

MODULE DESCRIPTOR

Module Title

Oil And Gas Economics

Reference	BSM179	Version	7
Created	February 2024	SCQF Level	SCQF 11
Approved	September 2018	SCQF Points	15
Amended	March 2024	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 the economic concepts and principles underlining the oil and gas markets with a focus on international operations of the oil and gas industry.
- 2 Critically reflect on the demand and supply scenarios in the energy markets, focussing on the peculiarities of the oil and gas market by analysing the macro and micro economic factors.
- 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 the world 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) and late field economics.

Module Delivery

The module is delivered in blended mode by lectures, workshops, interactive group work, tutorials and directed self study. The module is delivered in online mode by self-directed study learning from web based learning materials, facilitated by online support and group work.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	30	30
Non-Contact Hours	120	120
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
Actual Placement hours for professional, statutory or regulatory body		

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:	3, 4
Description:	Group Presentation				

Component 2

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

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The calculation of the overall grade for this module is based on 50% weighting of C1 and 50% weighting of C2 components. An overall minimum grade D is required to pass the module.

		Coursework:						NS
		A	B	C	D	E	F	
Coursework:	A	A	A	B	B	C	E	
	B	A	B	B	C	C	E	
	C	B	B	C	C	D	E	
	D	B	C	C	D	D	E	
	E	C	C	D	D	E	E	
	F	E	E	E	E	E	F	
NS		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