DMX5313 Power Electronics and Motor Drives

Level	5
Course Code	DMX5313
Course Title	Power Electronics and Motor Drives
Credit value	3
Core/Optional	Core
Course Aim/s	Aim of this course is to provide principles and its applications of Power electronics and motor drives
Course Learning Outcomes (CLO):	At the completion of this course student will be able to CLO1: Explain the operating principles of semiconductor switches and analyze its characteristics CLO2: Analyze the operating principles of cooling devices for semiconductor switches and design Snubber circuits CLO3: Perform calculations in AC to CD , DC to DC, AC to AC and DC to AC Converters CLO4: Construct different types of converters and apply them selectively to solve practical problems CLO5: Select suitable motor drives for electrical machines in different applications.
Content	**Outline Syllabus:** Unit 1: Power electronics Unit 2: Motor drives **Laboratory work:** 1. Familiarization of Power Electronics Components 2. Uncontrolled Rectification 3. Single Phase Full Wave Controlled Rectification 4. Single Phase AC Control 5. Single Phase Full Wave Simple Motor Control