

MODULE SPECIFICATION FORM

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| Module Title: Sustainability and Environmental Hazards | Level: 4 | Credit Value: 20 |
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| Module code: SCI436 (if known) | Cost Centre: GAFS | JACS2 code*: |
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**please contact Student Data Services for further guidance if necessary*

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| Semester(s) in which to be offered: 2 | With effect from: September 2015 |
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| Office use only: To be completed by AQSU: | Date approved: September 2015 Date revised: - Version no: 1 |
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| Existing/New: New | Title of module being replaced (if any): SCI413 Introduction to Sustainability SCI 420 Environmental Hazards |
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| Originating Academic area: Chemistry | Module Leader: Amiya Chaudhry |
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| Module duration (total hours) 200 | Status: Core |
| Scheduled learning & teaching hours 60 | |
| Independent study hours 140 | |

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| Programme(s) in which to be offered: BSc Geography, Ecology and Environment; | Pre-requisites per programme (between levels): |
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Module Aims:

- To examine the origin of a variety of environmental hazards.
- To understand the contrasting approaches which may be employed to overcome environmental hazards.
- To explore the relationship between hazards and environmental change.
- Introduction to the concept of sustainability.
- The promotion of sustainability in different social, political and economic contexts.

Expected Learning Outcomes

At the end of this module, students should be able to:

Knowledge and Understanding:

1. Understand core definitions and concepts
2. Recognise the natural and human processes which generate environmental hazards and how society is affected by and responds to environmental hazards.
3. Describe the role humanity plays in changing the global environment and the degree to which global environmental change may occur independently of human influence
4. Explain the complex interactions between people, the natural environment and economic systems.

Transferable/Key Skills and other attributes:

Critical reading
Writing skills
Working in a group
Presentation skills

Assessment: please indicate the type(s) of assessment (eg examination, oral, coursework, project) and the weighting of each (%). ***Details of indicative assessment tasks must be included.***

Assessment:1

Students will be asked to work in small groups and present a case study at the end of the module demonstrating learning outcomes 1 and 2. Students will be required to keep a task log to ensure equal input to the group task and formative feedback will be provided weekly to each group.

Assessment 2

Using referenced examples students will be asked to write an essay demonstrating learning outcomes 3 and 4

| Assessment number | Learning Outcomes to be met | Type of assessment | Weighting | Duration (if exam) | Word count (or equivalent if appropriate) |
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| 1 | 1,2 | Poster Presentation | 50 | N/A | N/A |
| 2 | 3,4 | Essay | 50 | | 2000 |

Learning and Teaching Strategies:

Students are taught with weekly lectures. The lecture material is supported by online resources in the form of case studies.

Syllabus outline:

- Introduction to Natural Hazards
- Man-made hazards: case studies such as Chernobyl.
- Hazard management
- Environmental history: Recognise that global environment changes can be related or independent of human influence. Develop further understanding of this concept through case studies such as "Easter Island".
- Introduction to sustainability: concepts and meaning
- National and global drivers for sustainability
- Changing Attitudes- Environmental change and its interpretation, contradictions and tensions today.

Essential reading:

- Moran, E. F. (2010) *Environmental Social Science: Human - Environment interactions and Sustainability*. Blackwell UK.
- Diamond, J. (2011) *Collapse: How Societies Choose to Fail or Succeed*. Penguin Books.

- Bryant E (2005) *Natural Hazards* 2nd Edition. CUP.
- Smith K (2009) *Environmental hazards: Assessing Risk and Reducing Disaster*. Taylor & Francis.
- McGuire B, Mason I, and Kilburn C (2002) *Natural Hazards and Environmental Change*. Arnold, London

Other indicative reading:

- Heinberg, R. and Lerch, D. (2010) *The Post Carbon Reader Managing the 21st Century's Sustainability Crisis*. Post Carbon Institute.
- Goudie, A. (2000) *The Human Impact on the Natural environment* 5th Edition. Oxford Blackwell Publishers.
- Pointing, C. (2007) *A New Green History of the World: The Environment and the Collapse of Great Civilisations*. Vintage.
- Schumacher, E.F. (1993) *Small is beautiful: a study of economics as if people mattered*, London, Vintage.
- Carson, R. (1963) *Silent spring*, Hamilton.
- Selected articles in the Journal of Current Opinion in Environmental Sustainability.