TENS 2135 Thermodynamics
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
An introduction to thermodynamics. First and second law analysis of thermal systems. Use of property charts, tables and equations of state in analyzing common thermal processes of technological importance.
Prerequisite(s): MATH 2242.

TENS 2137 Engineering Economy
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Introduction to the time value of money and its effect on economic decisions. The principles and techniques needed to make decisions about the acquisition and retirement of capital goods, the output and life of equipment, operating costs, depreciation rates and economic selection.
Prerequisite(s): MATH 1113 or prior or concurrent enrollment in MATH 1441.

TENS 2138 Digital Computation
3 Credit Hours. 2 Lecture Hours. 2 Lab Hours.
An introduction to engineering technology problem solving using the computer. Emphasis is placed on the application of advanced software, programming logic/structure, and programming languages. Exploration of a range of problems that are suitable to be solved using computers and the software tools which provide the best fit for these problems.

TENS 2141 Statics
0.4 Credit Hours. 0.3 Lecture Hours. 0.2 Lab Hours.
The study of force systems and equilibrium of bodies at rest. Forces in plane trusses machines and frames, centroids and moments of inertia, and friction. Includes problem solving sessions in support of the above topics.
Prerequisite(s): MATH 1113, MATH 1441, MATH 2242.

TENS 2142 Dynamics
0.4 Credit Hours. 0.3 Lecture Hours. 0.2 Lab Hours.
The study of kinetics of particles and rigid bodies; work, energy, impulse and momentum as applied to particles. Includes problem sessions in support of the above topics.
Prerequisite(s): MATH 1441, TENS 2141, ENGR 2231.

TENS 2143 Strength of Materials
0.4 Credit Hours. 0.3 Lecture Hours. 0.2 Lab Hours.
Introduction to concepts of stress and elastic deformation under axial, torsional, flexural and combined loadings and beam loading. Also includes laboratory activities in materials testing and problem solving.
Prerequisite(s): MATH 1441, ENGR 2231, TENS 2141.

TENS 2144 Fluid Mechanics
0.4 Credit Hours. 0.3 Lecture Hours. 0.2 Lab Hours.
Fundamentals of fluid dynamics for incompressible fluids, fluid static and dynamic forces, Bernoulli’s equation, pipe flow and losses, open channel flow and flow measurement. Also includes methods, procedures and the use of equipment and meters to measure standard fluid properties and phenomena.
Prerequisite(s): MATH 1441, ENGR 2231, TENS 2141.

TENS 2146 Electrical Devices and Measurements
0.4 Credit Hours. 0.3 Lecture Hours. 0.2 Lab Hours.
An introduction to basic electrical devices and measurements. Coverage includes analog/digital systems and computer simulation. Also includes laboratory activities in support of instruction.
Prerequisite(s): MATH 1441 or MATH 1292.