

**PROGRAMME DETAILS****Programme Code:** G137-PEE**Department:** Petroleum Engineering**Main Award:** MSC - Master of Science**Full Award Title:** Master of Science in Petroleum Engineering**Level:** Postgraduate Taught**LOCATION OF STUDY**

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

**ASSOCIATED AWARDS**

Programme Code	Award	Title
G130-PEE	PGCERT	Postgraduate Certificate in Petroleum Engineering
G135-PEE	PGDIP	Postgraduate Diploma in Petroleum Engineering
G137-PEE	MSC	Master of Science in Petroleum Engineering

**ACCREDITATION**

Energy Institute

**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 petroleum engineering and geoscience disciplines (reservoir engineering, petroleum geology, drilling engineering, formation evaluation, reservoir simulation, petroleum project economics, production technology)
- the application of IT to petroleum engineering 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 Society of Petroleum Engineers 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**

The projects require both written and oral presentations to be made by students and these are the main opportunities to express these skills. The nature of the degree involves demonstration of numerical skills in both analytical form and as part of numerical simulation.

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 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 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, 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 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 programme is structured to expose the students to the international reputation of the teaching and research activities of the Institute of Petroleum Engineering. The programme enables engineers to develop an appreciation of the variety of disciplines associated with petroleum engineering in order to operate in multidisciplinary teams and encourages the development of the personal qualities and professional competencies of petroleum engineers.

## G137-PEE Master of Science in Petroleum Engineering

### 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.

The DL programme necessarily places more emphasis on examination with some modules being assessed 100% by examination. However a dissertation plus a project module ensures that a significant proportion of the assessment is non-examination.

### PROGRAMME STRUCTURE

#### Mandatory Courses

Edinburgh/ Orkney/SBC	Malaysia	Dubai	ALP	IDL	Coll. Partner	Stage	Semester	Phase	Course Code	CourseTitle	SCQF Cr	SCQF Lvl
X	X	X	X	X		1	1		G11DE	<a href="#">Drilling Engineering</a>	15	11
X	X	X	X	X		1	1		G11FE	<a href="#">Formation Evaluation</a>	15	11
X	X	X	X	X		1	1		G11PG	<a href="#">Petroleum Geoscience</a>	15	11
X	X	X	X	X		1	1		G11RE	<a href="#">Reservoir Engineering</a>	15	11
X	X	X	X	X		1	2		G11PE	<a href="#">Petroleum Economics</a>	15	11
X	X	X	X	X		1	2		G11PT	<a href="#">Production Technology</a>	15	11
X	X	X	X	X		1	2		G11RS	<a href="#">Reservoir Simulation</a>	15	11
X	X	X	X	X		1	2		G11WT	<a href="#">Reservoir Engineering - Well test Analysis</a>	15	11
X	X	X	X	X		1	3		G11DP	<a href="#">Design Project</a>	30	11
X	X	X	X	X		1	3		G11IP	<a href="#">Individual Project</a>	30	11

#### Optional Courses

Edinburgh/ Orkney/SBC	Malaysia	Dubai	ALP	IDL	Coll. Partner	Stage	Semester	Phase	Course Code	CourseTitle	SCQF Cr	SCQF Lvl
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### COMPOSITION NOTES(PG)

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

## G137-PEE Master of Science in Petroleum Engineering

Mandatory Credits	120
Optional Credits	
Elective Credits	0
Dissertation Credits	60
Total	180

### AWARDS, CREDITS AND CRITERIA(PG)

#### Awards, Credits and Levels

	Overall Credits	Specific Requirements
Masters Degree	180	180 SCQF credits including a minimum of 150 credit at Level 11
Postgraduate Diploma	120	120 SCQF credits including a minimum of 90 credit at Level 11
Postgraduate Certificate	60	60 SCQF credits including a minimum of 40 credit at Level 11

#### Award Requirements

	Total Course Passes	Overall Mark	Overall Grade	Basis of Overall Mark/Grade
Master (Distinction)	8 + 2 projects	70	A	Credit Weighted Average greater than or equal 70% over 8 courses and 2 projects at grades A-B. Maximum 2 courses or 1 course and 1 project at minimum grade B
Master	8 + 2 projects	50	C	Weighted Average $\geq 50\%$ over 8 courses at grades A-D plus 2 projects at minimum grade C. Minimum of 6 courses at grade C or above and a maximum of 2 courses $\geq D$ . Projects must be at grade C or above.
Diploma (Distinction)	8	70	A	Credit Weighted Average greater than or equal 70% over 8 courses at grades A-C
Diploma	8	40	D	Credit Weighted Average greater than or equal 40% over 8 courses at grades A-E. Minimum of 6 courses at grade D or above and a maximum of 2 courses at no less than grade E.
Certificate	4	40	D	Credit Weighted Average greater than or equal 40% over 4 courses at grades A-E. Minimum of 3 courses at grade D or above and a maximum of 1 course at no less than grade E.

#### DURATION OF STUDY

IN MONTHS	Full-time	Part-time
Masters	12	24
Diploma	9	15
Certificate	6	12

#### 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