UNIVERSITI TEKNOLOGI MARA

CHM576: ENVIRONMENTAL CHEMISTRY

Course Name (English)	ENVIRONMENTAL CHEMISTRY APPROVED
Course Code	CHM576
MQF Credit	3
Course Description	This course will expose students to the chemistry of the environment. Topics include tropospheric and stratospheric chemistry and pollution including acid rain, greenhouse effect, global warming, indoor air quality and thinning of the ozone layer. Water resources, water quality, water treatment and water pollution as well as solid waste and hazardous waste will also be covered in this course. This course will also examine how air, water and waste pollution affect humans and the environment. Monitoring and control pollution strategies will also be looked into during this course.
Transferable Skills	Have the ability to present materials orally as well as answer questions and discuss environmental issues. Able to assess and evaluate other's work
Teaching Methodologies	Lectures, Blended Learning, Case Study, Discussion, Presentation
CLO	CLO1 Explain the concepts and principles in the environmental study of air, water and waste chemistry CLO2 Evaluate current issues in the environmental study of air, water and waste chemistry. CLO3 Demonstrate managerial skills related to environmental issue.
Pre-Requisite Courses	No course recommendations

Topics
1. Introduction and Atmospheric layers 1.1) Introduction 1.2) Layers of the Atmosphere
2. Tropospheric Pollution and Reactions 2.1) Outdoor (Ambient) Air Pollution 2.2) Tropospheric Reactions 2.3) Indoor Air Quality 2.4) Greenhouse Effect and Global Warming 2.5) Acid Rain
3. Stratospheric Pollutions and Reactions 3.1) Statospheric Pollution and Reactions
4. Water Chemistry and Pollution 4.1) Water Chemistry 4.2) Water Pollution 4.3) Types of Water Pollutants 4.4) Eutrophication
5. Water Resource and Quality 5.1) Water Resources 5.2) Hydrological Cycle 5.3) Water Use and Quality 5.4) Water Treatment 5.5) Unit Conversion
6. Waste 6.1) Municipal Solid waste 6.2) Hazardous Waste

7. Presentation 7.1) Oral presentation
8. Assignment 8.1) Written report

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Assignment	Assignment	20%	CLO2
Presentation	Oral presentation	10%	CLO3
Test	Test	30%	CLO1

Reading List

Reference Book Resources

- **G.Tyler Miller, Scott E.Spoolman 2015, *Living in the Environment*, 18 Ed., 18,20,21, Cengage Learning Singapore [ISBN: 978-1-305-004]**
- **Kaufman, R abd Cleveland, C 2008, *Environmental Science*, Ed., , McGraw-Hill International Edition [ISBN:]**
- **Botkin, D.B and Keller, E.A 2008, *Environmental Science*, 6 Ed., Wiley NJ, U.S.A**

Article/Paper List: This Course does not have any article/paper resources

Other References: This Course does not have any other resources