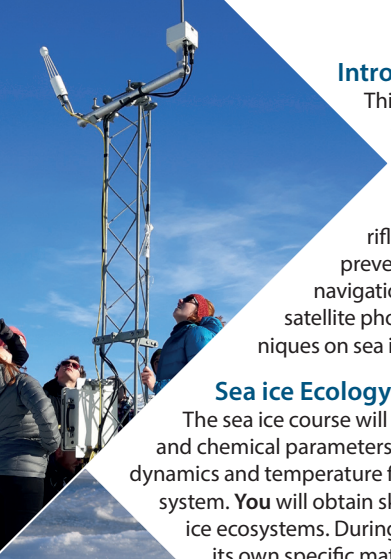
Arctic Science Study Programme

– Climate, Environment and Society

Four courses focusing on Arctic Climate and Society are offered in Nuuk, Greenland during the spring semester.

The four courses will give **YOU** a unique educational experience with connection to climate and research in Greenland. **YOU** will be living in Nuuk during the courses in the centre of a multi-disciplinary research environment and a thriving Arctic society. **YOU** get first-hand access to master project opportunities in Arctic topics and a possibility to explore exceptional career opportunities in Greenland.

So give **YOUR** education an Arctic angle and come join us in "Colourful Nuuk" (colourfulnuuk.com).



Introductory safety course:

This course will not grant ECTS, but it is mandatory for **you** when working on sea ice. The course takes place in Nuuk and will involve fieldwork. The course will give **you** knowledge about the risks when working in Greenland. During the course, **you** will get hand-on practice and theoretical introduction to safety and behavior working on sea ice, e.g. use of rifles, flares etc. to scare away polar bears and muskox, first aid with focus on prevention and treatments of frost injuries, emergency equipment including navigation in Greenland and use of communications systems (including VHF radio, satellite phone ect.), setting up emergency camps (including snow pits), rescue techniques on sea ice, safety on snowmobile and avalanche scenarios and rescue techniques.

Sea ice Ecology (5 ECTS):

The sea ice course will give **you** insight into and understanding of the most important physical and chemical parameters e.g. light availability, nutrients, salinity, inorganic and organic carbon dynamics and temperature fluctuations relevant for the structure and function of Arctic sea ice ecosystem. **You** will obtain skills to discuss how future changes in those parameters will influence sea ice ecosystems. During the course **you** will get an understanding of sea ice as an ecosystem with its own specific matter and energy transport pathways. Finally, **you** will get an understanding of sea ice as an extreme ecosystem, focusing especially on sea ice algae and bacteria. The course takes place in Nuuk but involves fieldwork outside Nuuk.

Climate forcing, effects and adaptation in the Arctic (10 ECTS):

The course will give **you** the knowledge and understanding of the climate forcing and effects in the Arctic. **You** will obtain understanding of the sensitivity of the cryosphere (snow, ice and permafrost) to climate change their effects on living conditions in the Arctic. **You** will gain perception of the most important effects on ecosystems and climate activated feedback processes and an understanding of how the natural environment changes and how this affect the society. Finally, **you** will obtain knowledge of different adaptation strategies. The course takes place in Nuuk and it involves some field work in the Nuuk area.

Arctic Aquatic Ecosystems (15 ECTS):

The course will give **you** knowledge about the processes, structures and pathways in different Arctic aquatic environments affected by snow and glacial melt, e.g. ocean, fjords, streams and lakes. During the course, **you** will also learn about how the structure and function of Arctic aquatic ecosystems are influenced by physical and chemical parameters e.g. temperatures, freshwater input (salinity), nutrients levels, light conditions and ice cover. Furthermore, the course will provide **you** the background knowledge to discuss how future climatic changes in those parameters will influence different Arctic aquatic ecosystems. Finally, **you** will get an introduction into the processes leading to management advice of living resources in Greenland. The course takes place in Nuuk and involves fieldwork.

In order to attend the spring semester **you** should send a short (1/2 page) letter of motivation to either: Lise Lotte Sørensen (lls@bios.au.dk), Thomas Juul-Pedersen (thpe@natur.gl) or Dorte S. Schrøder (doso@natur.gl).

We can also help finding accommodation in Nuuk and help applying for funding to cover accommodation and travel cost. Find more information about ASSP on www.gcrc.gl/education.

Photos by: Martin Blicher, Thomas Juul-Pedersen, Dorte S. Schrøder, Bjarne Jensen, Henrik Lund and Peter Schmidt Mikkelsen

Grønlands Naturinstitut
Pinngortitaleriffik · Greenland Institute of Natural Resources

AARHUS UNIVERSITY

ARC ARCTIC RESEARCH CENTRE

ILISIMATUSARFIK University of Greenland

ASSP Arctic Science Partnership