



UNIVERSITI TEKNOLOGI MARA

EVT422: ENVIRONMENTAL SCIENCE MANAGEMENT

Course Name (English)	ENVIRONMENTAL SCIENCE MANAGEMENT APPROVED
Course Code	EVT422
MQF Credit	3
Course Description	This course will interactively engage students cognitively and scientifically in areas of environmental science management. Students will state and explain concept of sustainability, biodiversity, energy, resources, population growth, and human impact on the natural environment and environment and society, classified by their uses, perform investigations via fieldwork exercises and verbally and in writing, discuss the relationships with peers and facilitators. Lecture sessions employ a mixture of lectures and active learning (self and peer discussions). The outcomes shall be assessed through a variety of tools that include the traditional paper examination, assignments, field visit report, presentation, informal interviews and classroom engagement.
Transferable Skills	Students are able to manage an issues related to the environment with applying the knowledge and skills that they had learn in this course. Through this course, awareness in environmental issues can be further enhanced in students, thus, they will change their lifestyle in order to reduce environmental pollution. In addition, students are able to convey this awareness to nearby people such as family, friends and also public.
Teaching Methodologies	Lectures, Field Trip, Discussion
CLO	<p>CLO1 1. State, write and explain the concepts in the study of environmental science and management</p> <p>CLO2 2. Discuss, assess and analyze between interdisciplinary perspective of environmental issues and environmental management problem</p> <p>CLO3 3. Communicate to peers verbally and to the facilitator in writing, the science investigations and justification in managing environmental problem.</p> <p>CLO4 4. Collaborate, motivate and truthful with team members in both the fieldworks and in the classroom.</p>
Pre-Requisite Courses	No course recommendations
Topics	
1. Environmental Problem, Their Causes and Sustainability	
1.1) 1.1 Living more sustainably 1.2) 1.2 Population growth, economic growth, environmentally sustainable development and globalization 1.3) 1.3 Resources 1.4) 1.4 Pollution 1.5) 1.5 Environmental problem cause and connection	
2. Environmental History: An Overview	
2.1) 2.1 Cultural changes and the environment 2.2) 2.2 Environmental history	
3. The Human Population and Environment	
3.1) 3.1 Factors affecting human population 3.2) 3.2 Population age structure 3.3) 3.3 Influencing population size	
4. Non-renewable Resource – Mineral	
4.1) 4.1 Nature and formation of mineral resources 4.2) 4.2 Finding and removing non-renewable mineral resources 4.3) 4.3 Environmental effect of extracting, processing, and using mineral	

5. Biodiversity 5.1) 5.1 Definition of biodiversity 5.2) 5.2 Type of biodiversity 5.3) 5.3 Issues and management of biodiversity
6. Energy and Sustainability 6.1) 6.1 Evaluating energy resources 6.2) 6.2 Nonrenewable energy: fossil fuel – coal, oil, natural gas 6.3) 6.3 Renewable energy: solar, wind, hydro, thermal and biomass energy
7. Air Pollution 7.1) 7.1 The atmosphere 7.2) 7.2 Types and source of air pollution 7.3) 7.3 Effect of air pollution on living organism 7.4) 7.4 Preventing and reducing air pollution
8. Water Pollution 8.1) 8.1 Types and source of water pollution 8.2) 8.2 Effect of water pollution 8.3) 8.3 Water pollution of stream, lake and ocean 8.4) 8.4 Preventing and reducing water pollution
9. Solid and Hazardous Waste 9.1) 9.1 Wasting resources 9.2) 9.2 Producing less waste and pollution 9.3) 9.3 Reuse 9.4) 9.4 Recycling 9.5) 9.5 Achieving low-waste society
10. Economics, Environment and Sustainability. 10.1) 10.1 Economic resources and system and environmental problems 10.2) 10.2 Monitoring economic and environmental progress 10.3) 10.3 Harmful external cost and full cost pricing 10.4) 10.4 The economics of pollution control and resources management 10.5) 10.5 Market force to improve environmental quality
11. Field Trip 11.1) n/a
12. Presentation 12.1) 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	Writing assignment	10%	CLO3 , CLO4
	Presentation	Present their assignment	10%	CLO3 , CLO4
	Test	Test 1	10%	CLO1
	Test	Test 2	10%	CLO2
	Test	Test 3	10%	CLO3
	Written Report	Write report about their filed trip.	10%	CLO3 , CLO4

Reading List	Recommended Text	<ul style="list-style-type: none"> Miller, G.T. and Spoolman, S.E. 2009, <i>Living In The Environment: Concepts, Connecti</i>, 16 Ed., Brooks/Cole, Cengage Learning: Belmont
	Reference Book Resources	<ul style="list-style-type: none"> Raven, H.R. and Berg L.R. 2004, <i>Environment</i>, Ed., , John Wiley & Sons: New York [ISBN:] Buchholz, R. A 1998, <i>Principles of environmental management: The g</i>, Ed., , Prentice Hall: New Jersey [ISBN:] Abdullah Mohamad Said 1999, <i>Pengurusan Sumber dan Alam Sekitar</i>, Ed., , Institut Teknologi MARA: Shah Alam. [ISBN:] Botkin, D.B and Keller, E.A. 2003, <i>Environmental Science: Earth as living planet</i>, Ed., , John Wiley & Sons: New York
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	