



UNIVERSITI TEKNOLOGI MARA

EVT678: OCCUPATIONAL SAFETY AND HEALTH : INDUSTRIAL SAFETY

Course Name (English)	OCCUPATIONAL SAFETY AND HEALTH : INDUSTRIAL SAFETY APPROVED
Course Code	EVT678
MQF Credit	3
Course Description	This course will interactively engage students cognitively and scientifically in areas of occupational and industrial safety. This course introduces the student with the aspects of occupational safety at workplace, which include machinery, tools and equipment and working in confined spaces. Hazards in working environments are identified and discussed in detail with the requirement of controls and prevention methods as required by the law. Students will also be introduced to Emergency Response Preparedness planning (ERP). The outcomes shall be assessed through a variety of tools which include the traditional paper examination, tests, written assignment, oral presentation, blended-learning and classroom engagement.
Transferable Skills	Communication skills, Analytically skills, Team work skills
Teaching Methodologies	Lectures, Blended Learning, Discussion, Presentation
CLO	<p>CLO1 Identify the basic knowledge of occupational and industrial safety concepts and related regulation in various working environment.</p> <p>CLO2 Explain the workplace hazards and its' control measures to solving occupational concern at workplace.</p> <p>CLO3 Demonstrate information management skills in preparing industrial safety programs at workplace.</p> <p>CLO4 Display effective communication skill based on current issues related to occupational and industrial safety.</p>
Pre-Requisite Courses	No course recommendations
Topics	
1. Review of the Occupational Safety and Health Law and Regulations at workplace 1.1) 1.1 The machinery regulations. 1.2) 1.2 The health, safety and welfare regulation. 1.3) 1.3 The health regulations.	
2. Types of Hazards in Workplace 2.1) 2.1 Physical hazards. 2.2) 2.2 Chemical hazards. 2.3) 2.3 Biological hazard. 2.4) 2.4 Machinery hazard. 2.5) 2.4.1 Safe guarding of machinery. 2.6) 2.4.2 Safe machine operation. 2.7) 2.4.3 Hand tools and portable power tools. 2.8) 2.4.4 Maintenance of machine guards and tools. 2.9) 2.4.5 General area fencing.	
3. Personal Protective Equipment for Safety and Health 3.1) 1.1 Introduction to PPE. 3.2) 1.2 Body protection. 3.3) 1.3 Respiratory protection. 3.4) 1.4 Special work clothing. 3.5) 1.5 Introducing PPE to workplace.	

4. Emergency Response Preparedness and Recovery Planning

- 4.1) 4.1 Recognizing an emergency.
- 4.2) 4.2 Emergency management.
- 4.3) 4.3 Emergency planning.
- 4.4) 4.4 Emergency mitigation and resources.
- 4.5) 4.5 Procedures.
- 4.6) 4.6 Incident control and facilities.
- 4.7) 4.7 Training & exercises.

5. Housekeeping and Physical Arrangement

- 5.1) 5.1 Definition and regulatory requirements.
- 5.2) 5.2 Physical and safe housekeeping arrangement.
- 5.3) 5.3 Type and cause of accidents.
- 5.4) 5.4 Types of cause of diseases.
- 5.5) 5.5 Planning, scheduling of physical and safe housekeeping arrangement.
- 5.6) 5.6 Factors to reduce accident and disease.
- 5.7) 5.7 Steps for a better housekeeping.

6. Pressurised Equipment

- 6.1) 6.1 Definitions.
- 6.2) 6.2 Classification and the use.
- 6.3) 6.3 Dangerous occurrence.
- 6.4) 6.4 Factors causing dangerous occurrence.
- 6.5) 6.5 Control measures and the use of regulations.

7. Mechanical Handling

- 7.1) 7.1 Definition, types and requirement on mechanical handling.
- 7.2) 7.2 Advantages and limits in mechanical handling.
- 7.3) 7.3 Main components in mechanical handling.
- 7.4) 7.4 Hazard and accident related to mechanical handling.
- 7.5) 7.5 Hazard and safety planning and control measures.

8. Manual Handling

- 8.1) 8.1 Definition and law requirement.
- 8.2) 8.2 Type of accidents associated to manual handling.
- 8.3) 8.3 Factors, strategy and technique in manual handling.
- 8.4) 8.4 Hazard and safety planning and control measures.

9. Working in Confined Space

- 9.1) 9.1 Definition and examples of confined space.
- 9.2) 9.2 Law requirement.
- 9.3) 9.3 Hazard and accident associated to working in confined space.
- 9.4) 9.4 Hazard and safety planning and control measures.

10. Safety at Workplace

- 10.1) 10.1 Transport safety defensive driving (forklift).
- 10.2) 10.1.1 Types and purpose of transport.
- 10.3) 10.1.2 Law and types of accident.
- 10.4) 10.1.3 Causes and control measures of accident.
- 10.5) 10.2 Welding safety.
- 10.6) 10.2.1 Definition, types and welding equipments.
- 10.7) 10.2.2 Factors in welding hazards.
- 10.8) 10.2.3 Causes and control measures of accident.
- 10.9) 10.3 Office safety.
- 10.10) 10.3.1 Office hazard.
- 10.11) 10.3.2 Accident and diseases.
- 10.12) 10.3.3 Law requirements and control measures.
- 10.13) 10.4 Electrical Safety.
- 10.14) 10.4.1 Definition and electrical installation.
- 10.15) 10.4.2 Hazard and effect from electric current.
- 10.16) 10.4.3 Principles in electrical safety.
- 10.17) 10.4.4 Safety measures use of electricity.
- 10.18) 10.5 Construction safety.
- 10.19) 10.5.1 Definition and law requirement.
- 10.20) 10.5.2 Activities at construction sites.
- 10.21) 10.5.3 Equipments and machineries associated in construction.
- 10.22) 10.5.4 Types of hazard and accident in construction.
- 10.23) 10.5.5 Causes and control measures of accident.
- 10.24) 10.6 Fire safety.
- 10.25) 10.6.1 Basic and causes of fire.
- 10.26) 10.6.2 Classification of fire.
- 10.27) 10.6.3 Control of fire hazard.
- 10.28) 10.6.4 Planning for factory fire safety.
- 10.29) 10.6.5 Control measures in fire safety.
- 10.30) 10.6.6 Equipments in fire safety.
- 10.31) 10.6.7 Causes and control measures in fire safety.

11. Current issue related with industrial safety in Malaysia and worldwide.
11.1) N/A

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Cumulative one assignment	20%	CLO3
	Presentation	Cumulative one presentation	10%	CLO4
	Test	Cumulative one test	30%	CLO1

Reading List	Recommended Text	Reference Book Resources
	<ul style="list-style-type: none"> • International Law Book Services 2017, <i>Factories & Machinery Act 1967 (Act 139), Regulations, Rules & Orders (As at 20th October 2017)</i>, International Law Book Services Kuala Lumpur [ISBN: 9789678926843] • MDC Publisher Sdn. Bhd. 2015, <i>Occupational Safety and Health Act. 1994</i>, 22 Ed., MDC Publisher Sdn. Bhd. Kuala Lumpur. [ISBN: 967701188X] 	<ul style="list-style-type: none"> • Goetsch, David L. 2015, <i>Occupational Safety and Health for Technologists, Engineers and Managers</i>, 8 Ed., Prentice Hall New Jersey [ISBN: 978013348417] • Phil Hughes & Ed Ferret 2015, <i>Introduction to Health and Safety at Work</i>, 6 Ed., Taylor & Francis Ltd. United Kingdom [ISBN: 9781315857893] • Brauer, Roger L. 2016, <i>Safety and Health for Engineers</i>, 3 Ed., Wiley New Jersey [ISBN: 9781118959]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	