Earth Sciences

Integrating Science Into Disaster Risk Reduction (IRDR0015)

**Description**

This module is intended to meet the growing and recognised need that scientific and other technical knowledge must become more integrated in a systematic way into disaster risk reduction strategies; it also recognises that this knowledge must respect and integrate with local and indigenous knowledge. The aims of the module therefore are: (i) to make students aware of the role science has to play in informing and improving disaster risk reduction strategies, and (ii) to equip students with the skills and knowledge enabling them to solve complex problems in disaster risk reduction through engagement with scientific knowledge, methods, data and expertise.

The module will consider the following topics:

- Overview of approaches to disaster risk reduction.
- Behavioural Biases
- Quantitative risk assessment
- Dealing with uncertainty, including acceptable levels of risk and uncertainty
- Catastrophe modelling
- The roles of scientific evidence, scenario development and horizon scanning in responsible decision-making.
- The role of the insurance industry in risk and disaster reduction
- Science and accountability.
- Science and Policy
- The nature and distribution of risk and disasters, including the temporal and spatial scales and the acute and chronic dimensions.
- Mitigation methods and early warning systems.
- How disaster risk may evolve in the future and how science and technology may be able to improve preparedness.

**Key information**

- **Year**: 2019/20
- **Credit value**: 15 (150 study hours)
- **Delivery**: PGT L7, Campus-based
- **Reading List**: [View on UCL website](#)
- **Tutor**: Dr Joanna Faure Walker
- **Term**: Term 1
- **Timetable**: [View on UCL website](#)

**Assessment**

**Find out more**

For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](http://ucl.ac.uk).
The pressures in different sectors that limit the application of science in disaster risk reduction.

Communication of complex issues to wide and varied audiences that will have different objectives with regard to issues and solutions.
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**Assessment**

- Written examination (main exam period): 70%
- Oral examination (departmentally managed): 30%

**Find out more**

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**Disclaimer:** All information correct as of August 2019. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.
• The pressures in different sectors that limit the application of science in disaster risk reduction.

• Communication of complex issues to wide and varied audiences that will have different objectives with regard to issues and solutions.