MIME 3110	Thermodynamics I	3 Credit Hours
Prerequisites:	PHYS 1210	
Goal	To expose the student to the basic concepts and foundation of thermodynamics	

Objectives	Outcomes
This course should enable the student to: 1. Understand the fundamental concepts of thermodynamics 2. Grasp the basic three laws of thermodynamics and their significance in engineering 3. Conceive the principle of operation of heat engines and refrigerators. 4. Categorize and model typical thermodynamics process. 5. Make appropriate assumption for solving basic thermodynamics problems in various practical situations.	Upon completion of the course, the student will be able to 1. Differentiate between open and closed systems. 2. Realize the thermodynamic temperature scale as a fundamental absolute scale of temperature. 3. Identify the assumption of formulation of the equation of state with limitation. 4. Relate the zero law of thermodynamics to thermodynamics equilibrium. 5. Appreciate the special statement of the law of conservation of energy involved in the first law of thermodynamics. 6. Distinguish the various equivalent statement of the second law of thermodynamics. 7. Analyze and solve various thermodynamics problems involving heat engine and refrigerator with consideration of energy conversion and consideration. 8. Select the appropriate parameters from the table of thermodynamics properties. 9. Interpret the principle of the increase of entropy with practical applications. 10. Perform laboratory

	experiments related to bomb calorimeter and marcet boiler 11. Relate the concept of entropy with trend events in the universe.