



UNIVERSITI TEKNOLOGI MARA

EVT733: ENVIRONMENTAL HAZARD AND RISK

Course Name (English)	ENVIRONMENTAL HAZARD AND RISK APPROVED
Course Code	EVT733
MQF Credit	3
Course Description	This course will interactively engage students cognitively in areas of hazards identification and risk assessment. It provides a detail explanation the implementation of control measures based on the risks evaluated. This course focuses on preventing environmental incidents and loss rather than solving the problems when it is too late, from the developmental procedures to steps ensure continual improvement. A comprehensive understanding of the presented case studies and problems should provide sufficient knowledge for students to evaluate risks and develop a safe work system.
Transferable Skills	Students are able to assess risk for specific environment and deliver in details the control measures based on risk evaluated
Teaching Methodologies	Lectures, Inquiry-based Learning, Case Study, Discussion
CLO	<p>CLO1 Compare the fundamentals of environmental hazards with risks assessment and safety management (PLO1) (C2)</p> <p>CLO2 Demonstrate the existing applications of risk assessment tools in managing environmental hazards (PLO6) (A4)</p> <p>CLO3 Apply the current techniques and methods in analyzing the environmental hazards and evaluating the risks involved (PLO5) (A3)</p> <p>CLO4 Debate on the concepts and ideas in solving the problems of environmental hazards and risk assessment (PLO9) (A2)</p>
Pre-Requisite Courses	No course recommendations
Topics	
<p>1. 1.0 Introduction</p> <p>1.1) 1.1 Environmental hazards and disasters</p> <p>1.2) 1.2 Natural versus man-made disasters</p> <p>1.3) 1.3 The nature of disasters</p> <p>1.4) 1.4 Elements of safety programming</p> <p>1.5) 1.5 Safety management</p>	
<p>2. 2.0 Upgrading Developmental Programs</p> <p>2.1) 2.1 Safety Procedures</p> <p>2.2) 2.2 Contingency planning</p> <p>2.3) 2.3 Emergency response</p> <p>2.4) 2.4 Arrangement and Performance measures 2.5 Education</p> <p>2.5) 2.6 Training and development in safety</p>	
<p>3. 3.0 Understanding the risks</p> <p>3.1) 3.1 Perception of risk</p> <p>3.2) 3.2 Safety policy and objectives</p> <p>3.3) 3.3 Safety and loss prevention</p> <p>3.4) 3.4 Emergency preparedness and response</p> <p>3.5) 3.5 Accident prevention of hazardous substances</p>	
<p>4. 4.0 Hazard Identification</p> <p>4.1) 4.1 Hazards, risk and danger</p> <p>4.2) 4.2 Methods to identify hazards</p> <p>4.3) 4.3 Long term and short term hazards 4.4 Safety and common sense</p>	

5. 5.0 People at risk

- 5.1) 5.1 Manufacturers
- 5.2) 5.2 Users/handlers
- 5.3) 5.3 Transporters
- 5.4) 5.4 Waste disposal personnel 5.5 Environment

6. 6.0 Risk evaluation

- 6.1) 6.1 Probability Rules and Theoretical Distributions 6.2 Design of Sample survey
- 6.2) 6.3 Analysis of Variance
- 6.3) 6.4 Sampling distribution and Test of Significance 6.5 Correlation and Regression
- 6.4) 6.6 Theory of Attributes 6.7 Time series analysis

7. 7.0 Recording findings and implementation of controls

- 7.1) 7.1 Hierarchy of controls
- 7.2) 7.2 Factors to consider
- 7.3) 7.3 Permit to work
- 7.4) 7.4 Involving others in the process 7.5 Good plan of action

8. 8.0 Reviewing the assessment

- 8.1) 8.1 Changes and improvement
- 8.2) 8.2 Learning from near-misses and previous accidents 8.3 Effectiveness of risk assessment
- 8.3) 8.4 Updating the systems

9. Industrial Talk

- 9.1) Students will conduct industrial talk related to risk assessment topics

Assessment Breakdown	%
Continuous Assessment	80.00%
Final Assessment	20.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Case Study	Assignments	30%	CLO2
	Discussion	Lifelong learning discussion	30%	CLO3
	Presentation	Group presentation	20%	CLO4

Reading List	Recommended Text	<ul style="list-style-type: none"> Mark Robson and William Toscano 2007, <i>Risk Assessment For Environmental Health</i>, John Wiley & Sons.
	Reference Book Resources	<ul style="list-style-type: none"> Glenn Koller 2005, <i>Risk Assessment And Decision Making In Business And Industry A Practical Guide</i>, 2nd. Ed., CRC Press. Pat Perry 2003, <i>Risk Assessments Questions And Answers A Practical Approach</i>, Thomas Telford Publishing London Nick W Hurst 1998, <i>Risk Assessment The Human Dimension</i>, Royal Society of Chemistry
Article/Paper List	Reference Article/Paper Resources	<ul style="list-style-type: none"> Keith Smith 2006, Environmental Hazards Assessing Risk And Reducing Disaster,, 172 Issue 3, 267
Other References	This Course does not have any other resources	