**GENERAL TECHNOLOGY (2820)**

2820:100 Introduction to Engineering Technology (2 Credits)
This introductory course stresses skills needed for academic success. Discussion of fields in engineering technology, job searches, calculators, and data measurement and analysis are included.

2820:105 Basic Chemistry (3 Credits)
Prerequisite: 2010:052 with a grade of C or better or math placement test. Elementary treatment of facts and principles of chemistry emphasizing biological application. Elements and compounds important in everyday life, biological processes and medicine. Introduction to laboratory techniques. Primarily for medical assistant, criminal justice and allied health students. Laboratory.
Gen Ed: Tier 2 - Natural Science w/LAB

2820:110 Physical Science for Technicians (3 Credits)
Elementary presentation of theory and facts of general chemistry and physics (excluding electricity). Includes atomic structure, chemical reactions, energy, electromagnetic radiation, sound and mechanics.

2820:111 Introductory Chemistry (3 Credits)
Gen Ed: Tier 2 - Natural Science w/LAB

2820:112 Introductory & Analytical Chemistry (3 Credits)
Prerequisite: 2820:111 or permission. Chemical equilibria, ionization, radioactivity. Properties of selected metals and nonmetals. Introduction to organic chemistry. Basic concepts of qualitative analysis. Identifications of cations and anions. Laboratory.
Gen Ed: Tier 2 - Natural Science w/LAB

2820:131 Software Applications for Technology (1 Credit)
Prerequisite: 2030:153. Word processing and spreadsheets used within technical applications. This course focuses on using software for technical reports and data analysis. Laboratory.

2820:150 Manufacturing Physics (4 Credits)
Prerequisite: Admission to the Manufacturing Engineering Technology program. Corequisite: 2030:154. Applications of physics to manufacturing including two dimensional motion, vectors, forces, statics, torque and simple electronic circuits. Laboratory.

2820:160 Technical Physics: Mechanics (4 Credits)
Corequisite: 2030:154. Applications of mechanics which include one and two dimensional motion, vectors, forces, equilibrium, work, power, conservation of energy, rotational motion & torque. Laboratory.
Gen Ed: Tier 2 - Natural Science w/LAB

2820:161 Technical Physics: Mechanics I (2 Credits)
Corequisite: 2030:153. Principles of mechanics that include motion, vectors, forces, equilibrium; also significant figures and unit conversions. Laboratory.
Gen Ed: Tier 2 - Natural Science w/LAB

2820:162 Technical Physics: Mechanics II (2 Credits)
Prerequisites: 2820:161 and 2030:153. Principles of mechanics that include work, power, conservation of energy, rotational motion, torque. Laboratory.
Gen Ed: Tier 2 - Natural Science w/LAB

2820:163 Technical Physics: Electricity & Magnetism (2 Credits)
Prerequisites: 2820:160 and 2030:154 with a grade of C- or better in both. Principles and applications of electricity and magnetism. Electrostatics, DC circuits, magnetism, electromagnetism, and AC circuits. Laboratory.
Gen Ed: Tier 2 - Natural Science

2820:164 Technical Physics: Heat & Light (2 Credits)
Prerequisites: [2820:160 with a grade of C- or better] and 2030:154. Principles and applications of heat and light: heat energy, thermodynamics, electromagnetic waves, geometric and physical optics, introduction to quantum mechanics, and radiation.
Gen Ed: Tier 2 - Natural Science

2820:290 Special Topics: General Technology (1-4 Credits)
Prerequisite: Permission. Selected topics of subject areas of interest in General Technology. (May be repeated for a total of eight credits.)

2820:310 Programming for Technologists (2 Credits)
Prerequisites: 2820:131 and 2030:255. A study of a technical programming language with applications in engineering technology. Limited to students in Engineering & Science Technology Department programs.