

Priyadarshini College of Engineering

First year Course Outcomes

Semester-I

Course Name: Applied Mathematics-I CODE: BESI-1	
CO1	Students will be able to understand the idea of derivatives & also able to solve problem involving relationship between changing quantities
CO2	Student will able to understand concepts of function of several variables & their individual effects on function & Its application in optimization.
CO3	Student will understand, Analyze & transfer the data in a proper form for advance Engineering studies
CO4	Students will be able to clarify & identify different types of D.E & to arrive at solution & Its Interpretation
CO5	Students will develop an ability to design conduct & analyze different stream(Electrical & Mechanical) related problems
CO6	Students will be able to understand the concept of complex numbers & its application in Engineering filed.

Engineering Physics CODE: BESI-2T	
CO1	Students will be able to understand the basic principles of Quantum mechanics and will be able to apply these to the complex phenomenon of interaction of radiation with matter.
CO2	Students will be able to understand the concept of wave packets using Heisenberg's uncertainty principle.
CO3	Students will be able to apply Schrodinger's wave equations to study the complex physical phenomenon.
CO4	Students will be able to understand the structure of crystalline solids by applying knowledge of crystallography.
CO5	Students will be able to understand semiconducting materials by using the concepts of band theory of solids.
CO6	Students will be able to apply the knowledge of semiconductor fundamentals to study various electronic devices.

Course Name: Engineering Chemistry CODE: BESI-3T	
At the end of Course Students will be able to	
CO1	Understand the concept of hardness and the treatment methods to remove them which includes

	domestic water treatment and use of this water as an Engineering Material. Identification of problem and providing solutions
CO2	Understand ecological balance and awareness towards sustainable development
CO3	Provide solution to the problem pertaining to complex chemical processes useful in engineering concepts.
CO4	Understand the manufacturing processes of cement, importance of microscopic constituents and various properties including types of cement their uses.
CO5	Understand new concept of energy storage devices and its applications
CO6	Understand and identify the professional responsibilities and the impact of engineering practices on society.

Course Name: Basics of Electrical Engineering	
CODE: BESI-4T	
At the end of Course	
CO1	Student will be able to define and explain the meaning of charge current, voltage, power, energy, Passive elements
CO2	Student will be able to understand the basic concepts of magnetic circuits as applied to electric machines.
CO3	Student will be able to understand the EMF generation and AC fundamentals.
CO4	Student will be able to understand the relation between voltage and current for pure R,L,C ,series & parallel network
CO5	Student will be able to understand the three phase systems – types of connections, relationship between line and phase values of voltage and current
CO6	Student will be able to understand the performance of the single phase transformers and to calculate the losses, efficiency and parameters of the machines

Course Name: Basics of Civil Engineering	
CODE: BESI-5T	
At the end of Course Students will be able to	
CO1	Students will acquire the basic knowledge in different fields of Civil Engineering and materials used in construction.
CO2	know the importance of surveying and to study different types of modern instrument.
CO3	Understand different types of highways, types of pavements, traffic rules and causes of accidents.
CO4	Understand the importance and necessity of drinking water standards, necessity of water treatment and water supply system & storage of water.
CO5	Understand the importance & necessity of different methods of waste management.

CO6	Demonstrate the knowledge of different types of instrument, sustainable techniques used in construction.
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Course Name: Engineering Graphics	
CODE: BESI-6T	
At the end of Course Students will be able to	
CO1	Know about different construction method for engineering curves
CO2	aware about the projection of points and straight lines
CO3	Know about projection of plane
CO4	Know basic concepts of projection of solids.
CO5	Convert pictorial view into orthographic projections
CO6	Know about isometric view and projection

Course Name: Communication Skills	
CODE: BESI-7T	
At the end of Course Students will be able to	
CO1	Apply basic principles of communication in English language.
CO2	Use various models of verbal and nonverbal communication in professional and social sphere.
CO3	Understand the basic rules of phonology, grammar and will use them in communication
CO4	Do accent neutralization
CO5	Understand the importance of intonation, stresses, syntax construction, voice modulation etc.
CO6	Use communication skills in order to analyze & interpret different projects undertaken at various departmental levels.

Semester - II

Course Name: Applied Mathematics-II
CODE: BESII-1

Student will be able to	
CO1	Evaluate improper integrals by Beta/Gamma function and Differentiation under Integral sign technique.
CO2	Trace the curves and rectify , to find the area ,Volume of the curves in Cartesian and polar form
CO3	Understand the concept of double and Triple Integration and their application in finding mass, area and center of gravity in Cartesian and polar form.
CO4	Represent vectors analytically and geometrically and compute dot and cross products for presentation of lines and planes
CO5	Understand the concept of vector integration and student should be able to apply the results of the theorems as fundamental problem solving tools .
CO6	Represent and statistically analyze data both graphically and numerically and to design the mathematical models for solution of contextual problems.

Course Name: Advanced Physics	
CODE: BESII-2T	
At the end of Course Students will be	
CO1	Able to understand the principle behind the working of LASERS.
CO2	Able to understand the phenomenon of interference in thin films and its various applications.
CO3	Able to understand the dynamics behind the trajectories of charged particles in electric and magnetic fields.
CO4	Able to apply the concepts of electron optics to understand the working of various electro-optic devices.
CO5	Able to understand the concept of total internal reflection in optical fiber and its applications.
CO6	Able to learn various synthesis processes and basics of nanomaterials. The students will be able to understand the impact of Nanoscience and Nanotechnology on society.

Course Name: Materials Chemistry		CODE: BESII-3T
At the end of Course Students will be able to		
CO1	Apply scientific knowledge towards energy management including resources.	
CO2	Develop analytical skill towards identification of properties and its application in real world engineering phenomenon.	
CO3	Develop manufacturing intelligence towards energy resources	
CO4	Develop material know how/engineering know how for operational efficiency.	
CO5	Understand exploitation of cutting edge knowledge in diverse spheres of engineering field	

	through advanced engineering materials.
CO6	Apply technological changes in multidisciplinary environment with professional responsibilities.

Course Name: Engineering Mechanics		CODE:BESII-4T
At the end of Course Students will be able to		
CO1	Understand the basic concepts of forces, couples, couple momen in two dimensional & spatial system.	
CO2	Apply the concepts of free body diagrams for static equilibrium in the beams and trusses.	
CO3	Apply the concept of friction between two surfaces or bodies.	
CO4	Understand the basic concept of moment and product of inertia of plane areas and solids.	
CO5	Understand the application of principle of virtual work in simple beams and frames.	
CO6	Analyze the effect of dynamic forces on a body by using D'Alemberts Principle and study the application of Linear Impulse Momentum for system of particles.	

Course Name: Advanced Electrical Engineering		CODE:BESII-5T
At the end of Course Students will be able to		
CO1	Understand the operation of different conventional and nonconventional power generation. Also to analyze the transmission , distribution and protective devices for safety	
CO2	Understand the basic concepts and importance of Earthing , Inverter and UPS.	
CO3	Able analyze the behavior , characteristics and types of DC motor and generator.	
CO4	Analyze the utilization of electrical energy and calculation of Electrical bill.	
CO5	Understand the basic concepts of Illumination and its applications.	
CO6	Analyze the performance of the single phase and three phase Induction Motors and characteristics of the Induction Machines	

Course Name: Ethical Science		CODE:BESII-8
At the end of Course Students will		
CO1	be able to apply knowledge of humanities and social engineering process in diverse sphere of social life.	
CO2	be able to make appropriate use of socio-legal tools for the overall benefit of the society.	
CO3	be able to apply the principles of industrial psychology and industrial sociology and industrial democracy in industry.	
CO4	Be able to apply tools of motivation at work place, comprehend work organization and forms of organization.	

CO5	be able to apply the tools of transactional analysis, to solve complex behavioral problems and develop leadership traits.
CO6	be able to develop awareness for environment sustainability and apply dynamic principles of social and ethical science.