DMX5205 Applied Thermodynamics II

Level	5
Course Code	DMX5205
Course Title	Applied Thermodynamics II
Credit value	2
Core/Optional	Core
Course Aim/s	The aim of this course is to provide knowledge on the application of thermodynamic principles in refrigeration, air-conditioning, combustion and heat transfer.
Course Learning Outcomes (CLO):	At the completion of this course student will be able to: CLO1: Describe features of practical vapour compression refrigeration cycle with associated components. CLO2: Analyze vapour absorption refrigeration systems and determine performance. CLO3: Analyze vapour compression refrigeration systems having multiple evaporators and multiple compressors in different arrangements. CLO4: Analyze air conditioning processes with the use Psychrometric chart. CLO5: Apply principles of combustion of fuels to solve practical problems. CLO6: Analyze steady state two dimensional combined mode heat transfer problems. CLO7: Explain the effects of mass and heat transfer through walls and apply this phenomenon to solve practical problems.
Content	Unit 01 : Refrigeration Unit 02: Psychrometric Unit 03: Combustion Unit 04 : Heat transfer Unit 05 : Mass transfer **Laboratory work:** 1. Demonstration of a Refrigeration cycle 2. Determination of heat convection efficiency of the different surfaces 3. Measurement of heat transfer by Natural convection and radiation 4. Determination of calorific values of solid and gaseous fuel.