

MSc Climate Change, Environmental Processes and Sustainable Futures

First intake 2026-27

Explore how we can create sustainable futures in the context of climate-induced changes to environmental processes.

Introduction

Anthropogenic climate change is disrupting global environmental processes, creating intersecting environmental crises that affect both human and non-human life. These challenges include: increased frequency and magnitude of hazardous events such as landslides, floods and droughts; land degradation; melting of polar/mountain glaciers, ice sheets and permafrost; and rising sea levels.

This MSc responds to the question of how we can address these challenges in order to develop sustainable futures. On the MSc you will develop a) understanding of the relations and feedbacks between climate change and environmental processes, b) advanced-level skills of data collection, analysis, and interpretation needed for decision making under conditions of uncertainty and incomplete data. The programme brings together state-of-the-art research in environmental processes across diverse systems from polar regions to deserts under changing climates, and advanced approaches to data acquisition, analysis and interpretation. You will also gain the leadership and engagement and communication skills necessary to help you contribute to global efforts to enhance environmental sustainability.

Students will exit the programme understanding the impact of anthropogenic climate change on environmental processes at different scales, and equipped with the skills to research, evaluate, propose and lead solutions that foster environmental sustainability.



Course Timetable

Term 1 October to December	Term 2 January to March	Term 3 April to June	Summer June to August
Sustainable Futures (30 credits)	Climate and Environmental Change Past and Present (15 credits)	Knowledge for Action and Leadership (15 credits)	Dissertation or Vocational Dissertation (60 credits)
Environmental Data Science (30 credits)	Anticipating Future Environments (15 credits)	Dissertation or Vocational Dissertation (60 credits)	
Option 1: Climate Change and Society (15 credits)	Dissertation or Vocational Dissertation (60 credits)		
	Option 2: Cities and Climate Change (15 credits)		
	Option 3: Social Dimensions of Risk and Resilience (15 credits)		
	Option 4: Environmental Impact Assessment and Management (15 credits)		

List of Modules

You will take the following modules which, together, add up to 180 credits:

Sustainable Futures (30 credits) (Term 1)

This module introduces the causes of climate change and a range of other complex global crises, and explores emerging solutions around the promise of 'sustainable futures', building from the Sustainable Development Goals.

Environmental Data Science (30 credits) (Term 1)

This module will develop advanced data analysis skills such as programming, modelling and GIS, using datasets that allow advanced insight to a range of environmental processes as well as experience in a range of data sources.

Climate and Environmental Change Past and Present (15 credits) (Term 2)

Understanding how environmental processes responded under previous climates is key for predicting how they might respond in future. This module will assess how different paleo-environmental records are produced and analysed, and how they can be interpreted to make future predictions that enhance sustainability. It involves fieldwork, as well as lectures and seminars.

Anticipating Future Environments (15 credits) (Term 2)

This module will consider how we can predict the future behaviour of a range of different environmental systems under conditions of uncertainty, synthesising the state of the art and critically analysing current knowledge to enhance sustainability.

Knowledge for Action and Leadership (15 credits) (Term 3)

This module develops practical skills of leadership, engagement and dissemination relevant to creating sustainable futures.

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This module develops practical skills of leadership, public engagement and dissemination relevant to creating sustainable futures.

Dissertation or Vocational Dissertation (60 credits) (Terms 2 and 3)

The dissertation allows students to design and execute an extended piece of research on a particular problem, challenge, or issue at the intersection of climate change, environmental processes, and questions of sustainability. The vocational dissertation option is based on working with a non-academic partner.

Plus 15 credits from one of:

Climate Change and Society (15 credits) (Term 1)

This module will expand students' comprehension of the diverse societal processes underpinning climate change and its impacts in particular places across the globe.

Cities and Climate Change (15 credits) (Term 2)

The module explores how the very nature of urbanization is profoundly connected to the challenges of sustainability and responding to climate change.

Social Dimensions of Risk and Resilience (15 credits) (Term 2)

This module focuses on the social dimensions of risk and resilience with a particular emphasis on environmental hazards and climate change.

Environmental Impact Assessment and Management (from Earth Sciences, 15 credits) (Term 2)

This module aims to provide students with a comprehensive understanding of Environmental Impact Assessment (EIA) and its role in sustainable development.



Contact

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