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Title: Hazard and Operability (HAZOP) Study
 Status: Definitive
 Code: **7533ENGRSK** (118832)
 Version Start Date: 01-08-2016

Owning School/Faculty: Maritime and Mechanical Engineering
 Teaching School/Faculty: Maritime and Mechanical Engineering

Team	Leader
Alan Wall	Y

Academic Level: FHEQ7 **Credit Value:** 10 **Total Delivered Hours:** 16.5
Total Learning Hours: 100 **Private Study:** 83.5

Delivery Options

Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	4
Online	.5
Tutorial	12

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 2,000 words long.	40	
Report	Report	Report documenting application of the HAZOP process, up to 2,000 words long.	60	

Aims

To enable students to understand the uses, application and limitations of HAZOP study methodology

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically review the HAZOP technique identifying its strengths and weaknesses
- 2 Apply the HAZOP process at different stages of a project's lifecycle such as design, operation de-bottlenecking, or decommissioning and analyze the issues associated with proposed design and modifications
- 3 Generate a HAZOP report
- 4 Critique examples of HAZOP actions

Learning Outcomes of Assessments

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

Essay	1	4
Report	2	3

Outline Syllabus

Introduction to Risk Assessment

Process Safety History – lesson learnt

HAZOP - what, when, how

HAZOP – Guideword and Parameters

HAZOP - Teams, roles and responsibilities

HAZOP - recording methods and software

Managing HAZOP studies – Major Studies

Minor Modification studies

Managing HAZOP teams

HAZOP reporting and close-out

Other forms of HAZOP – of procedures, software, transport, drilling

Learning Activities

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

Notes

The purpose of this module is to enable students to understand the uses, application and limitations of HAZOP study methodology. The taught part of the module involves

a significant amount of practical exercises (tutorials).

The methodology will be analysed, definitions used within the HAZOP methodology will be discussed and students will have the opportunity to practice the technique.

The students will critique example HAZOPS and critically review HAZOP recording methods. Team roles and responsibilities will be discussed, as will the management of HAZOP teams and the facilitation of HAZOP studies.

The assessment for this module is a combination of an essay and a technical report.