Al-Ahliyya Amman University

Faculty of Arts and Science

Major: basic science

Course description of mathematics courses

٠١١١١٠١ Mathematics (1) {3} [3-3]

Review of Basic Algebra; Functions, Limits and Continuity; Derivatives of Algebraic, Trigonometric, Exponential and Logarithmic Functions; Graphs; Related Rates Problems; Maximum-minimum Problems; Indefinite Integral; Definite Integral and Applications with Emphasis on Engineering and Pharmacy models.

Prerequisite: None

٠١١٢١٢٢ Mathematics (2) {3} [3-3]

Applications of the Definite Integral; Techniques of Integration; Hyperbolic Functions; Inverse Trigonometric Functions; L'hopital's Rule and Indeterminate Forms; Improper Integrals; Taylor's Formula; Sequences and Infinite Series and Applications with Emphasis on engineering models**.**

***Prerequisite*: ٠١١١١٠١ Mathematics (1)**

٠١١١٢٠١ General Physics {3} [3-3]

Motion in a straight line, Lows of motion ,Work, Energy & Power , Statics, Linear Momentum, Temperature and the Behavior of Gases, Thermodynamics , Thermal properties of matter , Non Viscous Fluid, Electric forces, fields , Electrical current , Nerve Conduction , Nuclear Physics ,The atomic nucleus , Nuclear Physics , Ionization Radiation.

Prerequisite: None

0111202 General Physics (1) {3} [3-3]

Physics and measurements, Motion in one dimension, Vectors, Motion in two, dimensions, The Laws of motion, Circular motion and other applications of Newton's laws, Energy of a system, Conservation of energy, Linear momentum and collisions, Rotation of a rigid object about a fixed axis, Angular momentum, Static equilibrium and elasticity, Universal gravitation, Fluid mechanics, Oscillatory motion, Wave motion, Sound waves, Superposition and standing waves, Temperature, The First law of thermodynamics, The Kinetic theory of gases, Heat engines, Entropy, and the Second law of thermodynamics

Prerequisite: None

0111203 General Physics (2) {3} [3-3]

Electric fields, Gausses law, Electric potential, Capacitance and dielectrics, Current and resistance, Direct current circuits, Magnetic fields, Sources of the magnetic field, Faradays law, Inductance, Alternating current circuits, Electromagnetic waves.

Prerequisite: ٠١١١٢٠٢ General Physics (1)