

<b>MECHANICAL ENGINEERING (25 SCHEME)</b>	
<b>Course Code</b>	<b>BCEDK103/203 - Computer Aided Engineering Drawing</b>
CO1	Generate orthographic projections of points, lines, planes, and solids manually and with computer-aided tools.
CO2	Develop the lateral surfaces of solids for real-world applications.
CO3	Draw isometric views and convert isometric drawings to orthographic views.
CO4	Create basic 3D models of engineering components and parts.
CO5	Identify the interdisciplinary engineering components or systems through its graphical representation.
<b>Course Code</b>	<b>1BCHEM102/202 - Applied Chemistry for Advanced Metal Protection and Sustainable Energy Systems</b>
CO1	Interpret the terms and processes involved in scientific and engineering applications
CO2	Apply the knowledge of chemistry to solve the problems in chemistry that are pertinent in engineering applications
CO3	Analyze the appropriate chemical techniques suitable for engineering applications to reach the substantiated conclusions
CO4	Apply the techniques of quantitative chemical analysis for engineering problems through experimental skills.
<b>Course Code</b>	<b>1BEME105/205 -Elements of Mechanical Engineering</b>
CO1	Analyse the properties of steam, various engineering materials along with their classifications and applications.
CO2	Illustrate the basic concepts of thermodynamics, internal combustion engines and electric/hybrid vehicles.
CO3	Demonstrate the working and operations of machine tools and metal joining techniques.
CO4	Outline the configuration, anatomy, and performance parameters of robots.
CO5	Apply the concepts of belt and gear drives to solve basic numerical problems related to velocity ratio in gear drives.
<b>Course Code</b>	<b>1BEMEL107/207 -</b>
CO1	Perform various operations using lathe and welding machine.
CO2	Calibrate various measuring devices to achieve accuracy of measurement.

CO3	Determine the properties and characteristics of fuels and oils.
CO4	Determine the hardness of materials using hardness testing machine.
CO5	Apply the method of materials selection, material data and knowledge sources for computer- aided selection of materials.
<b>Course Code</b>	<b>1BESC104D/204D - INTRODUCTION TO MECHANICAL ENGINEERING</b>
CO1	Recognize the significance of mechanical engineering principles to solve the problems of social relevance.
CO2	Understand the working of I.C. engines, power transmission elements and future mobility vehicles.
CO3	Describe the working principles and applications of various manufacturing processes.
CO4	Explain the advances in mechanical engineering.
<b>Course Code</b>	<b>1BMATM101 - Differential Calculus and Linear Algebra</b>
CO1	Apply foundational concepts of calculus and differential equations to analyze geometric properties of curves, solve first order ordinary differential equations, and model physical phenomena in science and engineering.
CO2	Apply the principles of linear algebra to solve systems of linear equations, determine eigenvalues and eigenvectors, and analyze real-world problems such as traffic flow.
CO3	Demonstrate the applications of mechanical engineering and allied engineering science using modern ICT tools.
<b>Course Code</b>	<b>1BPHYM102/202 - PHYSICS OF MATERIALS</b>
CO1	Apply simple harmonic, damped, and forced oscillations in mechanical and electrical systems.
CO2	Describe stress, strain, and elastic moduli concepts to evaluate elastic behavior.
CO3	Explain thermoelectric effects and assess materials/devices for energy conversion and thermal management.
CO4	Summarize the knowledge of low-temperature physics, cryogen production methods, and cryogenic applications.
CO5	Discuss material characterization techniques and instrumentation for analyzing macroscopic and microscopic properties of engineering material