

MET 3398: Internship in Mechanical Engineering Technology

3 Credit Hours

Prerequisite: Department Chair approval

This course allows students to enhance their classroom knowledge through practical application of theories to real-world issues in a real-world work environment. Students explore specific interests within their academic discipline and refine their post-graduation goals.

MET 3401: Thermodynamics I

3 Credit Hours

Prerequisite: (MATH 1190 or (MATH 1179 and MATH 1189)) and (PHYS 1111 or PHYS 2211)

Covers the fundamentals of thermodynamics. Use of steam and gas tables is introduced. Property relations for ideal gases and incompressible liquids are introduced. Applications of the First and Second Laws to closed and open systems are studied. Heat engines, refrigerators, heat pumps, availability and irreversibility are studied.

MET 3402: Thermodynamics II

3 Credit Hours

Prerequisite: (ENGR 3343 or MET 3101) and (MET 3401 or ME 3410)

Continuation of Thermodynamics I with emphasis on applications. Transient flow analysis, combustion, internal and external combustion cycles, gas turbines, compressors, refrigeration and air conditioning processes are studied. Fundamentals of heat transfer are also covered.

MET 4112: Computer Aided Engineering & Analysis

3 Credit Hours

Prerequisite: (ENGR 3131 or MET 3124 and (MET 3101 or ENGR 3343) and EDG 1212

Introduces the student to advanced geometry creation as the necessary input for engineering design and analysis using modern computer aided engineering tools such as finite element stress analysis (FEA) and computation fluid dynamics CFD. Emphasis is placed on the interdependency of geometry creation and engineering analysis.