**Liverpool** John Moores University


Title: Hazard Identification
Status: Definitive
Code: **7553RTC**   (120386)
Version Start Date: 01-08-2019

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

| 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: Semester 1

| Component | Contact Hours |
|-----------|---------------|
| Lecture | 8 |
| Online | .5 |
| Tutorial | 8 |


**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, up to 4,000 words long. | 95 | |
| Test | AS2 | Individual and group activities e. g. quiz, forum. | 5 | |


**Aims**

*To provide an understanding and awareness of the tools and techniques available for hazard identification, where they can be applied and what limitations may exist.*

**Learning Outcomes**

After completing the module the student should be able to:

1  Assess the role of hazard identification in the risk management process
2  Critically review the tools and techniques available to carry out effective hazard identification at each lifecycle stage
3  Design a fit for purpose hazard identification study

**Learning Outcomes of Assessments**

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

4000 Word essay          1      3

Individual and group work    2


**Outline Syllabus**

*Introduction – basic concepts*
*Overview of hazard identification techniques, e.g:*
  *Critical examination*
  *Codes and standards*
  *Hazard indices*
  *Concept Safety Analysis / Preliminary Hazard Review*
  *What If?*
  *Safety audits*
  *Fault trees and event*
  *Sneak Analysis*
  *Human error / task analysis*
*Hazard identification through the project lifecycle*
*Failure Modes and Effects Analysis (FMEA)*
*Hazard and Operability (HAZOP) studies*
*HAZID/Checklist approach*
*HAZID versus HAZOP*
*Making recommendations*


**Learning Activities**

A combination of lectures, exercises and supported self study.


**Notes**

The module aims to provide an understanding and awareness of the tools and techniques available for hazard identification, where they can be applied and what limitations may exist.  A hazard missed is a hazard not controlled. Students will practice the HAZID, HAZOP and FMEA methods on example systems and discuss

workshop teams and processes.  A range of other hazard identification techniques will also be introduced, but these are explained in greater detail in related modules.

Assessment is in the form of an essay combined with activities (e.g. exercises, discussions, etc.).  The delivery modes for the module elements are explained below.

Lecture (using slides and notes):  will be delivered by classroom based teacher (face to face) or online self-study (distance learning) or mixture of the two (blended learning).

Tutorial/Activities (exercises and reviews):  will be delivered by classroom based teacher (face to face) or online activities with teacher feedback/virtual classroom (distance learning) or mixture of the two (blended learning).

Tutor supported online:  will be delivered by email support prior to assessment submission (face to face) or tutor feedback activities, virtual classrooms and email support (distance learning) or mixture of the two (blended learning).