G1E7-SES Master of Science in Subsurface Energy Systems

PROGRAMME DETAILS
Programme Code: G1E7-SES
Department: Petroleum Engineering
Main Award: MSC - Master of Science
Full Award Title: Master of Science in Subsurface Energy Systems
Level: Postgraduate Taught

LOCATION OF STUDY
Edinburgh Y Scottish Borders N Orkney N
Dubai N Malaysia N Approved Learning Partner N
Independent Distance Learners Y Collaborative Learning Partner N Other N

ASSOCIATED AWARDS
Programme Code | Award | Title
--- | --- | ---
G1E0-SES | PGCERT | Postgraduate Certificate in Subsurface Energy Systems
G1E5-SES | PGDIP | Postgraduate Diploma in Subsurface Energy Systems
G1E7-SES | MSC | Master of Science in Subsurface Energy Systems

ACCREDITIATION
None

LEARNING OUTCOMES – SUBJECT MASTERY
Understanding, Knowledge and Cognitive Skills
The programme gives the opportunity to develop skills in:

- fundamental concepts, principles and theories of the main types of geoenergy resources
- the application of IT to geoenergy management in terms of design and analysis.
- the ethics and standards relevant to professional engineering practice and the transfer of problem-solving skills to a variety of contexts
- integration of theory and practice and application of statistical, scientific and economics skills

Scholarship, Enquiry and Research (Research Informed Learning)
The students are expected to read more deeply into the subjects by referencing materials in their tutorial exercises, field work reports and laboratory exercises. This is important in developing study plans, developing research plans and methods.

LEARNING OUTCOMES – PERSONAL ABILITIES
Industrial, Commercial and Professional Practice
There is exposure to industry via seminars, visits to companies, attendance at meetings and during the Group Project where students are expected to participate in industry workshops/seminars on technical, environmental and commercial processes. Part of the Individual Project involves an appreciation of the business context of the research work.

Autonomy, Accountability and Working With Others
The students learn to develop an appreciation of their role in their studies through self-study, individual project and team work during the group project. They are responsible for meeting deadlines for submission of work during all activities both as individuals and as teams.

**Communication, Numeracy & Information and Communications Technology**

Both projects require written submissions to be made by students. The field management project also requires the students to work in teams. Both of these requirements help develop their communication skills. The nature of the degree involves demonstration of numerical skills in both analytical form and as part of numerical simulation.

**APPROACHES TO TEACHING AND LEARNING**

Course notes are provided for all courses. All lecture sessions are reinforced by tutorials or classroom exercises. Coursework is then further used to extend the concepts learned in lectures and notes and to demonstrate the use of problem solving skills by the students. Course notes are enhanced by model exams and answers, as well as recommended reading lists or suggestions for further reading. All courses have a VLE page, on which notes, powerpoints, reading lists, a model exam with answers and 1 or 2 other past papers, exercises and assessment are routinely posted for all courses. There is a discussion board for all of the courses and introductory videos for each course.

**EDUCATIONAL AIMS OF THE PROGRAMME**

The programme aims to develop the numerate science and engineering skills required by graduates and professionals to successfully work in the field of Geoenergy. A central focus of the programme is to integrate the knowledge and skills delivered in all 8 courses to manage Geoenergy resources in a holistic, safe and cost-effective manner.

The programme enables engineers and geoscientists to develop an appreciation of the variety of disciplines associated with the management of geoenergy resources in order to operate in multidisciplinary teams and encourages the development of the personal qualities and professional competencies.

**ASSESSMENT POLICIES**

Assessment is based on a combination of examination, coursework and project work submissions. The project work is assessed on written and oral presentations. In the Group Project, part of the assessment is by peer review and an individual requirement.

**PROGRAMME STRUCTURE**

<table>
<thead>
<tr>
<th>Mandatory Courses</th>
<th>Course Code</th>
<th>Course Title</th>
<th>SCQF Cr</th>
<th>SCQF Lvl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edinburgh</td>
<td>X</td>
<td>X</td>
<td>1</td>
<td>1</td>
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</tbody>
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## COMPOSITION NOTES (PG)

8 compulsory taught courses, for MSc 1 team project and 1 individual project

Mandatory Credits 120
Optional Credits
Elective Credits
Dissertation Credits 60
Total 180

## AWARDS, CREDITS AND CRITERIA (PG)

### Awards, Credits and Levels

<table>
<thead>
<tr>
<th>Overall Credits</th>
<th>Specific Requirements</th>
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</thead>
<tbody>
<tr>
<td>Masters Degree</td>
<td>180 SCQF credits including a minimum of 150 credit at Level 11</td>
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<tr>
<td>Postgraduate Diploma</td>
<td>120 SCQF credits including a minimum of 90 credit at Level 11</td>
</tr>
<tr>
<td>Postgraduate Certificate</td>
<td>60 SCQF credits including a minimum of 40 credit at Level 11</td>
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### Award Requirements

<table>
<thead>
<tr>
<th>Total Course Passes</th>
<th>Overall Mark</th>
<th>Overall Grade</th>
<th>Basis of Overall Mark/Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master (Distinction)</td>
<td>8+2 projects</td>
<td>70 A</td>
<td>Weighted Average greater than or equal 70% over 8 courses at grades A-C and individual project at grade A.</td>
</tr>
<tr>
<td>Master</td>
<td>8+2 projects</td>
<td>50 C</td>
<td>Weighted Average greater than or equal 50% over 8 courses at grades A-D plus 2 projects at minimum grade C.</td>
</tr>
<tr>
<td>Diploma (Distinction)</td>
<td>8</td>
<td>70 A</td>
<td>Weighted Average greater than or equal 70% over 8 courses at grades A-C.</td>
</tr>
<tr>
<td>Diploma</td>
<td>8</td>
<td>40 D</td>
<td>Weighted Average greater than or equal 40% over</td>
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<table>
<thead>
<tr>
<th></th>
<th>Full-time</th>
<th>Part-time</th>
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</thead>
<tbody>
<tr>
<td>Masters</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Diploma</td>
<td>9</td>
<td>15</td>
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<tr>
<td>Certificate</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

RE-ASSESSMENT (PG)

1. A student who has been awarded a Grade E or F in a course may be re-assessed in that course. A student who has been awarded a Grade D in a course my be re-assessed in that course in order to proceed to or be eligible to receive the award of Masters.
2. A student shall be permitted only one re-assessment opportunity in a maximum of three taught courses. The opportunity for re-assessment in four or more taught courses shall be at the discretion of the Progression Board.
3. Any further re-assessment opportunities in a course will require the approval of the Postgraduate Studies Committee.
4. A student may be permitted, at the discretion of the Progression Board, to be re-assessed in the dissertation, project or other supervised research component of the course of study.

PROGRESSION TO DISSERTATION/PROJECT

In accordance with University Regulations, to progress to Masters level a minimum of Grade C is required