D11CA Climate Change, Sustainability and Adaptation

COURSE DETAILS
Course Code: D11CA
Full Course Title: Climate Change, Sustainability and Adaptation
SCQF Level: 11
SCAF Credits: 15
Available as Elective: No

DELIVERY LEVEL
Undergraduate: Yes  Postgraduate Taught: Yes  Postgraduate Research: No

COURSE AIMS
The aim of this course is to introduce the student to the concepts of sustainability in their widest definition – that of environmental, economic and social sustainability. The course will introduce issues relating to climate science and future predictions, in addition to legislative requirements and government initiatives to combat climate change. The concepts of carbon, energy and water footprints, environmental impact analyses will be explored, and interests surrounding energy and carbon mitigation, and current thinking in adaptation strategies will also be covered. The use of case studies and/or site visits will be used throughout the course to demonstrate principles and current practice.

LEARNING OUTCOMES – SUBJECT MASTERY

- An awareness of sustainability in its widest definition, including aspects of environment, economy and social impact.
- An understanding of low carbon and climate change legislation, and an appreciation of possible future initiatives.
- An understanding of Environmental Impact and Life Cycle Assessments in current design and construction practice.

- An ability to understand a number of conflicting issues and communicate amongst a diverse group of professionals.
- An ability to appraise sustainability across a number of sectors and to appraise the impact of climate change on e.g. quality of life, energy generation, built environment resilience, food supplies and other relevant industries.

LEARNING OUTCOMES – PERSONAL ABILITIES
D11CA Climate Change, Sustainability and Adaptation

- A greater ability to communicate sustainable development practices across a diverse community of stakeholders
- Critical appraisal of a number of current case study

- The ability to understand the conflicting issues prevalent in sustainable development. Emphasis of this is expressed throughout case studies and site visits

- Advanced skills in verbal, written and graphic communication.
- Report writing skills, including critical appraisal, discussion and argument.
- Information finding and appropriate referencing of cited materials.

SYLLABUS

- Introduction to sustainability: environmental, economic and social
- Sustainability in a variety of contexts
- History of climate science and future predictions
- Carbon, energy and water footprints
- Environmental Impact Assessments (EIA), including an introduction to Life Cycle Assessment (LCA)
- Energy reduction and carbon emissions mitigation
- Adaptation/probability for future climate scenarios

COURSE RELATIONSHIPS

N/A

LOCATION AND ASSESSMENT METHODS

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