



Risk and Disaster
Science MSc
Management Pathway
2020/21 entry

www.ucl.ac.uk/rdr/

RDR

UCL Institute for Risk
and Disaster Reduction

*Fukushima nuclear reactor
Japan*

Risk and Disaster Science MSc Management Pathway

Natural and anthropogenic hazards, humanitarian and health crises, conflict, and climate change create challenges for businesses and demand managerial skills to respond. This science-led programme with management pathway fills a business and organizational need for graduates with management skills and innovative approaches to increase resilience.

Programme themes

Disaster Management

- Managerial skills to face disasters and to reduce risks
- Entrepreneurial mind and innovative approaches to build resilience
- Business continuity planning to manage real emergencies

Science of Earth and Space Hazards

- Analyze different hazard risks: seismicity, space weather, epidemics, conflict and climate
- Scenarios and case studies drawn globally to provide breadth of experience

Quantifying Risk

- Components of risk: exposure, hazard, vulnerability
- Understanding Vulnerability
- Statistical and Modelling Tools

Multidisciplinary Holistic Approaches

- Integrating scientific knowledge into disaster risk reduction research, policy and practice
- Communicating with stakeholders

Managing Disasters

- How to apply plans to manage real emergencies

Teaching and learning

Learn from world-class researchers and professionals delivering the programme through a combination of lectures, class discussions, problem-solving exercises, practicals, field trips, directed reading, student-led dialogues, and a practitioner-led real-time disaster scenario event. **Assessment** is by individual and group presentations, coursework, written examinations and a research project.



Why study at UCL-IRDR?

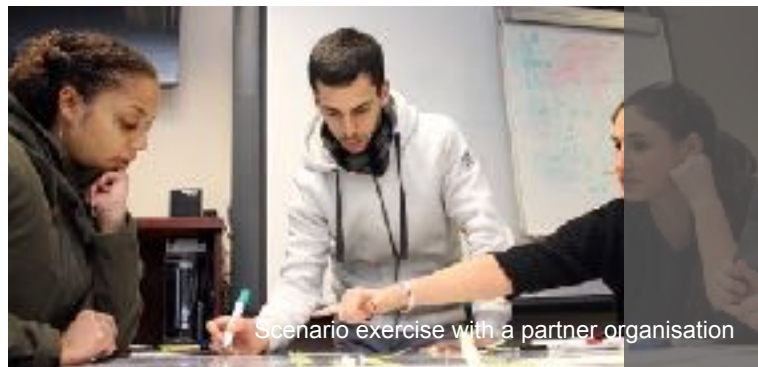
UCL is one of the world's leading universities, regularly featuring in the top 10 in global rankings.

The Institute for Risk and Disaster Reduction (IRDR), leads multidisciplinary research, knowledge exchange and advanced teaching across UCL.

School of Management ranked among the top 3 in the UK for Business and Management studies. It focuses on technology, innovation and entrepreneurship.

As a student, you will be able to attend the optional modules, to join the active seminar series, and to participate in the high-profile public discussion meetings of both IRDR and School of Management.

"London itself is an unparalleled breeding ground of ideas for anyone interested in research" (MSc student 2015/16).



Careers

Whether you wish to pursue a career in risk and disaster reduction or to start up your own enterprise, we are here to support you. We run an annual Careers and Opportunities Forum which offers expert and targeted advice, and hosts stalls from a range of employers and headhunters in the field of risk and disaster reduction. We support entrepreneurial initiatives by offering enterprise training and connecting students with resources available at UCL such as business mentors and start-up incubators. Students have chances to undertake their desertion projects with reputation organisations in the IRDR network such as London First and Resilience First. Graduates from this pathway will be highly employable in companies, governments, NGOs and around the world, equipped with a scientific understanding and management skills of risks and disasters reduction.

Some career destinations of recent IRDR graduates:

- Business Continuity & Resilience Consultant, PwC
- Business Continuity Consultant, ARUP
- Underwriting Assistant, MS Amlin
- Catastrophe Analyst, Barbican Insurance Group
- Reinsurance Claims Management Executive AXA Global Re, Paris
- Senior Analyst, RMS (Risk Management Solutions)
- Disaster Risk Management Consultant, World Bank
- Project Officer, Global Risk Forum, Davos
- Risk & Business Continuity Officer, County Fire & Rescue
- Emergency Planning and Business Continuity Officer, UK Local Government

Programme structure

Modes of study: Full time: 1 year. Part time: 2 years
 Students take eight taught modules and an independent research project. Students in the pathway are able to select up to 2 optional modules from the UCL School of Management.

A Postgraduate Diploma comprising eight taught modules can be taken full-time or part-time over two years.

For further information see www.ucl.ac.uk/rdr/



Degree Programme Modules

Two compulsory core taught modules (15 credits each)

1 Integrating Science into Risk and Disaster Reduction		2 Emergency and Crisis Management	
Quantitative risk assessment	Risk transfer & communication	Command procedures	Warning and evacuation

One compulsory programme-specific core modules (15 credits)

1 Risk Analysis for Disaster Science			
Earthquake science	Statistical geophysics		

Two compulsory taught skills modules (15 credits each)

1 Data Analysis and Interpretation		2 Practice and Appraisal of Research	
Statistical methods	R & GIS	Qualitative research methods	Project design & management

Three optional taught modules (15 credits each) from

Non-IRDR optional modules are marked with an asterisk ()*

1 Catastrophe Risk Modelling		2 Digital Health: Epidemics and Emergencies	
Probabilistic modelling	Hazard and physical vulnerability	Early warning & response	Surveillance systems
3 Gender, Disaster and Conflict		4 Business Continuity Management and Organisational Resilience	
Gender responsiveness	Structural vulnerabilities	Managing operations	Supply chain disruptions
5 Conflict, Humanitarianism & Disaster Risk Reduction		6 Natural and Anthropogenic Hazards and Vulnerability	
Humanitarian response	Conflict and crises resolution	Scientific causes	Social & economic vulnerability
7 Emergency and Crisis Planning		8 The Variable Sun: Space Weather and You	
Methodology and techniques	Policy and legal contexts	Satellite vulnerability	Risks to critical infrastructure
9 Decision and Risk (Statistics) *			
Statistical treatment of risk	Bayesian decision making		
10 Social Network Analysis * School of Management		11 Influence and Negotiations * School of Management	
Network dynamics	Blockmodeling	Experiential learning	Managerial decision making
12 Decision and Risk Analysis * School of Management		13 Mastering Entrepreneurship * School of Management	
Business analysis	Computer workshops	Business planning	Finance
14 Entrepreneurship: Theory and Practice * School of Management		15 Project Management * School of Management	
Business lifecycle	Business operation	Project administration	Risk management

All optional modules are subject to availability and particular modules may not be possible in any given year.

Independent project (60 credits)

The independent research project culminates in a 10,000 to 12,000 word dissertation and poster presentation. Projects may be field, theory or modelling based and can be conducted in collaboration with external partners including industry, international research organizations or NGOs.

Field studies and group working

Current field visits include: the Thames Barrier and disaster management; Cambridge flood hazard; a disaster scenario exercise with NGO Rescue Global; the Blacknest Seismological Observatory; the Met Office; Southwest England for integrated group projects covering hazard mapping, vulnerability assessment, and critical infrastructure assessment, with Hinkley Point nuclear power station as an example.

IRDR Programmes:

Risk, Disaster and Resilience
MSc

Risk and Disaster Science
MSc

**Risk and Disaster Science
MSc Management Pathway**

Space Risks and Disaster
Reduction MSc

Risk and Disaster Reduction
MRes

Risk and Disaster Reduction
PhD

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IRDR

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Web: www.ucl.ac.uk/rdr

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MSc Risk and Disaster Science Management Pathway Key information

Programme starts

September 2020

Modes and duration

Full time: 1 year

Part time: 2 years

Tuition fees (2020/21)

UK/EU: £11,830 (FT) £5,975(PT)

Overseas: £24,980 (FT) £12,470 (PT)

Scholarships

UCL offers a selection of scholarships for supporting postgraduate studies. Details of funding opportunities can be found at: www.ucl.ac.uk/scholarships. Further advice and programme-specific scholarships information can be obtained from the Masters Programmes section of the IRDR website.

Application dates

Open: November 2019 Close: 31 July 2020

Note on fees: The tuition fees shown are for the year indicated above. Fees for subsequent years may increase or otherwise vary. Further information can be viewed on the UCL Current Students website.

Entry requirements

Normally a minimum of an upper second-class UK Bachelor's degree in a relevant discipline or an overseas qualification of an equivalent standard. Relevant discipline is any science including social sciences, management science or any humanities subject.

Mathematics requirements

Mathematical or quantitative methods taken in science, engineering, economics or management is sufficient.

English language requirements

If your education has not been conducted in the English language, you will be expected to demonstrate evidence of an adequate level of English proficiency.

The English language level for this programme is: **Standard**
Further information can be found on our website.

International students

Country-specific information, including details of when UCL representatives are visiting your part of the world, can be obtained from the UCL International Students website.



Credit: Nevalenx