

Module Details	
Module Title	Oil and Gas Management
Module Code	CPE7013-B
Academic Year	2021/2
Credits	20
School	Department of Chemical Engineering
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Directed Study	160
Lectures	20
Seminars	20

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
This module will provide a deep understanding of the context in which the global oil and gas industry operates, highlighting its significance to the world economy. The key stakeholders in the sector and its structure are identified, together with an analysis of the strategic challenges they face, their responses, and the future direction of the wider energy market. The engineering, technological and management capabilities and knowledge needed by companies to succeed in the project management of developing a new oilfield and its subsequent operation are explored in both upstream and downstream operations.

Outline Syllabus

Overview of the scale of operation and performance of the oil and gas industry from its original development to its present dominant role in the global energy economy

- The lifecycle of an oilfield from discovery to development and decommissioning
- The technological and engineering challenges of large-scale oil production
- Project and risk management techniques employed in the oil and gas industry
- Identification of the key stakeholders in the petroleum sector and their corporate strategies
- The commercial relationships and interactions between the major oil companies, the governments of territories containing hydrocarbon resources, national oil companies and engineering service/contracting companies
- The principal licencing and contractual relationships used in the international oil and gas industry including, exploration and production sharing agreements contracts, joint operating agreements, construction and engineering contracts, petroleum economics and taxation
- The ethical and corporate social responsibilities of the oil and gas industry
- "Peak oil" and the theory of Hubbert
- The sustainability of the hydrocarbon economy and its environmental impact and climate change
- Developing unconventional oil and gas sources
- The Strategic challenges facing the oil and gas industry in an evolving world energy market and the move towards renewable sources of energy.

Learning Outcomes

Outcome Number	Description
01	Critically evaluate the significance of oil and gas within the global energy sector.
02	Understand the technological methods, project management techniques and commercial relationships used by companies and other organisations involved in the location, development and processing of oil and gas reserves.
03	Develop specialist skills and employ analyse tools to evaluate challenging technical and business problems typically faced by companies and other organisations operating in the oil and gas sector in order to reach reasoned management judgements.
04	Apply systematic problem solving and communication, enhance commercial awareness, time management, presentation, teamwork & leadership; IT skills, life-long learning.

Learning, Teaching and Assessment Strategy

1. The module is delivered through a series of lectures, supported by appropriate case study and video material. The learning materials (both lecture notes and case studies) used an integrated problem-solving approach. (LO1, LO2)

2. Lectures are supported with tutorial sessions in which material covered in the lecture is discussed and case studies analysed. These also provide the opportunity to undertake guided reading to analyse key issues in the oil and gas industry. (LO1, LO2, LO3)

3. Directed study hours are dedicated to independent learning and reading background materials in order to enable students to engage fully in classroom discussion. (LO1, LO2)

4. Group presentations enhance student personal communication skills and teamwork, IT skills. (LO3, LO4). Formative feedback is provided during student presentations and classroom discussion in tutorials.

Summative assessment is through 2 coursework reports of 2,000 words each. The report includes a detailed case study from the oil and gas industry to illustrate key challenges. Sustainability and ethical issues will be expected to feature in the coursework.

Supplementary assessment is as original.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework	Coursework Report (2000 Words)	50%
Summative	Coursework	Coursework Report (2000 Words)	50%
Formative	Presentation	Student presentations and class discussion (online)	N/A

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.