

Department of Basic Science Engineering			
Sl.No.	Name of the Subject	CO Code	Course Outcomes
1	Linear Algebra and Calculus	MAT101	solve systems of linear equations, diagonalize matrices and characterise quadratic forms
		MAT101	compute the partial and total derivatives and maxima and minima of multivariable functions
		MAT101	compute multiple integrals and apply them to find areas and volumes of geometrical shapes
		MAT101	compute mass and centre of gravity of plane laminas using multiple integrals
		MAT101	perform various tests to determine whether a given series is convergent, absolutely convergent or conditionally convergent
		MAT101	determine the Taylor and Fourier series expansion of functions and learn their applications.
2	Vector Calculus, Differential equation and Transforms	MAT102	Solve the homogenous differential Equations
		MAT102	Solve the nonhomogenous differential Equations
		MAT102	Analysing the Fourier series
		MAT102	Analyse the Partial differential equations with respect to their order and linearity.
		MAT102	Evaluate one dimensional wave equations
		MAT102	Evaluate one dimensional heat equation
3	Engineering Physics A	PHT100	Apply the knowledge of harmonic oscillator and waves in circuits
		PHT100	Interpret the importance of light phenomenon in thin film and resolution
		PHT100	Analyse the usage of Polaroid and Superconductors in Electronics industry.
		PHT100	Analyse the fundamental concepts in the behavior of electrons and photons.
		PHT100	Apply the basic concept of acoustics and ultrasonics in Civil structures
		PHT100	Apply the principles of laser and fiber optics in medical and telecommunications.
4	Engineering Physics B	PHT110	Compute the quantitative aspects of waves & oscillations in engineering systems
		PHT110	Apply the interaction of light with matter through interference, diffraction and identify these phenomena in different natural optical processes and optical instruments.
		PHT110	Analyze the behaviour of matter in the atomic & subatomic level through the principles of quantum mechanics to perceive the microscopic processes in electronic devices
		PHT110	Apply the knowledge of ultrasonics in non destructive testing.
		PHT110	Use the principles of accoustics to explain the nature and characterization of acoustic design and to produce a safe and healthy environment.
		PHT110	Apply the comprehended knowledge about laser and fibre optic communication system in various engineering applications.
5	Engineering Chemistry	CYT100	Analyse the structure of compounds using IR, NMR and UV-Vis. Spectroscopic techniques
		CYT100	Evaluate the Electrode potentials of metal electrodes and gain the knowledge of Electrochemical cells and batteries.
		CYT100	Apply the use of modern instrumental techniques including thermal and chromatographic methods in Engineering materials.
		CYT100	Designing of economically appropriate nanomaterials, polymers, composites and antistatic materials for engineering purposes.
		CYT100	Understand the fundamental concepts of Fuels and lubricants.
		CYT100	Evaluate the hardness, amount of chloride ion and dissolved oxygen present in watersample and water treatments for purifications.
6	Engineering Mechanics	EST100	Recall principles and theorems related to rigid body mechanics
		EST100	Identify and describe the components of system of forces acting on the rigid body
		EST100	Apply the conditions of equilibrium to various practical problems involving different force system.
		EST100	Choose appropriate theorems, principles or formulae to solve problems of mechanics.
		EST100	Solve problems involving rigid bodies, applying the properties of distributed areas and masses
7	Engineering Graphics	EST110	Understand the theory of Orthographic Projection
		EST110	Understand the conventions and the methods of Engineering Drawing
		EST110	Understand the knowledge about the Projection of point, straight lines, solids etc.
		EST110	Understand the sections of solids and the development of different types of surfaces
		EST110	Understand about isometric and perspective projection
		EST110	Understand the features of CADD Software

8	Basic of Civil Engineering	EST120	Recall the role of civil engineer in society and to relate the various disciplines of civil engineering
		EST120	Explain different types of buildings, building components, building materials and building construction
		EST120	Discuss the importance, objectives and principles of surveying
		EST120	Summarize the basic infrastructure services like MEP, HVAC, elevators, escalators and ramps
		EST120	Discuss energy system, materials and water management and environment for green building
		EST120	Students will have an idea about construction management with low budget
9	Basic of Mechanical Engineering	EST120	Explain the Carnot Engine and sources of power.
		EST120	Explain the working of steam turbine, gas turbine, hydraulic turbine and IC engine.
		EST120	Understand the working and applications of a refrigerator and air conditioner.
		EST120	Understand the casting, forging, rolling, extrusion and metal joining processes.
10	Basic Of Electric Engineering	EST130	Illustrate with the working of different active components to demonstrate basic electronic circuits
		EST130	Design circuits using active and passive components for strengthening fundamental idea about basic electronics.
		EST130	Summarize the devices used in basic communication systems.
		EST130	Apply fundamental concepts and circuit laws to solve simple DC electric circuits
		EST130	Develop and solve models of magnetic circuits
		EST130	Apply the fundamental laws of electrical engineering to solve simple ac circuits in steady state
12	Life Skills	HUT101	Define and Identify different life skills required in personal and professional life
		HUT101	Develop an awareness of the self and apply well-defined techniques to cope with emotions and stress.
		HUT101	Explain the basic mechanics of effective communication and demonstrate these through presentations.
		HUT101	Take part in group discussions.
		HUT101	Use appropriate thinking and problem solving techniques to solve new problems
		HUT101	Understand the basics of teamwork and leadership
13	Professional Communication	HUT102	Develop vocabulary and language skills relevant to engineering as a profession
		HUT102	Analyze, interpret and effectively summarize a variety of textual content
		HUT102	Create effective technical presentations
		HUT102	Discuss a given technical/non-technical topic in a group setting and arrive at generalizations/consensus
		HUT102	Identify drawbacks in listening patterns and apply listening techniques for specific needs
		HUT102	Create professional and technical documents that are clear and adhering to all the necessary conventions
14	Programming in C	EST102.1	Understand the basics of Computer Hardware & Software and fundamentals of C language
		EST102.2	Analyze a computational problem and develop an algorithm/flowchart to find its solution
		EST102.3	Develop readable* C programs with branching and looping statements, which uses Arithmetic, Logical, Relational or Bitwise operators.
		EST102.4	Write readable C programs with arrays, structure or union for storing the data to be processed and which uses string functions
		EST102.5	Divide a given computational problem into a number of modules and develop a readable multi-function C program by using recursion if required, to find the solution to the computational problem
		EST102.6	Develop readable C programs which uses pointers for array processing and parameter passing, with files for reading input and storing output