



UNIVERSITI TEKNOLOGI MARA

CGE650: OIL AND GAS SIMULATION LABORATORY

Course Name (English)	OIL AND GAS SIMULATION LABORATORY APPROVED
Course Code	CGE650
MQF Credit	2
Course Description	This course aims to introduce various methods of analysis by using sophisticated software to solve various reservoir engineering problems.
Transferable Skills	Computer simulation by using any relevant Reservoir Simulation software package.
Teaching Methodologies	Lectures, Lab Work, Project-based Learning
CLO	CLO1 Perform software-based analysis to evaluate potential, productivity and economic feasibility of an oil and gas field. CLO2 Evaluate simulation data as well as the findings and relate with the fundamental theories and concept relevant to a field's life cycle CLO3 Demonstrate teamwork in organizing the simulation for oil and gas engineering application.
Pre-Requisite Courses	No course recommendations
Topics	
1. Fundamental of Reservoir Simulation 1.1) Describe basic principles of reservoir simulation	
2. Introduction to Eclipse 2.1) Basics of using the software.	
3. PETREL 3.1) Static Model	
4. ECLIPSE 4.1) Dynamic Model	
5. Reservoir Performance Prediction 5.1) Data analysis of oil and gas problem.	

Assessment Breakdown		%		
Continuous Assessment		100.00%		
Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Group Project	Project report	20%	CLO2
	Test	Mid-term assessment	10%	CLO2
	Visual Assessment	Peer Assessment	5%	CLO3
	Visual Assessment	Individual Assessment	5%	CLO3
	Written Report	Written report	60%	CLO1
Reading List	This Course does not have any book resources			
Article/Paper List	This Course does not have any article/paper resources			
Other References	<ul style="list-style-type: none"> • Manual Schlumberger 2014, <i>ECLIPSE 100</i>, Schlumberger, Schlumberger http://www.ipt.ntnu.no/~kleppe/TPG4150/EclipseReferenceManual.pdf 			