

MIME 3140	Fluid mechanics II	3 Credit Hours
Prerequisite	MIME 2240	
Goal	To provide the students with necessary knowledge and skills in hydraulic and pneumatic (Fluid Power) systems and their applications.	
Objectives		Outcomes
<p>The students should be able to:</p> <ol style="list-style-type: none"> 1. Grasp the basics of hydraulics and pneumatics (Fluid Power). 2. Recognize and deal with different components of hydraulic and pneumatic systems. 3. Study the design and operation of different hydraulic and pneumatic systems. 4. Introduced to the troubleshooting and maintenance of hydraulic and pneumatic systems. 		<p>Upon completion of the course, the student will be :</p> <ol style="list-style-type: none"> 1. Fully Comprehend the basics and laws of hydraulics and pneumatics (Fluid Power). 2. Acquainted with the construction, operation and applications of different pumps and compressors. 3. Familiar with the construction, operation and applications of different hydraulic and pneumatic valves and actuators and their symbols. 4. Used to the basic components of hydraulic and pneumatic system components such as reservoirs, filters, accumulators, coolers, pipes, lines, seals, etc and their symbols. 5. Well Informed about characteristics of hydraulic fluids. 6. Able to read, understand, analyze and explain the circuits of some hydraulic and pneumatic systems. 7. Able to make design calculations and drawing for some hydraulic and pneumatic systems. 8. Practically establish and test different hydraulic and pneumatic subsystems & complete systems. 9. Make some troubleshooting and maintenance of hydraulic and pneumatic systems.