Department of Applied Science and Humanities

B.E. 1st Sem

Course: Engineering Mathematics-I   **Course Code: (1A1)**

At the end of Engineering Mathematics-I course the student will be able:

CO 1: To find the highest derivatives by successive differentiation and to apply Leibnitz's rule for finding nth derivative of product of two functions.

CO 2: To understand the concept of partial differentiation, application of Euler's theorem for homogeneous function and their application to Maxima/Minima.

CO 3: To apply Demoiver's theorem in various concepts of complex number.

CO 4: To solve all types of first order first degree differential equations.

CO 5: To understand and solve first and higher order differential equations and apply them as mathematical modelling in electric and mechanical systems.

CO 6: To understand the concept convergence of sequence and series.

Course: Engineering Physics   **Course Code: (1A2)**

At the end of Engineering Physics course the student will be able:

CO 1: To explain the position of Fermi levels in intrinsic and extrinsic semiconductors and semiconductors conductivity.

CO 2: To understand Dual nature of wave particle, wave function and its sigfincance.

CO 3: To describe the motion of electrons in Electric and Magnetic fields.

CO 4: To express the fundamental condition of interference and different diffraction mechanisms.

CO 5: To describe the principle of optical fiber, applications of optical fiber, working principle of LASER and their applications.

CO 6: To define and explain fluid dynamics and acoustics.

Course: Engineering Mechanics   **Course Code: (1A3)**

At the end of Engineering Mechanics course the student will be able:

CO 1: To Compose and resolve the forces along with its effect.

CO 2: To apply principles of statics to the system of rigid bodies and analyze simple structures and also calculate frictional forces for simple contact, wedges and belt friction.

CO 3: To Locate centroid and calculate moment of inertia

CO 4: To calculate various kinematic quantities.

CO 5: To solve the problems using different kinetic equations related to direct and Interconnected particles.

CO 6: To study work-energy equation and apply principle of conservation of momentum and laws of impact.

Course: Computer Programming   **Course Code: (1A4)**

At the end of Computer Programming course the student will be able:

CO 1: To explain the fundamental concept of computer and computing.

CO 2: To test and execute the programs and correct syntax and logical errors.

CO 3: To implement conditional branching, iteration and recursion.

CO 4: To use arrays, pointers and structures to formulate algorithms and Programs.

CO 5: To recognize various problem-solving techniques and computer applications.

CO 6: To understand programming concepts to solve real life problems.