Updated March 2024
For Spring 2024, Summer 2024, Fall 2024

Sustainability & the Environment

DIS Study Abroad in Scandinavia

Overview

DIS - Study Abroad in Scandinavia offers programs geared toward students studying sustainability and the environment. Sustainable development is on top of the global agenda for the 21st century. In Europe, strategizing sustainability initiatives is a priority, from energy consumption to food production. Students experience new approaches to sustainability from a European perspective and hear from the stakeholders shaping today's and tomorrow's agendas.

Students explore climate change theory through the lens of scientific climate history of the Arctic alongside expert scientists in the field. Faculty-led Study Tours examine current research in the changes occurring within the glaciers of Iceland, the Greenlandic ice sheet, or the tundra of Arctic Norway.

Courses are all in English and are offered during both the semester (spring and fall) and summer. During the spring or fall, students enroll in one Core Course (with course-integrated Study Tours) and three or four electives. Once students have chosen their Core Course, they are free to choose from a variety of elective courses.

Students in the summer enroll in one class at a time and can stay for one to three sessions in Copenhagen and/or Stockholm, taking 3 to 9 credits over 3 to 9 weeks. Students may choose to stay in either Copenhagen or Stockholm, or to mix and match locations.

Semester Core Courses

ENGINEERING (Stockholm)

Engineering Sustainable Environments in Scandinavia, 3 credits
This engineering course explores the development of tools and technologies to protect and restore environmental systems sustainably, using contemporary Scandinavian case studies. We assess local environmental impacts of human activities relating to water consumption, waste production, transportation, energy, air quality, heat, and urban ecosystems, applying methods, techniques, and modelling to describe, quantify, and solve environmental problems through collaborative engineering solutions. The course is problem-based and experiential, with course-integrated travel throughout the region, and hands-on projects with real-world applications.

- Week-Long Study Tour: Finland (fall), Iceland (spring)
- Short Study Tour: Sweden
- *Prerequisites: Two courses in math, plus a total of five courses within engineering, basic science (biology, chemistry, physics), and/or computer science, all at university level. At least one of these courses should be an engineering course.*

ENVIRONMENTAL SCIENCE OF THE ARCTIC (Copenhagen)

Climate, Glaciers, and Human Impact, 3 credits
This course focuses on the natural science aspects of climate change with emphasis on historic times. The course takes a journey from ancient times through to the present describing periods when the climate was strikingly different than it is today and revealing the mechanisms and feedback that govern the climate system. With Iceland as your case study, students gain a thorough understanding of general climate mechanisms, with a focus on the past 1,000 years and how civilizations have interacted with climate processes.

- Week-Long Study Tour: Iceland
- Short Study Tour: Denmark
- *Prerequisites: One course in environmental or earth science at university level. One year of physics or chemistry at university level is recommended.*

Ice Cores and Ice Ages, 3 credits
This course focuses on the natural science aspects of climate change during the prehistoric times with focus on the glacial and the deglaciation. Students gain an understanding of past climate variability, including its underlying causes and mechanisms as a basis for separating natural and anthropogenic climate change and for making useful projections of future climate and assessing its impacts. The course focuses on pre-human times, and the 100,000 year old Greenlandic ice sheet provides an ideal case study.

- Week-Long Study Tour: Greenland
- Short Study Tour: Denmark
- *Prerequisites: One course in environmental or earth science at university level. One year of physics or chemistry at university level is recommended.*

Polar Biology, 3 credits
In this course, students gain an understanding of biology of the polar areas, with a special emphasis on the Northern Hemisphere. They learn how organisms of the Polar Regions are evolutionarily adapted to cold terrestrial or marine habitats with strong seasonality. By studying theoretical and practical case studies, gain insight into population dynamics and species richness within Denmark, and of the Arctic regions in Iceland and Norway.

- Week-Long Study Tour: Iceland or Arctic Norway
- Short Study Tour: Denmark
- *Prerequisites: One course in environmental or Earth science at university level. One course in biology or ecology at university level is recommended.*

SUSTAINABILITY (Copenhagen)

Sustainable Development in Northern Europe, 3 credits
This course enhances student understanding of the divergent goals and complex processes associated with sustainable development from a European perspective. Specific focus is given to the interplay between social, political, and economic issues and environmental concern. You are introduced to a broad range of Danish and European stakeholders currently shaping the sustainability agenda and encouraged to identify their own values and strategies for a sustainable future.

- Week-Long Study Tour: Seville or Sweden or Finland
- Short Study Tour: Denmark

Sustainable Food: Production and Consumption, 3 credits
This course focuses on concrete and innovative solutions that reshape our connection to food. These solutions recognize and address the environmental and social impacts of food. Critical questions include: What is the true cost of food? How can we achieve more sustainable diets while producing less waste? Does food activism make a difference? What do pioneering restaurants and food entrepreneurs teach us? How do cities help shape more sustainable food practices?

- Week-Long Study Tour: Sweden or Sicily (Fall) or Barcelona (Spring)
- Short Study Tour: Denmark

Semester Elective Courses

Students select 3-4 electives from across the liberal arts and sciences, including these relevant to sustainability and the environment:

Copenhagen

- Adaptive Re-use in Europe: Cities and Buildings
- Anthropology of Food
- Arctic Geopolitics
- Arctic Glaciology
- Biological Conservation and Biodiversity
- Biological Conservation and Biodiversity Lab
- Biology of Marine Mammals
- Biology of Marine Mammals Lab
- Citizen Science on Biodiversity and Climate Change
- Climate Change and Radical Political Movements
- Eco-Psychology
- Environmental Economics
- Environmental Impact of Humans
- Environmental Philosophy
- Environmental Policy in Practice
- Geographic Information Systems: Applied Climate Change Cases
- Getting There: Transportation in Urban Europe
- Integrated Climate Change Planning

- Place-Based Sustainable Building
- Politics and Ethics of Food
- Renewable Energy Systems
- Research Assistant: Acoustic Ecology of Urban Bats
- Research Assistant: Biological Pest Control in Agriculture
- Strategies for Urban Livability
- Sustainable Business Strategy
- Sustainable by Design
- Understanding Climate Change
- Urban Ecology
- Waste Management Systems in Europe

Stockholm

- Energy Cloud: Engineering Localized, Digitized, Sustainable Networks
- Smart and Sustainable Cities
- Statistics

Summer Sessions

Students take one class at a time, and stay for 3 to 9 weeks, earning 3 to 9 credits.

Session 1 (May 21 - June 12, 2024)

- Environmental Philosophy (Copenhagen)
- Social Change and Active Citizenship (Copenhagen)
- Strategies for Urban Livability (Copenhagen)
- Statistics (Stockholm)
- Sustainable Business Strategy (Copenhagen)
- Sustainable Denmark: Solutions and Dilemmas (Copenhagen)

Session 2 (June 16 - July 5, 2024)

- Arctic Ecology (Copenhagen)
  - Study Tour: Disko Island, Greenland
- Climate Change and Glaciers (Copenhagen)
  - Study Tour: Arctic Norway or Iceland
- Engineering Sustainable Environments in Scandinavia (Stockholm)
  - Study Tour: Norway
- European Biodiversity (Copenhagen)
  - Study Tour: Sweden
- Renewable Energy Systems (Copenhagen)
  - Study Tour: Germany
- Sustainable Development in Northern Europe (Copenhagen)
  - Study Tour: Berlin-Hamburg
- Sustainable Food: Production and Consumption (Copenhagen)
  - Study Tour: Italy

Session 3 (July 8 - July 27, 2024)

- Bicycle Urbanism (Copenhagen)

Labs, Research, & Practicums Session (May 21 - July 5, 2024)

- Climate Change of Arctic Ecosystems Lab (Copenhagen)
    - Includes a 10-day fieldwork excursion to Greenland

Program Director

Neringa Bigailaite

M.A. (Scandinavian Philology, 2005). B.A. (Lithuanian and Danish Philology, University of Vilnius, 1996). International Student Advisor, Copenhagen University, 2004-2005. Lithuanian language instructor, Baltisk Oplysnings Forbund, 2002-2006). Employment at DFDS Transport A/S, 1997-2004. With DIS since 2005.

Faculty

Eliza Cook (Copenhagen)
Ph.D. in Physical Geography at Swansea University (2016).

- M.Sc. in Quaternary Science at University College London (2003).

Currently an assistant professor at Copenhagen University, with a research focus on reconstructing volcanism over the last 100,000 years, using the Greenland ice cores. Experience as a Field Scientist on eight ice core drilling expeditions in the Arctic, and as a field operations manager, supporting research logistics for the research missions in Greenland.

Amari Claudia Enzi, (Stockholm)
M.Sc./graduate engineer, Energy and Environmental Engineering, FH Pinkafeld, 2012 and MSc. Environmental System Science with focus on Business Administration, University of Graz, 2013.

Senior Sustainability Specialist, Sandvik Coromant, 2022-present. Director Subject Matter Expert Sustainability, Prime Weber Shandwick, 2022. Nordic Sustainability & Corporate Affairs Manager, Samsung Electronics, 2017-2022. Senior Consultant for Climate Change & Sustainability Services, EY, 2013-2016. With DIS since 2023

Rasmus Ekman (Copenhagen)
M.Sc. in Geography and Geoinformatics (University of Copenhagen).

- GIS analyst and drone pilot in the Department of Sustainable Development, City of Copenhagen.

His primary work is in climate adaptation projects, ensuring public participation and creation of high detailed drone generated geodata. Former member of the student association for Physical Geography with University of Copenhagen. Former position with the Copenhagen Municipality in the Climate Adaptation Unit under the Technical and Environmental Administration Works with GIS at the climate adaptation unit in the municipality of Copenhagen and at Energy and Water – Greater Copenhagen Science Centre. With DIS since 2016.

Emmanuel Gentil (Copenhagen)
Ph.D. (Environmental Engineering, Technical University of Denmark, 2011).

Independent environmental consultant. Senior Consultant at Copenhagen Resource Institute and for the European Environment Agency on waste management policy in EU. Ph.D. School Manager and Ph.D. researcher at DTU, Denmark 2006-2011. Master of business strategy and environmental management, Bradford. With DIS since 2013.

Jannik Hansen (Copenhagen)
M.Sc. (Wader/shorebird breeding ecology and behavioural ecology), Dept. of Animal Behaviour, Copenhagen University, 2001.

Scientific officer at Arctic Ecosystem Ecology, Department of Ecoscience, Aarhus University (2004-2021), incl. monitoring field work at Zackenberg Research Station, Northeast Greenland (2005-2021). Project officer (2014-) for and board member (2007-) of the International Wader Study Group. Has worked with terrestrial animals, primarily shorebirds, in the field in, Denmark, Sweden, Northeast Greenland, central Norway, and Svalbard. With DIS since 2021.

Camilla Hoff-Jørgensen (Copenhagen)
B.A. in Nutrition and Health (2006) B.A. and cand.scient in Anthropology (2012).

She worked as a cultural consultant in Japan concerning Danish and Scandinavian food culture and developing comparative studies of the Danish (European) and Japanese food culture. Moreover, she has international working experience in Bangkok and Barcelona. Camilla has done various research within the fields of medical anthropology and anthropology of food. As medical anthropologist, she has worked with harm reduction strategies for homeless and other at-risk populations. As an anthropologist with a background in food culture she has been a food study consultant and taught various food culture courses. Camilla is currently working on an experience design study covering restaurant NOMAs reaction to COVID19.

Asterios Papageorgiou, (Stockholm)
Ph.D. student, Department of Sustainable Development, Environmental Sciences and Engineering (SEED), KTH (Royal Institute of Technology), Stockholm, Sweden (2018-present).

Licentiate, Industrial Ecology, KTH (2021). MSc, Sustainable Technology, KTH (2018). MSc, Sustainable Waste Management, School of Civil Engineering, Leeds University, UK (2006). BSc, Physics, Aristotle University of Thessaloniki, Greece (2005). Environmental researcher, Aristotle University of Thessaloniki (2008-2009). Physics tutor, Epikentro tuition centre (2008-2012). Physics Tutor and co-owner, Aristeia tuition centre (2012-2016). With DIS since 2021.

Katja Vinding Petersen (Copenhagen)
Ph.D. (Distribution, habitat use, behavior, and sound communication), Zoology Dept., Whale Unit, University of Pretoria, 2016.

- M.S. (Biology and Didactics), University of Copenhagen, 2007.
- Research associate at Statens Serum Institute, Denmark (2012-2016).

TV presenter at “Physics at sea”, Galathea 3 Expedition (2008). Has worked with marine mammals in the field in, Iceland, Northern Norway, Greenland, and South Africa. Local stranding responsible In the Overstrand Region, South Africa (2010-2012). Founder of the Danish Maine Mammal Society (2003). With DIS since 2019.

Inger Kathrine Seierstad (Copenhagen)
MSc in Geology-Geophysics (University of Copenhagen).

Educated within glaciology at Centre for Ice and Climate, Niels Bohr Institute, which is a world-leading research group in ice core science. Inger has done research on ice cores, past climate change, volcanic deposits in ice, stable isotopes and stratigraphic dating of ice cores. Participated in ice-core drillings in Greenland and Antarctica multiple times. With DIS since 2018.