

Liverpool John Moores University

Title: RAIL SAFETY ANALYSIS
Status: Definitive
Code: **7506RSKDL** (118766)
Version Start Date: 01-08-2019

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

Team	Leader
Zaili Yang	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		45	
Report	Report		50	
Reflection	Test&refl		5	

Aims

To enable students to understand and implement the requirements of formal safety assessment in the rail industry.

Learning Outcomes

After completing the module the student should be able to:

- 1 Illustrate how rail safety may be controlled
- 2 Apply techniques to evaluate safety of the rail environment from both design and operation aspects
- 3 Generate a quantitative and/or qualitative rail formal safety assessment

Learning Outcomes of Assessments

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

Essay	2
Report	3
Online test and Reflection	1

Outline Syllabus

Introduction to safety and risk

Risk and safety regulations in rail engineering

Hazard identification techniques (more detail in Hazard Identification module)

Historical data

Potential escalation events e.g. speed, derailment

Human factors and safety management

Organisational responsibilities

Risk reduction and criteria

Novel risk modelling and decision making techniques

Learning Activities

A combination of slides and notes, exercises, discussions, interactive web activities and supported self study.

Notes

The aim of this module is to enable students to understand and implement the requirements of formal safety assessment in the rail industry.

This involves an introduction to safety and risk and an overview of the risk and safety regulations in rail engineering. Potential escalation events and human factors and safety management will be discussed. Organisational responsibilities, risk reduction and criteria and risk modelling and decision making techniques also form part of the module.

The assessment for the module is a combination of essay, technical report and online activities (e.g. tests, discussion, etc.).