DMX4203 Applied Fluid Dynamics I

Level	Level 4
Course Code	DMX4203
Course Title	Applied Fluid Dynamics I
Credit value	2
Core/Optional	Core
Aim	Aim of this course is to provide the knowledge to apply the concepts and theories in fluid mechanics to understand and solve the problems related to fluid in motion.
Course Learning Outcomes (CLO):	At the completion of this course student will be able to: CLO1: Determine the forces caused due to fluid flow with aid of principles of fluid dynamics. CLO2: Use appropriate devices for the measurement of pressure and discharge of fluid flows. CLO3: Analyze lift and drag forces due to external flows. CLO4: Analyze flow through pipes and open channels. CLO5: Select appropriate fluid machines with a sound knowledge of operating principles and performance characteristics. oCLO6: Model fluid flow systems with the use of dimensional analysis and similitude approach.
Content	**Outline Syllabus:** Unit 1 : Fundamental Concepts of Fluid Dynamics Unit 2 : Flow and pressure Measuring Devices Unit 3 : External Flows and Drag and Lift Unit 4 : Pipe Systems Unit 5 :Open Channel flow Unit 6 : Fluid Machinery Unit 7: Dimensional Analysis and similitude **Laboratory work:** 1. Impact of Jet 2. Wind Tunnel 3. Pipe Friction 4. Pumps and Turbines