Liverpool John Moores University

Title:	Hazard and Operability (HAZOP) Study
Status:	Definitive
Code:	**7533RSKDL** (118801)
Version Start Date:	01-08-2019
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	8
Online	.5
Tutorial	8

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	Essay		40	
Report	Report		55	
Reflection	Test&refl		5	

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	
Report	2	3
Online test & Reflection	4	

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 slides and notes, exercises, discussions, interactive web activities 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 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 a technical report, essay and online activities (e.g. tests, discussions, etc.).