

Warning: An incomplete or missing proforma may have resulted from system verification processing

Title: Oil and Gas Lifecycle Hazards and Risks
 Status: Definitive
 Code: **7534ENGRSK** (118833)
 Version Start Date: 01-08-2012

Owning School/Faculty: Engineering
 Teaching School/Faculty: Engineering

Team	Leader
Alan Wall	

Academic Level: FHEQ7 **Credit Value:** 10.00 **Total Delivered Hours:** 16.50

Total Learning Hours: 100 **Private Study:** 83

Delivery Options

Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	10.000
Online	0.500
Tutorial	6.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	essay	An essay question comprising several component parts, based around a case study, up to 4,000 words long.	100.0	

Aims

To provide an overview of oil and gas industry facilities and activities and the typical hazards associated with this industry.

To provide an understanding of the role of risk management through the oil and gas project lifecycle.

Learning Outcomes

After completing the module the student should be able to:

- LO1 Critically review, from an HSE perspective, the engineering options for developing an oil and/or gas reservoir and delivering the products to market.
- LO2 Analyze the oil & gas industry project life cycle with regards to the change in the hazard and risk profile, and devise a programme of HSE and risk studies appropriate for each stage of the life cycle.
- LO3 Critically compare and contrast the different approaches to governance and regulation of the oil and gas industry around the world and analyse the influence of major incidents on regulatory regimes.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

essay	LO	LO	LO
	1	2	3

Outline Syllabus

Hydrocarbon industries sources of risk:

- *Drilling and Well Intervention*
- *Offshore Production Systems*
- *Production and debottlenecking*
- *Simultaneous Operations*
- *Maintenance and Aging Assets*
- *Pipelines & Shipping*
- *Refining, Downstream Processing & Storage*
- *LNG/LPG*

Regulatory regimes

Value and risk management through the project lifecycle:

- *Initiation*
- *Feasibility*
- *Concept Selection*
- *Project Definition*
- *Detailed Design*
- *Construction and Commissioning*
- *Operation*
- *Abandonment*
- *Change Management*

Overview of Risk Assessment Tools and Techniques

Learning Activities

A combination of lectures, exercises during the taught session, and supported self

study.

References

Course Material	Book
Author	Maclachlan, M.
Publishing Year	1995
Title	An Introduction to Marine Drilling
Subtitle	
Edition	
Publisher	Oilfield Publications Ltd
ISBN	1870945441

Course Material	Book
Author	Ellis, P.W.
Publishing Year	1981
Title	Blowout Prevention and Well Control
Subtitle	
Edition	
Publisher	McGraw-Hill
ISBN	2-7108-0397-6

Notes

The purpose of this module is to provide an overview of oil and gas industry facilities and activities, and the typical hazards associated with this industry.

The module also aims to provide an understanding of the role of risk management through the oil and gas project lifecycle. This includes evaluating regulatory regimes and the opportunities for risk reduction during the phases of a project.

The assessment for this module is an essay.