



UNIVERSITI TEKNOLOGI MARA

CMT136: ENVIRONMENTAL POLLUTION AND WASTE MANAGEMENT

Course Name (English)	ENVIRONMENTAL POLLUTION AND WASTE MANAGEMENT APPROVED
Course Code	CMT136
MQF Credit	2
Course Description	This course exposed students to environmental pollution due to water, air and noise, as well as waste management such as solid waste and hazardous waste. Students also learn how to perform a scientific investigation related to the subject. Students will also have an opportunity to go for academic visit or field trip in order to practically learn the recent methods and technology to handle environmental pollution and to manage waste repectively.
Transferable Skills	Scientific investigation related to environmental pollution and waste management
Teaching Methodologies	Lectures, Field Trip, Case Study, Discussion, Presentation, Industrial Talk
CLO	CLO1 Discuss the environmental pollution and waste management systems and how to manage them. CLO2 Report the available technology on how to control the environmental pollution and waste treatment based on the academic visit/field trip/industrial talk.
Pre-Requisite Courses	No course recommendations

Topics
1. Environmental Pollution 1.1) 1.1 1.2) Water Pollution 1.3) 1.4) 1.5) 1.1.1 1.6) Sources of water pollution 1.7) 1.8) 1.9) 1.1.2 1.10) Classes of water pollutants 1.11) 1.12) 1.13) 1.1.3 1.14) Water pollution monitoring 1.15) 1.16) 1.17) 1.1.4 1.18) Water pollution control methods 1.19) 1.2 1.20) Air Pollution 1.21) 1.22) 1.23) 1.2.1 1.24) Sources of air pollution 1.25) 1.26) 1.27) 1.2.2 1.28) Air pollution monitoring 1.29) 1.30) 1.31) 1.2.3 1.32) Air pollution control equipment

- 1.33) 1.3
- 1.34) Noise Pollution
- 1.35)
- 1.36) 1.3.1
- 1.37) Sources of noise pollution
- 1.38) 1.3.2
- 1.39) Measurement of sound
- 1.40) 1.3.3
- 1.41) Effect of noise on human health
- 1.42) 1.3.4
- 1.43) Noise control

2. Waste Management

- 2.1) 2.1
- 2.2) Introduction
- 2.3) 2.2
- 2.4) Definition of waste
- 2.5) 2.3
- 2.6) Definition of waste management: Integrated and Sustainable waste.
- 2.7) 2.4
- 2.8) Solid Waste Management
- 2.9)
- 2.10)
- 2.11) 2.4.1
- 2.12) Definition of terms
- 2.13)
- 2.14)
- 2.15) 2.4.2
- 2.16) Monitoring, Characterizing and Analysing Waste
- 2.17)
- 2.18)
- 2.19) 2.4.3
- 2.20) Solid Waste Management Approach
- 2.21)
- 2.22)
- 2.23) 2.4.4
- 2.24) Collection, Transportation, and Disposal of solid waste
- 2.25) 2.4.5
- 2.26) Reuse, Recovery, and Recycling of solid waste
- 2.27)
- 2.28) 2.5
- 2.29) Wastewater Management
- 2.30) 2.5.1
- 2.31) Purpose of sewage treatment
- 2.32) 2.5.2
- 2.33) Preliminary treatment
- 2.34) 2.5.3
- 2.35) Primary treatment
- 2.36) 2.5.4
- 2.37) Secondary treatment
- 2.38) 2.5.5
- 2.39) Sludge treatment
- 2.40) 2.6
- 2.41) Hazardous Waste Management
- 2.42) 2.6.1
- 2.43) Classification of hazardous wastes
- 2.44) 2.6.2
- 2.45) Treatment and disposal methods

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Write a report based on field trip/industrial talk/case study	30%	CLO2
	Presentation	Present the assignment	20%	CLO2
	Test	Test 1 that covers topic Environmental Pollutions	25%	CLO1
	Test	Test 2 that covers topic Waste Managements	25%	CLO1

Reading List	Reference Book Resources	<ul style="list-style-type: none"> Versilind, P.A. and Morgan S.M. 2004, <i>Introduction to Environmental Engineering</i>, 2 Ed., Thomson Brooks-Cole [ISBN: 0-534-95573-8] Manahan, S.E. 2017, <i>Environmental Chemistry</i>, 10 Ed., Lewis Publisher's [ISBN: 1-56670-633-5]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	