ENGINEERING (ENGR)

ENGR111 Intro to Engineering 3 credits (3 lec hrs/wk)
Prerequisite(s): (MTH111Z)
Topics include: survey of the engineering profession, educational and professional development, standards of practice; engineering information, calculations and analysis. Students will complete an engineering design project will be incorporated.
This course may be taken 1 time for credit.
Course classification: LDC

ENGR112 Engineering Computation 4 credits (3 lec, 3 lab hrs/wk)
Prerequisite(s): (MTH111Z)
Introduction to engineering problem solving by means of programmed numerical methods. Exposure to fundamentals of computational systems, logical analysis, algorithm development, and program input/output design. A higher-level programming language will be presented and utilized.
This course may be taken 1 time for credit.
Course classification: LDC

ENGR180 Internship: Engineering 1-12 credits
Prerequisite(s): Instructor consent
Practical on-site experience that will allow students to explore workplace environments and career options
This course may be taken 12 times for credit.
Course classification: LDC

ENGR201 Electrical Fundamentals I 4 credits (3 lec, 3 lab hrs/wk)
Prerequisite(s): (MTH251Z)
Topics include: circuit variables and elements, simple resistive circuits, techniques of circuit analysis, applications of operational amplifiers, inductors, capacitors, and first-order circuits.
This course may be taken 1 time for credit.
Course classification: LDC

ENGR202 Electrical Fundamentals II 4 credits (3 lec, 3 lab hrs/wk)
Prerequisite(s): (ENGR201)
Topics include: circuit variables and elements, simple resistive circuits, techniques of circuit analysis, applications of operational amplifiers, inductors, capacitors, and first-order circuits.
This course may be taken 1 time for credit.
Course classification: LDC

ENGR203 Electrical Fundamentals III 4 credits (3 lec, 3 lab hrs/wk)
Prerequisite(s): (ENGR202)
Covers transient circuit analysis-RL, RC, RLC. Introduces LaPlace Transform and its use in circuit analysis, the transfer function, Bode diagram and two port networks.
This course may be taken 1 time for credit.
Course classification: LDC

ENGR211 Statics 3 credits (3 lec hrs/wk)
Prerequisite(s): (MTH252Z)
Analysis of forces induced in structures and machines by various types of loading in static equilibrium.
This course may be taken 1 time for credit.
Course classification: LDC

ENGR212 Dynamics 3 credits (3 lec hrs/wk)
Prerequisite(s): (ENGR211 and MTH252Z)
Kinematics, Newton's laws of motion, and work-energy and impulse-momentum relationships applied to engineering systems.
This course may be taken 1 time for credit.
Course classification: LDC

ENGR213 Strength of Materials 3 credits (3 lec hrs/wk)
Prerequisite(s): (ENGR211)
Properties of structural materials; analysis of stress and deformation in axially loaded members, circular shafts, and beams, and in statically indeterminate systems containing these components.
This course may be taken 1 time for credit.
Course classification: LDC