Sustainable Development MSc (online)

Modules

The course is comprised of twelve 15-credit taught modules.

**Sustainable Development: Politics and Policies 15 credits**
This module provides an overview of the politics and policies of sustainable development in different parts of the world. From increasing inequality to toxic wastes and climate change, the challenges facing our world are daunting. Arguably then, the urgency of realising transformations to sustainability has never been greater.

**Science, technology and innovation 15 credits**
The mission of the module is to provide students with a grounding in a variety of economic and noneconomic (systems) frameworks for studying issues of science, technology and innovation, and their collective relationship to energy production and policy. The module gives students from diverse disciplinary backgrounds the knowledge and shared concepts for their studies, enabling them to communicate with each other and with the wider industrial, academic and policy communities concerned with innovation. The module aims to provide deep understanding of the processes of technical change and their relationships to organisations, markets and regulations.

**Policy Analysis 15 credits**
This module will provide students with the concepts and tools to understand and analyse specific energy policy problems, identify relevant goals, develop evaluation criteria, identify alternative policy options, assess the likely impact of those options against the evaluation criteria and provide practical policy recommendations. The approach will be interdisciplinary and applied, drawing in particular upon ideas from welfare economics and public choice theory. Students will apply these ideas to contemporary challenges within energy and climate policy.

**Understanding the Policy Process 15 credits**
This module will introduce students to the nature and operation of the policy process in modern societies. The module will examine the different stages of the policy process and assess competing explanations of that process, drawing upon ideas from policy studies and political science. The aim is to provide students with an understanding of how political systems are organised in different countries, how problems are constructed and brought onto the policy agenda, how policies are formulated, adopted, implemented and evaluated, how and why changes in policy occur, and how policy processes at different levels of government interrelate. Particular attention will be paid to international cooperation between nation states and the nature, operation and importance of the institutional arrangements that result (e.g. the UNFCCC and the Paris agreement). These ideas will be illustrated with practical examples and exercises from energy and other areas.
Key Perspectives in International Development (IDS)
15 credits
This module provides the epistemological foundations of development studies, mapping the historical evolution of key ideas and the political, socio-economic and cultural influences on them. It highlights the deeply contested nature of development and the different insights that academic disciplines such as economics, gender studies, anthropology, sociology, geography and political science have contributed to the evolution of development thinking. Students will reflect on their own motivation and positionality and how these influence their interpretation of the meaning and goals of development.

Democratising Science and Technology
15 credits
Modern sciences and technologies are deeply entangled with social power. Techno-scientific developments such as gene editing and climate geoengineering are political issues, embroiled not only in controversies among scientists and engineers, but also subject to wider public debates. These debates highlight the importance of continuous opening up of the techno-sciences to democratic scrutiny, in order to achieve a greater diversity of knowledge, artefacts, ecologies and cultures necessary for achieving transformations to sustainability.

Global Political Economy of the Environment
15 credits
This module explores the central relationship between the organisation of the global political economy and processes of social and environmental change. It examines the key pillars of the global economy in terms of production, trade and finance as well as looking at the political economy of key issues such as climate change, energy, food and water. These issues are studied in terms of the economic origins of socio-ecological impacts, their governance and contestation and struggles for alternatives.

Perspectives, Methods & Skills
15 credits
This module provides students with the basic building blocks for the production and use of social scientific research, giving special consideration to inter and transdisciplinary research. The aim is to develop students’ abilities to understand, critically evaluate, conduct, and communicate research. Module contents are relevant to students interested in pursuing careers in public and private sectors, and in research. The module will help students develop more sophisticated interpretative lenses, a strong understanding of methodological approaches used in the social sciences, and effective communication abilities. These skills are highly applicable to academic and non-academic tasks.
Innovation for Sustainability
15 credits
This module will explore the role that innovation can play in sustainable development in industrialised and developing countries. A number of ideas will be used to provide a framework for experiential learning, including: include past and current theory on sustainability, growth and competitiveness (with specific reference to the role of technology); understanding and influencing directions of innovation – both in terms of green industrialisation and grassroots innovation; and the governance of socio-technical transitions. Specific topics will be explored to illustrate the utility of each idea, such as: the barriers to the diffusion of sustainable innovations; the role of innovative green niches in systems transformations; and the challenges of international co-ordination and regulation within the multilateral trading system. These topics will be illustrated with reference to real world case studies in a number of different sectors.

Critical Issues in Sustainability
15 credits
This module examines key policy issues and debates relating to sustainability and global development in the domains of agriculture, health and the environment. A case study approach is used to explore real-life policy dilemmas, through topics such as agricultural transformation, carbon politics, the commodification of nature, the governance of infectious diseases, resource extraction, and climate change.

Market-based Solutions for SD: Pitfalls and Possibilities
15 credits
This module examines the emergent place and problems of market-based approaches for achieving sustainability and will cover topics such as payments for ecosystem services, carbon and biodiversity markets, offsetting and banking, and no net loss approaches. It probes questions of equity, justice and efficacy in treating nature as 'capital' and financialised commodity.

Decolonising knowledge for Sustainable Development
15 credits
This module examines the ways in which the current development apparatus is rooted in colonial history and ways of knowing, and how the politics and practices of sustainability both reinforce and challenge coloniality. We will explore non-Eurocentric forms of knowledge production focussing on the global South (such as feminist and critical race theory and practices, environmental and indigenous movements) that critique coloniality, rework the meaning of sustainability and offer visions for socio-ecologically just transformations.