Module Title:	**Fluid Power Systems**
Academic year:	2008 – 2009
Credit Value:	5 – Mandatory
Pre- requisites:	
Assessment:	50% Final Exam, 40% Practical, 10% Continuous Assessment (C.A.)
Aims	1. To provide the student with a knowledge of Pneumatic and Hydraulic components and systems. 2. To provide the student with the skills required to design, build and troubleshoot fluid power systems.
Module Content	• Industrial automation and Safety. • Fluid power theory. • Provision of compressed air, compressors. • Pneumatics: actuators, valves, flow & pressure control, manual pneumatic circuits. • Hydraulics: pumps, pump controls, valves, actuators, circuits, fluids. • Sizing of actuators and pumps. • Maintenance, installation and faultfinding.
Intended Learning Outcomes:	**On successful completion of this module the student will be expected to be able to:** 1. Identify fluid power components and their symbols as used in industry. 2. Interpret and adapt existing fluid power circuits. 3. Describe the function and operation of fluid power components. 4. Design, construct and test pneumatic and hydraulic circuits for engineering applications in a safe manner. 5. Calculate the forces applied by actuators and the speed of actuator movement. 6. Describe the function and characteristics of the main compressor and pump designs. 7. Detail the treatment of compressed air to ensure economic and reliable system function. Contd.

	8. Describe the treatment of hydraulic fluids necessary for reliable system operation and protection of the environment. 9. Size and specify actuator and control components for given applications. 10. Present professionally the results of work orally, graphically and in writing. 11. Maintain a Reflective Diary.