

Liverpool John Moores University

Title: Incident Investigation and Analysis
Status: Definitive
Code: **7087RTC** (127355)
Version Start Date: 01-08-2021

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

Team	Leader
Ben Matellini	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: Semester 2

Component	Contact Hours
Lecture	8
Online	.5
Tutorial	8

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	An essay question comprising several component parts, based around a case study, up to 2,500 words long.	95	
Test	AS2	Individual and group activities e. g. quiz, forum.	5	

Aims

To give students an awareness and understanding of incident investigation and analysis.

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate a thorough grounding in the underlying theories behind accident cause analysis
- 2 Apply the investigation and analysis process to determine the sequence of events and the causes of an incident
- 3 Critically analyse published incident and accident reports including the recommendations

Learning Outcomes of Assessments

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

Essay	1	3
Test	2	

Outline Syllabus

Introduction

- Why we investigate accidents
 - The incident investigation process
 - Accident cause investigation theory
- Immediate actions in the event of an accident*
- Emergency response / make the area safe
 - Secure the scene / preserve the evidence
 - Information management

Planning the investigation

- How to determine the extent of the investigation and set Terms of Reference
- Appointing the investigation team – roles, responsibilities
- Planning the investigation team activities

Collecting Data

- Types of data / information available
 - Interviews and witness statements
 - Human Factors
- Data organisation / analysis*
- Defining what happened (the timeline)
 - Identifying why things happened (the analysis)
 - Understanding immediate, underlying and root causes

Corrective Actions

- Address each cause
- Failed barriers before restart
- Interim recommendations

Concluding the analysis

- Recommendations and Actions
- Reporting your findings

Learning Activities

A combination of lectures, exercises and supported self study.

Notes

The main aim of this module is to give students an awareness and understanding of incident investigation and analysis. This includes looking at why we need to investigate incidents.

The stages of incident investigation are discussed, such as: immediate actions in the event of an accident, planning the investigation, collecting data, data organisation and analysis and concluding the analysis. The taught part of the module involves a significant amount of practical exercises (tutorials).

Assessment is in the form of an essay combined with activities (e.g. exercises, discussions, etc.).

The module is delivered via distance learning, described as follows:

Lecture (using slides and slide notes): Online self-study

Tutorial/Activities (Exercises and reviews): Online activities with teacher feedback, and virtual classrooms

Tutor-supported Online: Tutor feedback for activities, virtual classrooms and email support