

# How are universities integrating climate-change awareness into teaching?

by Hollie Ryan, Isadora Ferreira and Kate Raworth

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**Kate Raworth**  
@KateRaworth

Following

I'm interested in hearing about universities that are taking ambitious steps to integrate awareness and action on climate change into teaching, understanding and student engagement across departments. Please send examples my way, thanks.

4:42 PM - 23 Oct 2018

372 Retweets 775 Likes



199

372

775



Many higher-education institutions recognise the crucial role that they can play in raising awareness and understanding of climate change amongst their students. We wanted to learn about the different ways in which this is being done so we crowdsourced examples, via Twitter, of different approaches being taken. Based on the examples shared with us, we have classified them into five broad approaches, each one illustrated with multiple examples.

What follows is a listing, not a ranking - we have not assessed the efficacy of the individual initiatives, nor of the different approaches. It is also illustrative, not exhaustive, including only those initiatives that we were made aware of during our phase of Twitter crowdsourcing. We hope that the results will serve to inform and inspire. We will not be adding further examples or categories to this set, but anyone is welcome to use it as the basis for further research.

## Contents:

### **Focused Degree Programmes**

Degree programmes focused specifically on teaching the complex problems and solutions to climate change.

### **Focused Researched Centres**

Research dedicated to understanding and solving the complex problems the world faces as a result of climate change.

### **Optional Modules & Extra Qualifications**

Additional learning which can be taken by both students and staff, to understand climate change.

### **University-wide Integrated Initiatives**

Integrating climate change awareness in teaching across the whole higher education institute, reaching various disciplines and departments.

### **Trans-university Integrated Initiatives**

Externally led integration of climate change awareness into university teaching, and collaboration between universities.

# Focused Degree Programmes

Degree programmes focused specifically on teaching the complex problems and solutions to climate change.

## **BASc Global Sustainable Development – University of Warwick (UK)**

The University of Warwick offers BASc Global Sustainable Development, both as a single honours and joint honours degree. The Joint Honours stream offers the chance to combine the unique interdisciplinary approach of GSD with a growing amount of conventional degree programmes including Politics, Life Sciences, Economics, Psychology and History. The department employ a problem-based learning approach, introducing students to critical issues such as climate change and social justice and asking them to propose innovative solutions to these complex problems. Link [here](#).

## **PhD Climate Change and Sustainable Development Policies – Joint between University of Lisbon, New University of Lisbon, and University of East Anglia (Portugal & UK)**

A three-year PhD in Climate Change and Sustainable Development Policies, focused on interdisciplinary training combining the physical, natural, social and human sciences. Link [here](#).

## **Bard MBA – Bard College (USA)**

Bard College offers an MBA programme that integrates sustainability into its business curriculum, preparing students for leadership positions in a variety of business environments—from innovative start-ups to major corporations. The programme provides a grounding in management essentials, with a focus on: economic success, environmental integrity, and social equity. Link [here](#).

## **Bsc Global Responsibility & Leadership – University of Groningen (Netherlands)**

The degree is designed based on the UN Sustainable Development Goals. It is a transdisciplinary programme dedicated to addressing global challenges and finding local solutions. Students also have the possibility to undertake a Living Lab project and to do a Capstone project, such as developing an app or filming a public announcement rather than writing a dissertation. Link [here](#).

## **Master programmes - SOAS (UK)**

SOAS offers various graduate courses with a focus on environmental and climate-related research and teaching. There are two climate specific MSc programmes (MSc Climate Change and Development, MSc Global Energy and Climate Policy), which are available online or on-campus. Other programmes that integrate climate change into their curriculum are MSc Economics with reference to Environment and

Development, MSc Environment, Politics and Development, LLM in Environmental Law, MA in Environmental Law and Sustainable Development. Link [here](#).

### **MSc Green Economy – University of Bournemouth (UK)**

An interdisciplinary distance learning course that focuses on exploring the transition to a green economy through the principles of environmental sustainability. Link [here](#).

### **MSc in Disaster Risk Management and Climate Change Adaptation - Lund University (Sweden)**

Offers a mix of practical and theoretical learning on climate change, with a strong focus on adaptation, risk management. The programme has connections with potential hosts for interns and students conducting research for their Master's thesis within the UN-system, the Red Cross/Red Crescent movement, and Governmental agencies on different administrative levels in various parts of the world. Link [here](#).

### **MArch/MSc Landscape Urbanism Graduate Programme – Architectural Association (UK)**

The programme explores the role that design and designers can play when confronted with large scale territories. Critical thinking is integrated on planetary issues: climate change, water/food/land consumption, energy resources, urban and landscape resilience. Link [here](#).

### **MSc Sustainable Development and Energy – Joint between St Andrews and MGIMO University (UK & Russia)**

Msc Sustainable Development and Energy is a joint programme between St Andrews University and MGIMO University. The Programme provides an opportunity for five Russian and five British master students to become experts both in sustainable energy and strategic management in energy (Russia). Link [here](#).

### **Master & Bachelor Minor in Sustainable Development – University of Bern (Switzerland)**

University of Bern offers both a Master minor and Bachelor minor in sustainable development. It also offers the Certificate of Advanced Studies on Sustainable Development, which provides participants with a solid basis in knowledge for sustainable development, offers space for reflection, and reveals tailored solutions for implementation. The extra-occupational course of studies is aimed at professionals in public administration, private industry, or NGOs, who wish to engage on behalf of sustainable development. Link [here](#).

## **Master Programmes – University for Peace (Costa Rica)**

The Department of Environment and Development has two masters programmes. MA in Responsible Management and Sustainable Economic Development (RMSED) emphasizes economic and management perspectives of peace while focusing on the concepts of sustainability and responsibility. The MA in Environment, Development, and Peace (EDP) focuses on issues of sustainable development, environmental governance, natural resource management, and environmental conflict management from both ecological and social perspectives. Link [here](#).

## **Climate Change and Environmental Law - PUC Rio**

The university offers a course on environmental law and climate change to students and practitioners. Link [here](#).

## **Focused Researched Centres**

Research dedicated to understanding and solving the complex problems the world faces as a result of climate change.

### **Centre for the Circular Economy - University of Exeter (UK)**

The Centre for the Circular Economy is an interdisciplinary centre focused on providing scientific, evidence based approaches to critique and develop the theory and practice of the Circular Economy, encourage creative solutions to the problems of the linear economy and challenge conventional thinking. Link [here](#).

### **Centre for Sustainable Fashion – London College of Fashion, University of the Arts London (UK)**

The university created MA Fashion and the Environment in 2008, which has evolved to become MA Fashion Futures. Student question and explore fashion practice and theory related to fashion as meaning and shape making. Since its inception, UAL has instigated a variety of sustainability focused projects and modules for courses across all schools at London College of Fashion and Central Saint Martins. Centre for Sustainable Fashion (CSF) is a Research Centre of the University of the Arts London based at London College of Fashion. Link [here](#).

### **Grantham Institute – Imperial College (UK)**

The Grantham Institute is Imperial College London's hub for climate change and the environment, one of Imperial's six Global Institutes established to promote interdisciplinary working, to meet some of the

greatest challenges faced by society. It has undergraduate and graduate programmes as well as offering research training for undergraduates in these topics. Link [here](#).

### **Atkinson Centre for a Sustainable Future – Cornell University (USA)**

The Atkinson Centre for a Sustainable Future at Cornell University empowers faculty to think outside of their departments and across disciplines when it comes to tackling the world's greatest challenge—creating a vital and resilient future for the global community. It provides start-up funding for cross-college collaborations, emergency research, partnerships with nonprofits, government, and industry. Link [here](#).

### **Institute for Environmental Sustainability – Loyola University Chicago (USA)**

The Institute of Environmental Sustainability aims to deliver core environmental science courses to raise awareness and action in all LUC undergraduates, prepare IES baccalaureate and graduate students for socially responsible professions in environmental science, policy, education, business, and health, and advance knowledge of environmental problems and develop solutions through research and community outreach. Link [here](#).

### **Centre for Climate Change Education and Communication – University of Winchester (UK)**

Launched in April 2018, the Centre is an interdisciplinary and collaborative centre aiming to be a home and catalyst for action on Climate Change Education and Communication at the University of Winchester. They undertake research and teaching and organise public engagement events. They also provide one Msc in Applied Global Practice (Management) which focuses on addressing important global issues from a management perspective. Link [here](#).

### **Julie Ann Wrigley Global Institute of Sustainability – Arizona State University (USA)**

Julie Ann Wrigley Global Institute advances research, education, and business practices for an urbanizing world. Arizona State University's School of Sustainability is the first comprehensive degree-granting program (undergraduate and postgraduate) of its kind in the United States since 2006, with a focus on finding real-world solutions to environmental, economic, and social challenges. Link [here](#).

### **Centre for the Study of Environmental Change – Lancaster University (UK)**

The Centre for the Study of Environmental Change explores the cultural, social and scientific dimensions of contemporary environmental issues including (un)sustainability, and environmental change, knowledge, and politics. Based in the Sociology Department, it has affiliate members in other

departments, and many active international collaborations. It also offers masters and doctoral programmes. Link [here](#).

### **The Earth Institute - Columbia University (USA)**

The Earth Institute spreads out across dozens of research centers and programs at Columbia University. Its research focus on understanding the earth systems and human impact on the environment. It also engages directly with stakeholders in practical efforts to improve the environment. The institute has also created a number of education programs that require students to learn environmental science and social science along with applied policy and management analysis. Link [here](#).

### **TERI School of Advanced Studies (India)**

This is the first school in India to dedicate itself to the study of environment, energy and natural sciences and sustainable development. Students can enrol on several academic programs related to sustainable development. These programmes have four thematic areas - Biotechnology, Regulatory & Policy aspects, Energy & Environment and Natural Resources. Link [here](#).

### **Tyndall Centre Manchester – University of Manchester (UK)**

Tyndall Manchester is a research group within the university that covers a wide range of issues relating to climate change mitigation and adaptation. Their interdisciplinary approach employ a diverse range of research methods and theory. The group also offers Phd programmes in the same topics. Link [here](#).

### **Grantham Research Institute on Climate Change and the Environment – London School of Economics and Political Science (UK)**

The Grantham Institute was established in 2008 to create a world-leading centre for policy-relevant research and training on climate change, bringing together international expertise on economics, finance, geography, the environment, international development and political economy. Link [here](#).

### **Centre for Climate Change Economics and Policy – Joint between University of Leeds and London School of Economics and Political Science (UK)**

The ESRC Centre for Climate Change Economics and Policy (CCCEP) brings together some of the world's leading researchers on climate change economics and policy, from many different disciplines. It was established in 2008 and is hosted jointly by the University of Leeds and the London School of Economics and Political Science (LSE). Link [here](#).

### **Environmental Change Institute – University of Oxford (UK)**

The Environmental Change Institute conducts interdisciplinary research on the nature, causes and impact of environmental change and aims to contribute to the development of management strategies for coping with future environmental change. It offers an MSc in environmental change and management as well as doctoral programmes. Link [here](#).

### **ENVR Division of Environment and Sustainability – The Hong Kong University of Science and Technology (China)**

The Division of Environment & Sustainability offers several degree programmes in environmental sustainability and climate change. The Division of has three research themes as follows: Air and water, including interrelations with climate change; Environmental changes on regional and local scales, and their global interrelations; and Economic and social impacts and solutions for environmental problems. Link [here](#).

### **School of Environment, Resources and Development – Asian Institute of Technology (Thailand)**

The School was established by joining several divisions within the institute. It has ten fields of study - Agricultural Systems and Engineering, Aquaculture and Aquatic Resources Management, Food Engineering and Bioprocess Technology, Energy, Environmental Engineering and Management, Pulp and Paper Technology, Gender and Development Studies, Natural Resources Management, Regional and Rural Development Planning and Urban Environmental Management. It offers several graduate programmes in the intersection of climate change, energy and sustainable development. Link [here](#).

### **Institute for Technology and Resources Management in the Tropics and Subtropics (Germany)**

The Institute for Technology and Resources Management in the Tropics and Subtropics (ITT) at the TH Köln (University of Applied Sciences) aims to enable people of various technical and cultural backgrounds to better solve the complex issues related to environmental problems with an interdisciplinary and intercultural approach at the graduate and postgraduate level. Link [here](#).

### **The Brighton Waste House – University of Brighton (UK)**

As a 'living laboratory' for ecological architectural design, the Brighton Waste House is a live research project helping Brighton University develop abilities as designers and makers. It is a house made out of materials that other people have thrown away, and is also an investigation into the circular economy in waste and construction. In simple terms, they are promoting the ethos of: "There is no such thing as waste, just things in the wrong place". Link [here](#).



## Optional Modules & Extra Qualifications

Additional learning which can be taken by both students and staff, to understand climate change.

### **Global Graduate Award on Sustainability – University of Surrey (UK)**

This is a free course open to all students, which aims to provide an understanding of a wide range of challenges affecting the sustainability of the planet and some of the solutions. It focuses on the three pillars of sustainability (economic, social and environmental) and all topics are applied to a case study family. Link [here](#).

### **Creating Sustainable Futures - University of Leeds (UK)**

Leeds has developed an interdisciplinary optional module, designed to expose students to many environmental, social and economic issues, an elective programme in which students from any discipline can do. Students can also partake in practical projects aimed at solving sustainability problems at work, in communities or individual lifestyles. University of Leeds also offers a variety of sustainability related degrees. Link [here](#).

### **Bristol Futures – University of Bristol (UK)**

Bristol Futures Optional Units are interdisciplinary units for undergraduates. They include a range of new learning resources investigating major opportunities and challenges facing our generations. In 2018/19, the units available focused on themes revolving sustainability and climate change in cities, sustainable development and sustainability and inequality. Link [here](#).

### **Future Literacy – Hanze University of Applied Sciences in Groningen (Netherlands)**

Futures Literacy, developed within UNESCO, uses the future as a tool to address societal challenges. Their approach is through learning by doing/action-research workshops to enable participants to reveal, reframe and rethink their assumptions about the future. Link [here](#).

### **Ethical Grand Challenge – University of Manchester (UK)**

The university holds a Sustainability Challenge in Welcome Week and six other times a year, as part of the Stellify Award. Students can learn more about sustainability as part of degree by taking a University College for Interdisciplinary Learning (UCIL) unit as one of your free choice options. Link [here](#).

# University-wide Integrated Initiatives

Integrating climate change awareness in teaching across the whole higher education institute, reaching various disciplines and departments.

## **Big Impact - Manchester Metropolitan University (UK)**

The University has several different initiatives which integrate climate change and environmental issues in its teaching. The Big Impact is a programme of sustainability events, activities, learning and volunteering opportunities from Manchester Met's Environment team, available to staff, students and local community members. Ideas into Action is a programme where people can submit ideas for sustainability action and change. Link [here](#).

## **Education for Sustainability – Anglia Ruskin University (UK)**

Anglia Ruskin University has embedded Education for Sustainability into academic regulations since 2014, focused on equipping students with the knowledge, skills and attributes they will need to build a more responsible future where people and the planet can prosper. Link [here](#).

## **Carbon Neutral University Network – University of Sheffield (UK)**

The CDUUK brings together seven academic departments to provide a cohesive centre for interdisciplinary research into carbon dioxide utilization in Sheffield. The Carbon Neutral University Network bring together students and staff that focus on encouraging and developing solutions to support the University of Sheffield to become Carbon Neutral by 2025. The University also has an MA programme in Environmental Change and International Development. Link [here](#).

## **Signatory of the UN Global Compact - Grenoble Ecole de Management (France)**

Grenoble Ecole de Management has been a signatory of the UN Global Compact, which underlines its work to promote UN Principles for Responsible Management Education (PRME). The institution also participates in the national work group on "Skills for Sustainable Development". As a result, it has internal training courses on topics such as "How to adopt sustainable teaching habits?", "Awareness on disabilities" or "Stress and management. Likewise, on its MBA programme, it has introduced a module that focuses on Ethics, Sustainability and Corporate Responsibility. Link [here](#).

## **Pathways to Sustainability – Utrecht University (Netherlands)**

Sustainability research at Utrecht University brings together five faculties: Geosciences, Sciences, Law, Economics and Governance, Social and Behavioural Sciences and Humanities. It aims to identify and

understand transformative pathways in four areas: Food; Industry; Infrastructure in cities and Water, Climate and Future Deltas. Link [here](#).

### **Otago Polytechnic (New Zealand)**

Otago Polytechnic integrates sustainable practice into all educational programmes – as well as providing a range of qualifications in sustainable practice. Students are also involved in research projects with a sustainability focus, enabling them to develop new responses to environmental and social challenges. The goal is for every graduate may practice sustainably and make a difference to the world – and that every student graduates with the skills and knowledge to act as a sustainable practitioner. Link [here](#).

### **The Green Academy – Nottingham Trent University (UK)**

NTU has a commitment to embedded environmental and sustainability issues in its courses curriculum. The emphasis is on Education for Sustainable Development (ESD) in both the formal and informal curriculum, as well as delivering the innovative Sustainability in Practice Certificate. Link [here](#).

### **The Green Office – Maastricht University (Netherlands)**

The Green Office empowers bottom-up initiatives and facilitates cooperation between departments to achieve Maastricht University's sustainability goals. They raise awareness, inspire critical, creative and collaborative thinking about sustainability challenges, the first of a model that has now spread to 27 higher education institutions across six countries. The university has an BSc and Master in sustainability as well as several courses both at undergraduate and graduate levels, in different subjects (law, business and economics, etc). Link [here](#).

### **The Local Healthy UMass Food System Initiative - University of Massachusetts (USA)**

The Local Healthy UMass Food System Initiative is a group within the university that works collaboratively with diverse stakeholders to increase the sustainability of their campus food services' facilities and operations. Link [here](#).

# Trans-university Integrated Initiatives

Externally led integration of climate change awareness into university teaching, and collaboration between universities.

## **NUS Responsible Futures (UK)**

NUS Responsible Futures puts sustainability at the heart of education across universities and colleges in the UK, including University of Edinburgh, Anglia Ruskin University and Manchester Metropolitan University. They actively support partnerships between student unions and institutions through a structured framework of criteria to encourage action on embedding social responsibility and sustainability into formal and informal learning. Link [here](#).

## **Engineering without Borders (UK)**

Engineering Without Borders runs an annual Engineering for People Design Challenge, which gives undergraduates the opportunity to learn and practice the ethical, environmental, social and cultural aspects of engineering design. This year, 31 universities with 6,500 students took part across the UK and Ireland. Link [here](#).

## **The Climate Leadership Network - Second Nature (USA)**

Second Nature works with a network of 600+ universities & colleges (since 1993) on climate change commitments and research-based action, on campus and through local communities. The Climate Leadership Network is comprised of colleges and universities across all 50 states including the District of Columbia, who have committed to take action on climate and prepare students through research and education to solve the challenges of the 21st century. Link [here](#).

## **NurSus Europe**

NurSus Europe provides a host of materials to put climate change and sustainability at the heart of healthcare training. The toolkit offers lectures and activities that can be adapted to meet the needs of students studying subjects such as geography, design, nursing, midwifery, environment, public health, and health planning and management. The outcome of a three-year collaboration between the University of Plymouth and universities in Esslingen (Germany), Jaen (Spain) and Maastricht (the Netherlands), funded by European Union programme Erasmus+. The content of the toolkit is based on evidence from literature, nurse education experts and student groups, and is available in six languages – English, French, Spanish, German, Dutch and Polish. Link [here](#).

## **The Least Developed Countries Universities Consortium on Climate Change**

The Least Developed Countries (LDC) Universities Consortium on Climate Change (LUCC) is a network between Southern universities to develop common research projects and implement teaching and training

programs in different climate change topics in universities and training Institutes in all the 48 LDCs. The focus of the Consortium will be on climate change adaptation, especially community-based adaptation. Participating countries are Bangladesh, Bhutan, Nepal, Ethiopia, Sudan, Tanzania, Uganda, The Gambia, Senegal, Mozambique. Link [here](#).

### **Interdisciplinary Food Systems Teaching and Learning (UK)**

As a collaboration of seven higher education institutions, including Warwick, Reading and Oxford, IFSTAL is pioneering a learning community and resource to enable a step change in food systems thinking. IFSTAL is available to all postgraduate students enrolled at the participating institutions. The programme equips participants with the skills to apply critical interdisciplinary systems thinking to issues of long-term food security through fostering intra- and inter-institution activities, and the means for taking new learning to the work-place. Link [here](#).

### **Helix (Europe)**

A EU-funded collaborative research project assessing the potential impacts of climate change. Scientists from 16 organisations worldwide have worked together to develop a number of future scenarios of the natural and human world as a consequence of 1.5°C, 2°C, 4°C and 6°C global warming. Various universities are working on this, including University of Exeter, University College London, Université de Liège, and VU University of Amsterdam. Link [here](#).

### **Carbon Literacy (UK)**

Carbon Literacy is an awareness of the carbon dioxide costs and impacts of everyday activities, and the ability and motivation to reduce emissions, on an individual, community and organisational basis. Led by The Carbon Literacy Project, a small independent charity based in Manchester, universities offer "a days worth of learning about climate change" meeting The Carbon Literacy Standard and offering successful participants certification as being Carbon Literate. Link [here](#).