G127-REM Master of Science in Reservoir Evaluation and Management

PROGRAMME DETAILS
Programme Code: G127-REM
Department: Petroleum Engineering
Main Award: MSC - Master of Science
Full Award Title: Master of Science in Reservoir Evaluation and Management
Level: Postgraduate Taught

LOCATION OF STUDY

<table>
<thead>
<tr>
<th>Location</th>
<th>Edinburgh</th>
<th>Scottish Borders</th>
<th>Orkney</th>
<th>Dubai</th>
<th>Malaysia</th>
<th>Approved Learning Partner</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Distance Learners</td>
<td>N</td>
<td></td>
<td></td>
<td>N</td>
<td>Collaborative Learning Partner</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

ASSOCIATED AWARDS

<table>
<thead>
<tr>
<th>Programme Code</th>
<th>Award</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>G120-REM</td>
<td>PGCERT</td>
<td>Postgraduate Certificate in Reservoir Evaluation and Management</td>
</tr>
<tr>
<td>G125-REM</td>
<td>PGDIP</td>
<td>Postgraduate Diploma in Reservoir Evaluation and Management</td>
</tr>
<tr>
<td>G127-REM</td>
<td>MSC</td>
<td>Master of Science in Reservoir Evaluation and Management</td>
</tr>
</tbody>
</table>

ACCREDITATION

IMMM and EI

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 reservoir engineering and geoscience disciplines (reservoir engineering, reservoir sedimentology, formation evaluation, reservoir simulation, well testing, modelling and management, geomechanics and geophysics)
- Use and application of leading computer software tools for design and analysis in reservoir engineering and geoscience
- 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 an 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 independent reading around subjects and by referencing materials provided in classes, tutorials, field work reports and laboratory exercises. This is important in developing study plans, developing research plans and deciding research methods. Students are given multiple opportunities to develop research skills, including internal assessment in taught courses as well as an independent research project.

LEARNING OUTCOMES – PERSONAL ABILITIES
Industrial, Commercial and Professional Practice

There is exposure to industry via seminars, visits to companies, attendance at the EAGE North Britain Student Meeting and during the Group Project where students are expected to participate in industry workshops/seminars on technical,
environmental and commercial processes, as well as being assessed by industry visitors and external examiners from industry. 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**

Some internal assessment projects as well as both group and individual research projects require both written and oral presentations to be made by students and these provide opportunities for students to learn about and develop skills in communication and ICT. The nature of the degree involves demonstration of numerical skills in various analytical disciplines, especially as part of problem solving exercises.

**APPROACHES TO TEACHING AND LEARNING**

Course notes are provided for some courses, however for other courses students are expected to take notes and are provided with powerpoint slide packs. 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 come with 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, past exams, model answers, exercises and assessment are routinely posted for all courses.

**EDUCATIONAL AIMS OF THE PROGRAMME**

The overall aim of this programme is to develop the skills of numerate science and engineering graduates and professionals to work in the international oil and gas industry to the standard required by the petroleum engineering industry. The course is structured to expose the students to the international reputation of the teaching and research activities of the Institute of Petroleum Engineering. The course enables engineers and geoscientists to develop an appreciation of the variety of disciplines associated with reservoir engineering and geoscience in order to operate in multidisciplinary teams, and encourages the development of the personal qualities and professional competencies of reservoir engineers and geoscientists.

**ASSESSMENT POLICIES**

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

**PROGRAMME STRUCTURE**

<table>
<thead>
<tr>
<th>Mandatory Courses</th>
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</thead>
<tbody>
<tr>
<td><strong>Course Code</strong></td>
</tr>
<tr>
<td>SCQF Cr</td>
</tr>
<tr>
<td>G11FE</td>
</tr>
<tr>
<td>15</td>
</tr>
</tbody>
</table>
### G127-REM Master of Science in Reservoir Evaluation and Management

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>SCQF Cr</th>
<th>SCQF Lvl</th>
</tr>
</thead>
<tbody>
<tr>
<td>G11FE</td>
<td>Formation Evaluation</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11RC</td>
<td>Reservoir Concepts</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11RC</td>
<td>Reservoir Concepts</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11RE</td>
<td>Reservoir Engineering</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11RE</td>
<td>Reservoir Engineering</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11SE</td>
<td>Reservoir Sedimentology</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11SE</td>
<td>Reservoir Sedimentology</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11MM</td>
<td>Modelling and Management</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11MM</td>
<td>Modelling and Management</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11RG</td>
<td>Rock Mechanics, Geomechanics and Geophysics</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11RG</td>
<td>Rock Mechanics, Geomechanics and Geophysics</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11RS</td>
<td>Reservoir Simulation</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11RS</td>
<td>Reservoir Simulation</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11WT</td>
<td>Reservoir Engineering - Well test Analysis</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11WT</td>
<td>Reservoir Engineering - Well test Analysis</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>G11EP</td>
<td>Field Evaluation Project</td>
<td>30</td>
<td>11</td>
</tr>
<tr>
<td>G11EP</td>
<td>Field Evaluation Project</td>
<td>30</td>
<td>11</td>
</tr>
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### Optional Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>SCQF Cr</th>
<th>SCQF Lvl</th>
</tr>
</thead>
<tbody>
<tr>
<td>G11IP</td>
<td>Individual Project</td>
<td>30</td>
<td>11</td>
</tr>
<tr>
<td>G11MP</td>
<td>Masters Dissertation (Individual Project)</td>
<td>30</td>
<td>11</td>
</tr>
</tbody>
</table>

### COMPOSITION NOTES (PG)

- 8 compulsory taught courses, for MSc 1 team project and 1 individual project.
- Mandatory Credits: 120
- Optional Credits: 0
- Elective Credits: 0
- Dissertation Credits: 60
- Total: 180
# AWARDS, CREDITS AND CRITERIA (PG)

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

## Award Requirements

<table>
<thead>
<tr>
<th></th>
<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</td>
<td>A</td>
<td>Weighted Average greater than or equal to 70% over 8 courses and 2 projects at grades A-B.</td>
</tr>
<tr>
<td>Master</td>
<td>8 + 2 projects</td>
<td>50</td>
<td>C</td>
<td>Weighted Average greater than or equal to 50% over 8 courses at grades A-C plus 2 projects at minimum grade C.</td>
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<tr>
<td>Diploma (Distinction)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Diploma</td>
<td>8</td>
<td>40</td>
<td>D</td>
<td>Weighted Average greater than or equal 40% over 8 courses at grades A-D</td>
</tr>
<tr>
<td>Certificate</td>
<td>4</td>
<td>40</td>
<td>D</td>
<td>Weighted Average greater than or equal 40% over 4 courses at grades A-D</td>
</tr>
</tbody>
</table>

## DURATION OF STUDY

<table>
<thead>
<tr>
<th>IN MONTHS</th>
<th>Full-time</th>
<th>Part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Diploma</td>
<td>9</td>
<td>15</td>
</tr>
<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 may 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