

Bowtie Risk Management

Module Information

2022.01, Approved

Summary Information

Module Code	7578RTC
Formal Module Title	Bowtie Risk Management
Owning School	Engineering
Career	Postgraduate Taught
Credits	10
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	8
Online	1
Tutorial	8

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-PAR	PAR	September	12 Weeks

Aims and Outcomes

Aims	To provide an in-depth analysis of how bowtie analysis can be used to manage risk. To critically review its practical uses and benefits, with hands-on practice at using the technique.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Analyse hazard scenarios by applying the bowtie method and designing a bowtie diagram
MLO2	2	Develop integrity assurance for bowtie barriers
MLO3	3	Devise risk acceptance criteria for hazards in bowties.

Module Content

Outline Syllabus	Introduction to risk assessment and bowties The bowtie method – what is a bowtie and how to build one Assuring barrier integrity Effectiveness and ALARP for bowties Practical uses of bowties Facilitating bowtie workshops Bowtie software tools
Module Overview	
Additional Information	<p>This module introduces bow-tie methodology and examines in detail the various bowtie analysis components. The module also provides a critical review of the method's practical uses, with hands-on practice at applying the technique. 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:</p> <p>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.</p> <p>Relevant subject benchmark statement(s) and other external reference points used to inform programme outcomes: The QAA does not currently offer any SBS for risk and safety management. The Engineering (MEng) benchmark statements do not address risk. The Risktec teachers and module leader are practising industry consultants, imparting knowledge which is both relevant and up-to-date, and incorporating that knowledge into the module materials. This maintains the relevance of the module. The module captures the industry-wide requirements of international standards for best practices in risk and safety management, such as ISO 17776 for tools and techniques for hazard identification and risk assessment and guidance published by the UK Civil Aviation Authority. Mode and duration of study: Distance Learning for 8 weeks. Criteria for admission to the programme: Students must meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • An undergraduate degree or equivalent in science, engineering, business management, or related studies, or • Be an industry professional with 5+ years industry experience, with some exposure to risk management tools and techniques, or • Be a mature student with qualifications and experience who in the opinion of the programme team will be able to successfully complete the programme, or • An appropriate combination of undergraduate degree (or academic equivalent) and industry experience at the discretion of the Programme Leader. <p>The entry criterion for English language ability is possession of one of the following qualifications:</p> <ul style="list-style-type: none"> • IELTS 6.5, or • TOEFL 560 Paper Based/220 Computer Based/ 83 Internet, or • Cambridge examination Board: Advance Certificate of English, grade C or above. <p>Applicants who have studied and successfully achieved a UK degree, or a degree from an English speaking country, are exempt from the requirements to produce evidence of competence in English. Any applicant to the programme who does not match the above English language criteria will be given an interview (by telephone if face to face is not practical) to ascertain their knowledge, skills and experience in relation to the programme requirements. If a student who has been accepted onto the programme subsequently displays difficulty with the technical content and/or English language, support will be provided. In the first instance the module teacher, Project Manager or Programme Leader will discuss the issue with the student (in confidence) and advice would be given to the student. If the problem persists, the Project Manager and/or Programme Leader will discuss options with the student and, where a student has been placed on the programme by their employer, with the employer (with the student's permission), and the appropriate course of action for the remainder of the programme will be agreed jointly.</p> <p>Name of the final award: CPD in Bowtie Risk Management Student support – brief summary: As students of LJMU, all participants of the programme have access to the LJMU online facilities including the E-Library. Support for all students is also provided by Risktec teachers, via the Risktec Online forums and email/telephone. Teachers are available for advice between the start of the module and the assessment hand-in dates. Contact details are included in t</p>

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Essay	Essay	95	0	MLO1, MLO2
Test	Test	5	0	MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Ben Matellini	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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