Programme Specification

| Programme award and title: | Cert, Diploma MSc  
| River Basin Management |
| SCQF Level: | 11  
| SCQF Credit Value: | 15 |

**Educational aims of the programme:**
Concise (e.g. a few sentences), general statement of aims and broad purposes of the programme

- Our programme aims to give students:
- an understanding of the scientific principles that underpin river basin management
- an understanding of the economic, social, political and legal frameworks for river basin management
- a sound training in relevant practical, investigative, research and generic skills that river basin managers should possess

**Intended programme learning outcomes:**
Outline (e.g. one or two paragraphs) of what the student will know, understand and be able to do as a result of their learning, expressed in the categories below. Please consider the contribution made to the student's personal development planning (PDP) and future employability.

**Knowledge and understanding**
- Knowledge and understanding:
  - (i) Hydrological and hydrochemical change at different temporal and spatial scales, and the impact of human activities on river basins.
  - (ii) Role of information technology in the monitoring and assessment of the biological chemical and physical elements of river basins.
  - (iii) Current legislative and political framework for river basin management.
  - (iv) Practical solutions to river basin management issues.
  - (v) River basin management career opportunities and work place experience.
- Acquisition is through a combination of lectures, practicals and field sessions, and directed reading for course assessments. Knowledge and understanding are assessed through coursework essays, reports, presentations, practical examinations for IT, and unseen written examinations (essays and short answer formats). (vi) is acquired through talks from visiting speakers in the profession, regular feedback to the students on openings available, and from specialist careers advisers.

**Subject-specific skills and other attributes**
- Intellectual skills:
  - (i) Critical reasoning
  - (ii) Analysis and synthesis of information from a variety of sources
  - (iii) Formulation and testing of hypotheses using appropriate and available lines of evidence
  - (iv) Application of knowledge to address a range of environmental problems and issues
  - (v) Understanding of the key theories, principles and concepts in Environmental Science
  - (vi) Planning, execution and reporting an original research project focussed on an environmental management issue
- Intellectual skills are acquired through the teaching and learning programme above. Assessment is via essays and reports, presentations, unseen written examinations and through the dissertation written in journal paper style for the MSc.

**Practical skills:**
- Devising research and consultancy projects for both teams and individuals
- Working in a safe and responsible manner in the field and laboratory
- Collecting and recording primary data using a range of field techniques
- Gathering of secondary data from individuals, organisations and databases
• (v) Data analysis and integration using a range of appropriate statistical methods and packages
• (vi) Reporting the results of investigations with appropriate referencing of sources of information
• (vii) Presenting results to an audience

These are acquired and assessed throughout the programme, where appropriate. All seven skills are integral to the core course on Environmental Systems and Assessment where students work in teams on miniprojects on a residential field course run in the third week of the autumn semester, and in a subsequent specialist exercise on flood risk assessment. (v) is specifically taught in the Information Technology core course. These skills acquired in the autumn are consolidated through specialised subject units, a field class and research design module in the spring, and then assessed through the dissertation.

Generic skills (e.g. information skills, communication skills, critical, analytical and problem solving abilities) and other attributes
• (i) Report writing, layout and design, and verbal communication
• (ii) Team working and the allocation of tasks
• (iii) Independent learning towards academic and personal goals
• (iv) IT skills including use of word processing, presentational, spreadsheet, statistical, GIS and image analysis software
• (v) Use of internet, bibliographic databases and other electronic information sources
• (vi) Liaising with individuals, public and private bodies to elicit background information for research.

The IT course provides essential training in the use of computers for information gathering (v), analysis (iv) and presentation (i) from the very start of the course. Team working (ii) is critical to the Field Techniques module and where selected the Environmental Systems and Assessment module. Independent research and learning (iii) is expected from all students at all stages of the course, and is central to written assessment and the dissertation. Library and other information sources (v) are introduced in the first week of the course.

Learning, teaching and assessment strategies:
Outline (e.g. one or two paragraphs) on overall approach taken to develop and assess learning outcomes, including any distinctive features

• Methods of teaching will vary according to the subject matter, but will comprise a combination of lectures, workshops, field trips and small group sessions. At postgraduate level there is an expectation that students can undertake independent learning and become self-reliant in terms of fulfilling most educational tasks. Employers look for self-reliance and the ability to undertake independent learning, communication skills, literacy and numeracy. External speakers from industry and environmental organisations also contribute to the course and opportunities for work shadowing and dissertations linked to environmental organisations external to the university may also be possible. Funding of part time places by SEPA allows 5 students each year to take the course on a 2 year basis whilst working in the SEPA Flood Science Programme.

Professional/statutory body accreditation or recognition: n/a

Further details:
Entry requirements: http://www.external.stir.ac.uk/postgrad/index.php
Programme structure: http://www.calendar.stir.ac.uk/

Relevant Subject Benchmark statement (if applicable): http://www.qaa.ac.uk/academicinfrastructure/benchmark/default.asp
Scottish Credit and Qualifications Framework: http://www.scqf.org.uk/the_framework.asp

Introduction/revision date: Revised Feb 2011