

Module code	TE-4303		
Module Title	Advanced Concepts of Conventional Energies		
Degree/Diploma	Bachelor of Engineering Degree		
Type of Module	Major Option		
Modular Credits	2	Total student Workload	4 hours/week
		Contact hours	2 hours/week
Prerequisite	None		
Anti-requisite	None		
Aims			
To provide students with a comprehensive knowledge on the use of conventional energy sources and technologies in relation to current major energy conversion techniques, with detailed analyses of specific applications. This module includes topics on types of conventional energy sources, principles of energy conversion technologies, details of conventional resources, energy conversion techniques and applications of steam power generation, gas-turbine power generation and internal-combustion engines. Thorough discussions of energy conservation and environmental pollution control are also integrated in this module.			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	30%	<ul style="list-style-type: none"> - describe the different types of conventional energy sources and conventional energy technologies - understand and assess existing and future conventional energies technologies such as steam power generation, gas-turbine power generation and internal-combustion engine 	
Middle order :	30%	<ul style="list-style-type: none"> - apply basic engineering concepts of conventional energies to real world applications - analyse the environmental impact of conventional energy technologies 	
Higher order:	40%	<ul style="list-style-type: none"> - justify the development of conventional energy technologies - solve complex engineering problems related to conventional energy technologies - form arguments for suitable conventional energy technologies' potential benefits to society based on the availability and economic perspectives - work cooperatively in groups when reviewing case studies 	
Module Contents			
<ul style="list-style-type: none"> - Overview of conventional energy sources and technologies - Steam power generation - Gas-turbine power generation - Internal-combustion engine energy analysis - Energy conservation and environmental pollution control 			
Assessment	Formative assessment	Monthly online quizzes will be used to test and to give feedback for their learning.	
	Summative assessment	Examination: 40% Coursework: 60% <ul style="list-style-type: none"> - 2 class tests (20% each) - 2 assignments (10% each) 	