



Queen's University
Belfast

Environmental Forensics

School of Planning, Architecture,
and Civil Engineering



Environmental Forensics

Degree awarded

MSc in Environmental Forensics
PgDip in Environmental Forensics
Certificate in Environmental Forensics

Duration & mode of study

MSc: 1 year full-time
2-3 years part-time
PgDip: 9 months full-time
18 month part-time
Certificate: Variable

Course description

This is an advanced course which has a strong focus on gaining experience of state-of-the art as well as emerging analytical techniques and developing practical skills. The discipline of Environmental Forensics first emerged in the US because of the 'polluter pays' principle, which is now also enshrined in the new EU directive 2004/35/CE. The emphasis is on transferable skills in analytical science, laboratory practice, computing, data analysis, report writing and project management and is reflected in the course structure that offers a good balance between study of legislature, hydrogeology, contaminated land, forensic analysis, computer modelling and business management.

Module details

The MSc/Diploma programme consists of taught modules and a research report (PgDip) or research thesis (MSc). Taught modules take place during the first 12 weeks of each Semester (1st Semester and 2nd Semester) and examinations are held during the last 3 weeks of each Semester. Modules are offered in Biomarkers, Forensic Analysis, Environmental Legislation, Contaminated Land, Computer Modelling of Contaminants, Environmental Biotechnology & Pollution Control to name but a few. A research report, due before the 2nd Semester examination is required for the Diploma, and a research thesis, due at the end of the summer research period, is required for the Masters.

Entry requirements

The standard academic entry requirements for a Masters programme (either taught or research) will be a 2(ii) UK honours degree, or international equivalent, in a relevant science or engineering discipline. When a sufficient mathematical or chemical background is not demonstrated, academic entry requirement will be a Higher Second (2i) or equivalent.

Career opportunities

There is growing demand in the UK and Europe for suitably qualified graduates in Environmental Forensics to enter positions in all areas of Environmental Sciences. Potential employers may include companies such as Alcontrol Geochem, Halcrow, government agencies such as the Environmental Agency, waste management and water treatment industry, environmental consultants and even underwriters of industrial insurance. You will also be well prepared to begin PhD research programmes, which may lead to careers in research establishments and universities.

Course Fees

Further Information on current fees is given at:

<http://www.qub.ac.uk/bo/income/fees.htm>

Scholarships

The School of Planning, Architecture and Civil Engineering offers a number of post-graduate taught bursaries and fee reduction scholarships for UK, EU and international students. All applicants are automatically considered for these. From time to time industry awards are available for taught MSc programmes. Further information can be obtained from the School of Planning, Architecture and Civil Engineering (www.qub.ac.uk/space)

The University also offers and administers a number of awards and bursaries in the form of Fellowships, Externally-Funded Scholarships, Special Bequests, Gifts and Prizes to which application can be made by students. From time to time government scholarship schemes are available for taught MSc programmes. Further information can be obtained from the Academic and

Student Affairs Office (www.qub.ac.uk/directorates/AcademicStudentAffairs/) or the Post Graduate Office (www.qub.ac.uk/home/ProspectiveStudents/PostgraduateStudents/)

Further information

Requests for further information can be addressed to:

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School of Planning, Architecture
& Civil Engineering
David Keir Building, Stranmillis Road
Belfast BT9 5AG, Northern Ireland
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E-mail: w.meir-augenstein@qub.ac.uk

Applications can be made online at:

<https://pg.apply.qub.ac.uk/home/>

Further information available at:

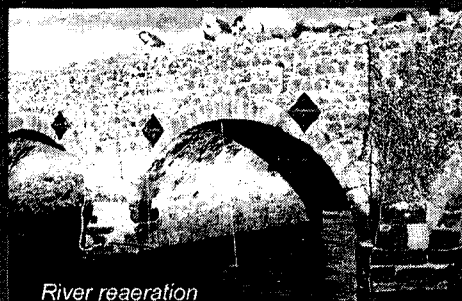
<http://www.qub.ac.uk/space>

<http://www.qub.ac.uk/home/ProspectiveStudents/>

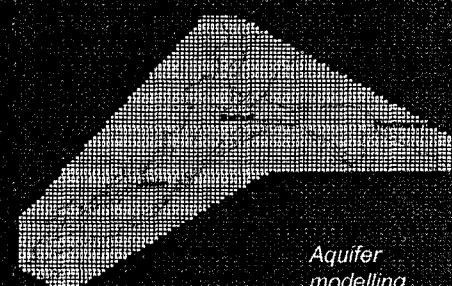
MSc/PgDip Environmental Engineering

1 year FT; 2-3 years PT.

Entry requirements: For admission, typically level 2 (second class 2:1) or equivalent in a relevant degree. Insufficient mathematics for 2:1 or better. PGDip entry: Pass honours level degree or equivalent. International students must have adequate English language skills (IELTS 6.5 TOEFL 577 paper), 233 (writing) or better.



River re-aeration



Aquifer modelling

The study programme comprises formal lectures, coursework, and for the MSc a research report. Strong communication skills are also developed. Students follow a taught programme of core* and elective modules from a list which includes for example:

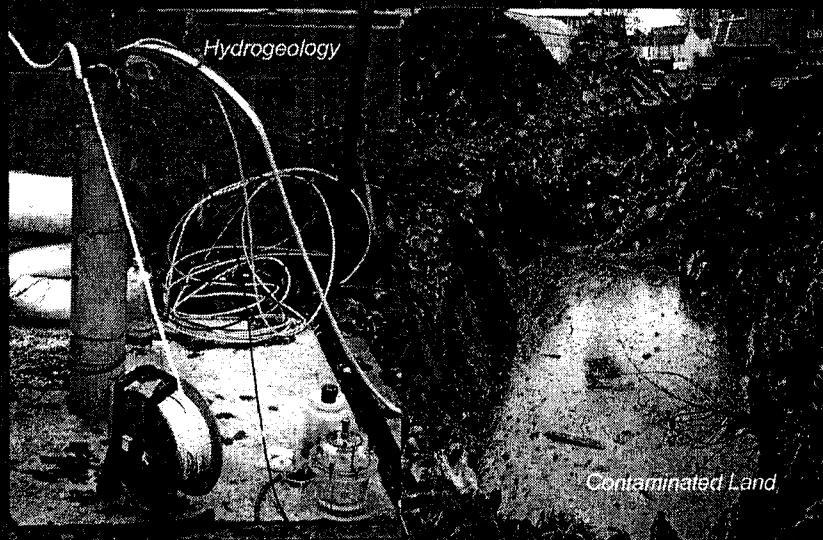
- Environmental Engineering (I & II)*;
- Hydrogeology*;
- Contaminated Land & Waste Management*;
- Computer Modelling of Contaminant Transport*;
- Water & Wastewater Treatment
- Coastal Engineering;
- Geotechnical Engineering
- Environmental Legislation;
- Highway & Traffic Engineering;
- Business Management;
- Advanced GIS



Environmental Engineering is the integration of the built environment within the natural environment using science and engineering to meet the principles of social, economic and environmental sustainability. ~ Prof. R.M. Kalin

Environmental Engineering is that branch of engineering concerned with protecting the environment from man's activities, protecting man from the adverse effects of the environment, and enhancing the environment for man's well-being and benefit. Established 1995, the **MSc/PgDip in Environmental Engineering** is designed for graduates in specialist areas of engineering, science and agriculture, who wish to broaden their knowledge in the areas of hydrogeology, contaminated land, landfills, pollution and regulatory controls. The course provides a suitable background for careers in environmental engineering, monitoring, management and consultancy, and it establishes a basis for interdisciplinary research to a higher level. The course involves staff mainly from the Faculty of Engineering & Physical Sciences, in collaboration with the Agriculture & Food Science, and with external inputs from relevant professionals in the industry. Expertise in Environmental Engineering is in demand. Graduates from this course typically have found employment with employers such as:

- environment regulatory agencies
- contractors
- environmental consultancy



Hydrogeology

Contaminated Land

For further info., please contact Dr. Ulrich Ofterdinger/Dr. Trevor Elliot at:

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e-mail: Enveng@qub.ac.uk or visit our web sites at <http://www.qub.ac.uk/civeng> and <http://www.qub.ac.uk/eerc/>