- Part IV: oral group presentations, a written report in the form of a blog post

Each part is evaluated by an assessment committee consisting of teachers on the course.

**Teachers**

Dr Antti Lauri (University of Helsinki, Institute of Atmospheric and Earth System Research INAR) is the corresponding teacher. The course is given jointly with teachers from University of Helsinki, Agricultural
University of Iceland, University of Iceland, Aarhus University, Lund University, Estonian University of Life Sciences, University of Eastern Finland, University of Oulu, Technical University of Denmark, University of Greenland, Greenland Climate Research Centre, and ETH Zürich.

Availability of the course and costs

The course is available to all students in universities. The course is primarily targeted for MSc and PhD students in all disciplines.

Parts I-III are free of charge. For part IV, the course fee is 2800 EUR, and it covers:

- All academic and social programmes during the course
- Access to the course material (online/printed)
- Accommodation in shared rooms in Nuuk between July 1-7 (six nights)
- Accommodation in shared rooms in Reykjavík between July 7-12 (five nights)
- Flight from Nuuk to Reykjavík on Saturday, July 7
- Airport transfers in Nuuk and Reykjavík on July 7
- Lunches on course days July 2-11 (ten days)
- Starting dinner on July 1 and final dinner on July 11
- Excursions during the course

The fee does not cover:

- Travel to Nuuk before the course and from Reykjavík after the course
- Breakfasts
- Dinners (except July 1 and 11)
- Personal health and civil liability insurance (please make sure you have one!)
- Personal expenses such as drinks, telephone, photocopies, laundry etc. during the course

The NordForsk project “Climate Whirl at High Latitudes” will cover the course fee for up to 8 doctoral students from Nordic countries (Denmark, Finland, Faroe Islands, Greenland, Iceland, Norway, Sweden, Åland Islands), and the Atmosphere-Biosphere Studies (ABS) Nordplus network will cover the fee for up to 8 master students from universities belonging to the ABS network. These fee-waivers can be requested on the course registration/application form.

The applicants are encouraged to look for funding opportunities regarding the travels e.g. from their doctoral/master’s programmes, Nordplus networks and north2north programme.

Insurance

The organisers of the course cannot accept liability for personal accident or loss or damage to private property of attending students, which may occur either during or arise from the course. Participants are therefore advised to arrange their own appropriate insurance coverage.

Registration / application

Students willing to participate on the course must submit their application before 31 January 2018 using the online form. The same form is used to register to parts I and II, and to apply to parts III and IV.

Further information

You can find the latest version of this document and other course-related documents under the INAR education webpage.

If you have questions about part I, please contact Dr Laura Riuttanen. For other questions about the course, please contact Dr Antti Lauri.