ADVANCED DIPLOMA OF PLANT ENGINEERING

MODULE DETAILS	**Module 15: Energy Management** Nominal duration: 3 weeks (24 hours total time commitment) This time commitment includes the preparation reading, attendance at each webinar (1 hour plus 15-30 minutes for discussion), and the time necessary to complete the assignments and further study.	
MODULE PURPOSE	To enable the participants to apply energy conservation and management principles and design systems for optimum energy utilization.	
PRE-REQUISITE MODULE(S)	Module 14: Process Management	
ASSESSMENT STRATEGY / CONDITIONS OF ASSESSMENT	To evaluate the achievement of the learning outcomes; written assignments, group projects and practical exercises are set. The Training and Assessment Matrix (TAM) documents the assessment criteria included in these assessments, based on the learning outcomes. The Training and Assessment Strategy (TAS) documents the overall training strategy for this Advanced Diploma course. The conditions of assessment are outlined in the Assessment Guidelines, TAM and TAS. Written assignments, group projects and practical exercises are required to meet assessment criteria outlined in the Assessment Guidelines, TAM and TAS.	
SUMMARY OF LEARNING OUTCOMES	1. Examine and discuss the principles of energy management 2. Discuss the optimization of energy 3. Describe the procedures for energy audit and analysis	
Learning Outcome 1	**Examine and discuss the principles of energy management**	
Assessment Criteria	1.1	Examine the basics of energy management

	1.2	Describe the methods for monitoring and controlling usage
	1.3	Discuss awareness and conservation management
Learning Outcome 2	**Discuss the optimization of energy**	
Assessment Criteria	2.1	Discuss design approaches and techniques for optimizing energy
	2.2	Describe the systems and technologies used for optimizing energy
	2.3	Discuss the attainment of energy for various systems
Learning Outcome 3	**Describe the procedures for energy audit and analysis**	
Assessment Criteria	3.1	Describe the monitoring of energy usage
	3.2	Describe the procedure for performing energy audits
Delivery mode		
A combination of asynchronous and synchronous e-learning delivery comprising a judicious mix of interactive online web conferencing, simulation (virtual labs) software, remote online labs, online videos, PowerPoint slides, notes, reading and study materials (in PDF, HTML and Word format) accessed through the Moodle Learning Management System (LMS).		