

MODULE DESCRIPTOR

Module Title

Health, Safety, Environment and Risk Assessment

Reference	ENM302	Version	10
Created	February 2023	SCQF Level	SCQF 11
Approved	December 2007	SCQF Points	15
Amended	July 2023	ECTS Points	7.5

Aims of Module

To provide the student with the ability to identify management and individual responsibilities for health, safety, and minimizing the environmental impact, of major accident hazard sites by assessing risks appropriately.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Evaluate risks using a structured review of hazards reducing to as low as reasonably practicable (ALARP).
- 2 Evaluate modelling techniques to review the effects of functioning or failed systems.
- 3 Make informed judgements on the legal obligations of a company operating in the UK and internationally.
- 4 Appraise the scope required of an environmental policy and a management action plan.
- 5 Critique the role of a positive safety culture with respect to causes of industrial accidents.

Indicative Module Content

Causes and outcomes of industrial accidents. Hazard identification and control. ALARP principle and its relationship to societal perception of risk. Safety integrity levels, human factors, safety culture. Assessment of risk and the need for risk management. Requirements for an environmental impact policy and management support. Corporate responsibility, legal and management issues.

Module Delivery

Full-Time: This is a lecture and tutorial based full time course, with case study work, plus private study and discussion. Part-time Online: The module is delivered by online lectures, interactive forum discussions and directed self-study.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	35	35
Non-Contact Hours	115	115
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Examination	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4, 5
Description:	Closed book examination.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

Component 1 comprises 100% of the module grade. To pass the module, a D grade is required.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	Normally a UK honours degree, or equivalent, in Engineering or related discipline at class 2.2 or above and proficiency in English language for academic purposes (IELTS minimum score of 6.5 or equivalent).
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 Rahman, Rehab O. Abdel, editor.; Hussain, Chaudhery Mustansar, editor. 2021 Handbook of advanced approaches towards pollution prevention and control. Volume 1, Conventional and innovative technology, and assessment techniques for pollution prevention and control Elsevier: Amsterdam
- 2 AICE, 2008, Guidelines for Hazard Evaluation Procedures, John Wiley & Sons
- 3 Energy Institute (Great Britain). Technical Team, issuing body. 2020 Guidance on safety integrity level determination for safety instrumented systems in support of IEC 61511. Energy Institute (Great Britain), publisher.
- 4 Ayyub, Bilal M., 2021. Hazard-Resilient Infrastructure - Analysis and Design. American Society of Civil Engineers (ASCE)
- 5 Joel M. Haight 2013 Handbook of Loss Prevention Engineering Wiley-VCH Verlag GmbH & Co. KGaA