



UNIVERSITI TEKNOLOGI MARA

AGR657: ENVIRONMENTAL MANAGEMENT IN PLANTATION

Course Name (English)	ENVIRONMENTAL MANAGEMENT IN PLANTATION APPROVED
Course Code	AGR657
MQF Credit	3
Course Description	This course will introduce students with the important aspects related to the management of environmental issues, problems and solutions in the plantation sector. The students will be exposed to issues related to the concepts of environmental science, sustainability and sustainable development, sustainability management in the plantation sector, relation between ecosystem and energy, physical environments and living organisms, environmental laws and regulations. The student will also be exposed to the standards, certifications and environmental impact assessment (EIA) requirements, pollutions generation and also resources required in the plantation sector. Towards the end of the syllabus, students will be exposed to the agricultural wastes problems and remediation technologies in the plantation sector.
Transferable Skills	Thinking Problem solving Communication skill Interpersonal skill
Teaching Methodologies	Lectures, Blended Learning, Discussion, Presentation
CLO	CLO1 Discuss the concepts and issues related to the sustainability, sustainable development, environmental regulations, standardization, certifications, EIA and sustainable biomass utilization in solving environmental problems in the plantation sector. CLO2 Evaluate the concepts in environmental management to solve environmental related problems in the plantation industry. CLO3 Communicate effectively through oral presentation and report writing.
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction 1.1) Environmental Science, sustainability and Sustainable development, sustainability management program in plantation	
2. Ecosystem 2.1) Ecosystem and Energy, physical environments and living organisms	
3. Environmental Laws 3.1) Environmental Quality Act 1974, environmental regulations related to plantation	
4. Environmental Standards, Certifications and Assessment 4.1) Environmental Management System ISO 14000 Standards, Round-Table on Sustainable Oil Palm Certification, Indonesian Sustainable Palm Oil Certification, Malaysian Sustainable Palm Oil Certification, Preliminary Environmental Impact Assessment, Detailed Environmental Impact Assessment	
5. Pollution in the Plantation 5.1) Air pollution, water pollution, soil pollution, solid and hazardous wastes	
6. Resources 6.1) Water, soil, mineral, food	
7. Agricultural Wastes and Environmental Problems 7.1) Biomass in plantation, animal waste, agricultural products processing wastes	

8. Remediation Technologies in Plantation

8.1) Phytoremediation, phytoaugmentation, biosparging and bioventing, soil vapour extraction and air sparging, aerobic and anaerobic biotransformation, vegetative crops

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Written assignment	20%	CLO2
	Presentation	Video presentation	10%	CLO3
	Test	Online test	30%	CLO1

Reading List	Recommended Text
	<ul style="list-style-type: none"> • Peter H Raven, David M Hassenzahl, Linda R Berg 2012, <i>Environment</i>, 8 Ed., John Wiley and Sons USA [ISBN: 978-0470-9457] • <i>The Asian Biomass Handbook A Guide for Biomass Production and Utilization.</i>, The Japan Institute of Energy Japan • <i>Remediation Technologies for Soils and Groundwater</i>, ASCE Publication Virginia USA

Article/Paper List	This Course does not have any article/paper resources
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Other References	This Course does not have any other resources
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