

Liverpool John Moores University

Title: OIL AND GAS AND PROCESS INDUSTRY RISK STUDIES
Status: Definitive
Code: **7508ENGRSK** (113873)
Version Start Date: 01-08-2019

Owning School/Faculty: Engineering
Teaching School/Faculty: Risktec Solutions

Team	Leader
Alan Wall	

Academic Level: FHEQ7 **Credit Value:** 10 **Total Delivered Hours:** 16
Total Learning Hours: 100 **Private Study:** 84

Delivery Options

Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	10
Tutorial	6

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	An essay question comprising several component parts, based around a case study, typically 2,000 words long.	75	
Technology	AS2	Application of risk studies	25	

Aims

To provide an understanding of the various types of specialist risk study which may be carried out for an oil & gas or process industry facility or operation.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically review the use of specialist risk studies in the Oil, Gas and Process industries;
- 2 Be capable of interpreting the legislative and regulatory requirements behind the use of specialist risk studies in the Oil, Gas and Process industries;
- 3 Apply specialist risk studies to simple process industry operations to analyse the risks to personnel, the asset and/or the environment; and
- 4 Design a report to illustrate application of a specialist risk study, evaluation of the results and key conclusions.

Learning Outcomes of Assessments

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

essay question in parts	1	2	4
Application of risk studies.	3		

Outline Syllabus

- *Introduction to Oil, Gas and Process industry risk assessment (more detail in Oil & Gas Lifecycle, Hazards and Risks module);*
- *Risk measures & criteria;*
- *Oil & gas / process industry safety and risk studies;*
- *Escape, Evacuation and Rescue Analysis (EERA);*
- *TR Impairment (TRI) Study;*
- *Occupied Building Risk Assessment (OBRA);*
- *Dropped Object Analysis;*
- *Emergency Systems Survivability Analysis (ESSA);*
- *Occupational (Workplace) Risk Assessment;*
- *Health Risk Assessment (HRA);*
- *Bibliography, sources of further studand common abbreviations; and*
- *Module conclusions and close out.*

Learning Activities

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

Notes

The purpose of this module is to provide an understanding of the various types of specialist risk study which may be carried out for an oil & gas or process industry facility or operation. This involves an introduction to oil and gas industry risk assessment, a summary of QRA (which is covered in more detail in a separate module) and a review of specialist risk studies such as Escape, Evacuation and

Rescue Analysis (EERA), TR Impairment (TRI) Studies, Occupied Building Risk Assessment (OBRA), Emergency Systems Survivability Analysis (ESSA) and Health Risk Assessment (HRA).

The assessment is a combination of a technological task and an essay.

The following modules are recommended for prior study:

- Introduction to Practical Risk Management; and
- Oil & Gas and Process Industry Quantitative Risk Assessment (QRA).