Programme Specification

Programme award and title: MSc in Energy Management

SCQF Level: 11  SCQF Credit Value: 180

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

• To provide knowledge and understanding of the nature of energy markets.
• To develop an appreciation of the insights which economic analysis can bring to energy policy issues.
• To develop the facility to use econometric techniques to analyse performance and trends in energy markets as well as in evaluating the impacts of climate change policy.
• To develop the ability to appraise investment projects using a variety of techniques such as environmental cost-benefit analysis.
• To develop an understanding of the key decision-making techniques used by corporations, national and international governmental bodies in a world of uncertainty.
  • To develop the knowledge of various international organisations that regulate and shape energy markets and help to design and implement international environmental agreements
  • To develop an understanding of important environmental problems and policy instruments available to mitigate these problems, as they relate to energy production and use
  • To develop an understanding of the techniques to evaluate environmental policy programmes
  • To develop the ability to identify and analyze situations of strategic interactions and the important features of institutional frameworks that shape them

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
The learning outcomes of knowledge and understanding specific to each module are set out in the Programme Handbook. The general learning outcomes in terms of knowledge and understanding described below apply to the programme as a whole.

• A systematic understanding of knowledge in environmental and energy economics.
• A critical awareness of current problems and new insights in these areas.
• A comprehensive practical understanding of the techniques of enquiry and research used in these areas and of how they are used to create and interpret knowledge.
• An adequate conceptual understanding for evaluating current research and scholarship in energy management.

• independent learning as part of continuing professional development.

Subject-specific skills and other attributes
• Students will learn to think about problems as an economist.

Generic skills (e.g. information skills, communication skills, critical, analytical and problem solving abilities) and other attributes

Transferable skills
As the programme aims to equip students for a career in the energy sector involving policy, management and planning, particular emphasis is placed on developing the qualities and transferable skills that require:
• the exercise of initiative and personal responsibility;
• decision-making in complex and unpredictable situations;
• independent learning as part of continuing professional development.

As all entrants have Honours degrees from UK universities, or equivalent overseas qualifications, they are expected already to have acquired the skills listed below. The programme aims to develop these skills to a higher level.

**WRITTEN AND ORAL COMMUNICATION**
The ability to:
• present arguments clearly and concisely both in writing and orally;
• give a direct and concise answer to a question;
• present both brief summaries that identify the key points and fuller treatments of a topic that are well structured;
• present a balanced view of different opinions on an issue;
• separate fact from opinion, yet present your own views where appropriate;
• use suitable means of presenting arguments, e.g. visual aids in oral presentations, diagrams in written work;
• contribute constructively to a group discussion (not relevant to dissertation);
• communicate concisely to different audiences, including those with no academic training.

**ANALYSIS AND PROBLEM-SOLVING**
The ability to:
• deal with complex issues both systematically and creatively;
• abstract and simplify in order to identify the essence of a problem;
• analyse, reason and develop logical arguments;
• identify what should be taken as given or fixed for the purpose of solving a problem;
• set up and analyse a model;
• marshal and evaluate evidence;
• make sound judgements in the absence of complete data;
• assimilate, structure and analyse qualitative and quantitative data;
• apply general principles to a specific case;
• use previous work but be prepared to develop original ideas where appropriate;
• exercise independent judgement;
• draw conclusions and decide what to do;
• think critically about the limits of any analysis;
• draw policy conclusions and recognise the potential constraints on their implementation;
• evaluate alternative strategies;
• keep an open mind about different methodological approaches;
• relate issues to a wider context;
• think imaginatively and creatively.

**LEARNING**
The ability to:
• search out relevant material;
• frame and ask questions that elicit the information required;
• synthesise relevant material;
• learn independently;
• make use of the services of libraries and other sources of help and information;
• continue to advance knowledge and understanding;
• develop new skills to a higher level.

**SELF-MANAGEMENT**
The ability to:
• work under pressure and meet deadlines;
• work methodically and manage time effectively;
• plan projects and prioritise tasks;
• set personal goals and evaluate personal performance;
• demonstrate self-direction and the capacity to work without supervision;
• take initiative and develop ideas independently.

**COMPUTING AND STATISTICS**
The ability to:
• use information technology;
• use and interpret statistics.
Outline (e.g. one or two paragraphs) on overall approach taken to develop and assess learning outcomes, including any distinctive features

All modules are taught by a combination of lectures and small-group teaching except the Spring seminar module which uses solely a seminar format.

Lectures aim primarily to impart knowledge and stimulate further study. The small-group teaching aims to provide an opportunity for interaction with staff and other students thus developing communication skills; to allow discussion of key issues and problems arising from the lectures and reading; to provide learning support related to the lectures; and to provide feedback on written work. In some modules, students play a more formal role by making presentations and acting as discussants.

In addition to the timetabled teaching, students are encouraged to make contact with staff for individual help.

The student is encouraged throughout to undertake independent study both to supplement and consolidate what is taught and to broaden their knowledge and understanding of the subject. In some units, lectures cover all the major topics in depth and references are mainly to one textbook. In other units, there is greater emphasis on independent study and students expected to read more widely, from journals as well as standard texts. Reading increasingly includes making use of web-based material.

The culmination of the process of developing independent study and the analytical skills for students proceeding to the MSc is the dissertation written in the summer. This is an opportunity to plan and produce a piece of independent research. Staff advise on the choice of topic and reading but essentially this is an opportunity to work independently and use the skills developed over the whole programme.

Modules are assessed typically by a combination of coursework and examination, with the weights varying depending on the nature of the material taught. The Seminar module is assessed solely on the basis of presentations and an essay prepared over the semester.

The examination takes place at the end of the semester in which the module is taught. Resit examinations are available to students who fail a module following the main diet of examinations. The resit examinations are timed to allow final grades to be published before the start of the second semester, in the case of Autumn semester modules, and before the start of work on the dissertation in the case of Spring semester modules; the maximum grade that may be awarded following a resit is ‘C’. The assessment is thus completed within the semester and a final grade awarded following the examination.

For award of the MSc, students must pass all eight modules. In addition they are required to achieve a pass grade in their dissertation. The Examiners may allow a dissertation that does not get a pass grade to be revised and submitted for re-assessment within a specified time period.

An MSc with Distinction may be awarded if additionally a candidate achieves a grade A in at least 5 taught modules and in the dissertation.

| Professional/statutory body accreditation or recognition: | none |
Further details:

Entry requirements: [http://www.external.stir.ac.uk/postgrad/index.php](http://www.external.stir.ac.uk/postgrad/index.php)

Programme structure: [http://www.calendar.stir.ac.uk/](http://www.calendar.stir.ac.uk/)

Relevant Subject Benchmark statement (if applicable): [http://www.qaa.ac.uk/academicinfrastructure/benchmark/default.asp](http://www.qaa.ac.uk/academicinfrastructure/benchmark/default.asp)


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