

31. Engineering Materials (2) (Former ME 31)

Prerequisite or concurrently: Chem 8, Phys 4A. Fundamental nature and properties of engineering materials; structure of matter and its effect on mechanical, electrical, magnetic, and thermal properties.

70. FORTRAN IV Programming (2)

Prerequisite: Algebra, trigonometry. Flowcharting, program structure, computation and arithmetic functions, input-output, transfer of control, looping, subscripted variables, subprograms, file processing, printer plotting techniques, terminal and batch processing procedures.

100. Technology and Society (3)

Prerequisite: junior standing. Technological developments and their effects on society; ecology and environment; selected examples.

110. Principles of Electrical Circuits (3) (Former EE 110)

Prerequisite: Engr 70, Phys 4B, Math 81 (or concurrently). Direct-current circuit analysis; circuit theorems; transient phenomena in RLC circuits; phasor concept; sinusoidal steady-state response; power and RMS calculations in single-phase and polyphase alternating-current circuits; principles of electrical instruments; computer solutions.

110L. Principles of Electrical Circuits Laboratory (1) (Former EE 110L)

Prerequisite: Engr 110 (or concurrently). Experiments on direct- and alternating-current circuits, including single-phase and polyphase systems. Use of electrical instruments, development of laboratory techniques, and verification of basic principles. (3 lab hours)

112. Engineering Mechanics: Dynamics (3) (Former ME 112)

Prerequisite: Engr 20. Application of principles of kinematics and kinetics to problems in engineering.

115. Home Applications of Engineering (2)

Prerequisite: junior standing or permission of instructor. Management of household and yard appliances, underlying principles of their operation, installation, and maintenance; lighting for utility and aesthetics; safety. (2 lecture-demonstration hours)

116. Thermodynamics-Fluid Mechanics A (3) (Former ME 116)

Prerequisite: Engr 112 (or concurrently). Fundamentals of thermo-dynamics and fluid mechanics as applied to engineering problems.

116L. Thermodynamics-Fluid Mechanics Laboratory (A) (1) (Former ME 116L)

Prerequisite: Engr 116 (or concurrently). Applications of experimental methods used in engineering practice to thermofluid systems. (3 lab hours)

121. Mechanics of Materials (3) (Former CE 121)

Prerequisite: Engr 20. Application of principles of mechanics to find stresses and deformations in machine and structural members.

121L. Mechanics of Materials Laboratory (1) (Former CE 121L)

Prerequisite: Engr 121 (or concurrently), Engr. 31. Application of the principles and methods of testing to verify theory and determine limitations of principles of mechanics of materials. (3 lab hours)

122. Advanced Mechanics of Materials (3) (Former CE 122)

Prerequisite: Engr 121, Engr 70, Math 81. Advanced topics in mechanics of materials.

136. Thermodynamics—Fluid Mechanics B (3) (Former ME 136)

Prerequisite: Engr 116. Continuation of Engr 116. Fundamentals of thermodynamics, fluid mechanics, and heat transfer as applied to engineering problems.

136L. Thermodynamics—Fluid Mechanics Laboratory B (1) (Former ME 136L)

Prerequisite: ME 117, Engr 136 (or concurrently). Applications of experimental methods as used in engineering practice to thermofluid systems. (3 lab hours)