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MODULE DESCRIPTOR

Module Title

Health, Safety, Environment and Risk Assessment

Reference	ENM302	Version	8
Created	March 2020	SCQF Level	SCQF 11
Approved	December 2007	SCQF Points	15
Amended	June 2020	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	Critically evaluate risks using a structured review of hazards and reduce to as low as reasonably practicable (ALARP).
2	Evaluate modelling techniques to review the effects of functioning or failed systems.
3	Demonstrate an awareness and understanding of the legal obligations on a company operating in the UK and internationally.
4	Identify the purpose and demonstrate the scope required of an environmental policy and a management action plan.
5	Identify the immediate and underlying causes of industrial accidents and understand the role of a positive safety culture in preventing these.

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

DISTANCE LEARNING: The module is delivered by online lectures, interactive forum discussions and directed self-study.

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Indicative Student Workload	Full Time	Part Time
Contact Hours	N/A	23
Non-Contact Hours	N/A	127
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	N/A	150
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

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

Component 1

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	2, 3
Description:	Coursework.				

Component 2

Type:	Examination	Weighting:	50%	Outcomes Assessed:	1, 4, 5
Description:	Closed book examination.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

In order to pass the module, students should achieve a mark of at least 40% in each component (which has a weighting of 30% or more) and an overall grade of D or greater.

Module Grade	Minimum Requirements to achieve Module Grade:
A	Greater than or equal to 70%
B	In the range 60% to 69%
C	In the range 55% to 59%
D	In the range 50% to 54%
E	In the range 40% to 49%
F	Less than 40%
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