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## MODULE DESCRIPTOR

### Module Title

Oil And Gas Economics

Reference	BSM179	Version	4
Created	April 2017	SCQF Level	SCQF 11
Approved	September 2018	SCQF Points	15
Amended	May 2017	ECTS Points	7.5

### Aims of Module

To provide students with an understanding of world energy markets and the evolution of, and challenges facing, the carbon economy. To provide students with a working practical knowledge of the role that oil and gas economics plays in the decision making within the oil and gas exploration and production lifecycle.

### Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Critically assess concepts and principles underlining operation of oil and gas markets.
- 2 Critically reflect on and apply the principles of Oil and Gas economics to decision making relating to field development options.
- 3 Critically apply economic modelling approaches to risk and uncertainty in an Oil and Gas context.
- 4 Critically evaluate the economics of field appraisal, field development and end of field life.

### Indicative Module Content

The module is delivered in two parts. The first part explores the evolution of the carbon economy and energy markets. This section will also consider labour markets in the oil and gas sector and de-commissioning. The second part of the module will consider exploration and appraisal economics (including probability and expectation curves), field development options (including modelling cash flows, profitability and risk indicators, net present value, investment appraisal, environmental issues), incremental analysis and economics (including depletion models), late field economics and decommissioning.

### Module Delivery

**Taught Mode (T)** The module is delivered in Taught Mode by lectures, workshops, interactive group work, tutorials and directed self-study. **Distance Learning Mode (DL)** The module is delivered in Distance Learning mode by self directed study learning from paper-based or web-based learning materials, supported by on-line support and group work.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	51	42
Non-Contact Hours	99	108
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

**ASSESSMENT PLAN**

If a major/minor model is used and box is ticked, % weightings below are indicative only.

**Component 1**

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	1, 2, 3, 4
Description:	Group Presentation				

**Component 2**

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	1, 2, 3, 4
Description:	Individual Report				

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

The Module is assessed by two components: C1 - Coursework - 50% weighting. C2 - Coursework - 50% weighting. Module Pass Mark = Grade D (40%)

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	At least 70% on weighted aggregate and at least 35% in each component
<b>B</b>	At least 60% on weighted aggregate and at least 35% in each component
<b>C</b>	At least 50% on weighted aggregate and at least 35% in each component
<b>D</b>	At least 40% on weighted aggregate and at least 35% in each component
<b>E</b>	At least 35% on weighted aggregate
<b>F</b>	Less than 35% on weighted aggregate
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

**INDICATIVE BIBLIOGRAPHY**

- 1 MU, X., 2019. *The Economics of Oil and Gas*. Newcastle: Agenda Publishing.
- 2 SLOMAN, J., GARRATT, D., GUEST, J. and JONES, E., 2019. *Economics for business*. 8th ed. Harlow: Pearson.
- 3 DOWNEY, M., 2009. *Oil 101*. Los Angeles: Wooden Table Press.
- 4 JAHN, F., COOK, M. and GRAHAM, M., 2008. *Hydrocarbon exploration and production*. 2nd ed. Amsterdam: Elsevier.
- 5 LERCHE, I. and NOETH, S., 2004. *Economics of petroleum production: a compendium: vol. 1: profit and risk*. Brentwood: Multi Science Publishing Co Ltd. *ebook*
- 6 Other Resources: BP Statistical Review of World Energy IEA World Energy Outlook OPEC World Oil Outlook