

<b>ELECTRONICS AND COMMUNICATION ENGINEERING</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Engineering Physics</b>	<b>C1108.1</b>	Apply the knowledge of different optical phenomena in daily life.
	<b>C1108.2</b>	Study the structures and properties of solid state materials and apply this knowledge to estimate the structure of the materials
	<b>C1108.3</b>	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
	<b>C1108.4</b>	Explain fundamental concepts of quantum mechanics and analyze the behavior of electron in metals according to various theories
	<b>C1108.5</b>	Estimate concentration of charge carriers in various types of semiconductors.
<b>Linear Algebra and calculus</b>	<b>C1105.1</b>	Define the concept of matrix rank and methods used to solve systems of linear equations.
	<b>C1105.2</b>	Describe the Cayley-Hamilton Theorem and the process of reducing quadratic forms to canonical forms through orthogonal transformations.
	<b>C1105.3</b>	Solve problems in calculus using the Mean Value Theorems.
	<b>C1105.4</b>	Solve optimization problems for functions of two variables by utilizing partial differentiation.
	<b>C1105.5</b>	Apply double integrals and triple integrals for the problems related to finding areas and volumes.
<b>Basic Electrical And Electronics Engineering</b>	<b>C1109.1</b>	Explain the fundamental laws and concepts to derive the various equations which are related to electrical circuits by applying mathematical tools.
	<b>C1109.2</b>	Demonstrate the working and operating principles of electrical machines, measuring instruments.
	<b>C1109.3</b>	Demonstrate the working of various power generation stations and calculate the electrical load and electricity bill of residential and commercial buildings.
	<b>C1109.4</b>	Illustrates the formation of PN junction Diode and Transistors (BJT)
	<b>C1109.5</b>	Articulate the operation of Rectifiers and Amplifiers
	<b>C1109.6</b>	Understand the concepts of Combinational & Sequential Digital circuits
<b>Engineering Graphics</b>	<b>C1110.1</b>	Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections
	<b>C1110.2</b>	Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side views.
	<b>C1110.3</b>	Understand and draw projection of solids in various positions in first quadrant.
	<b>C1110.4</b>	Explain principles behind development of surfaces.
	<b>C1110.5</b>	Prepare isometric and perspective sections of simple solids
<b>Introduction to programming</b>	<b>C1107.1</b>	Discuss the Historical Development of Computers and their Basic Organization including the Key Components.
	<b>C1107.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1107.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1107.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and

		Unions.
	<b>C1107.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.
<b>Physics Lab</b>	<b>C1109L. 1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	<b>C1109L. 2</b>	Analyze various electronic circuits and its components and verify the laws of stretched string.
	<b>C1109L. 3</b>	Apply the knowledge of phenomena like LASER diffraction and resonance in sound waves
<b>Electrical And Electronics Engineering workshop</b>	<b>C1110L.1</b>	Examine the Voltage, Current, Power and Resistance in various Electrical Circuits
	<b>C1110L.2</b>	Discover the operating characteristics of DC Shunt Generator
	<b>C1110L.3</b>	Analyze the effect of reactive power and power factor in electrical loads
	<b>C1110L.4</b>	Measure Voltage, Current and Resistance in Diode Circuits
	<b>C1110L.5</b>	Discover the Ripple factors of Rectifier & Characteristics of Transistor Circuits
	<b>C1110L.6</b>	Truth table verification of Digital logic circuits
<b>Computer Programming Lab</b>	<b>C1106L.1</b>	Discuss the Historical Development of Computers and their Basic Organization including the Key Components.
	<b>C1106L.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1106L.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
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	<b>C1106L.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.
<b>Nss/Ncc/Scouts &amp; Guides/Community Service</b>	<b>C1111L.1</b>	Understand the importance of discipline, character and service motto.
	<b>C1111L.2</b>	Solve some societal issues by applying acquired knowledge, facts, and techniques
	<b>C1111L.3</b>	Explore human relationships by analyzing social problems
	<b>C1111L.4</b>	Determine to extend their help for the fellow beings and downtrodden people
	<b>C1111L.5</b>	Develop leadership skills and civic responsibilities.
<b>II SEMESTER</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Communicative English</b>	<b>C1207.1</b>	Apply the four language learning skills-Listening, Speaking, Reading and Writing (LSRW) for professional success.
	<b>C1207.2</b>	Employ knowledge of vocabulary in speech and writing
	<b>C1207.3</b>	Apply effective communication skills in cross cultural context to enhance professional possibilities.
	<b>C1207.4</b>	Develop acceptable personality traits suitable for chosen profession.

<b>Chemistry</b>	<b>C1209.1</b>	Understand dual nature of electron and bonding between the atoms through the quantum mechanics.
	<b>C1209.2</b>	Describe Property based applications of semiconductors, super conductors, super capacitors and nano materials in different disciplines of the world.
	<b>C1209.3</b>	Explain the construction and working of batteries, sensors and fuel cells based on the principles of electrochemistry
	<b>C1209.4</b>	Understand the synthetic root and impact of different polymer based materials on environment based on their properties.
	<b>C1209.5</b>	Apply the principles of spectroscopy and HPLC in chemical analysis.
<b>Differential Equations and Vector Calculus</b>	<b>C1202.1</b>	Understand linear differential equations of first order, including Bernoulli's, exact, and equations reducible to exact forms.
	<b>C1202.2</b>	Solve higher-order linear differential equations related to various engineering fields.
	<b>C1202.3</b>	Solve partial differential equations that model physical processes.
	<b>C1202.4</b>	Interpret the physical implications of vector operators like gradient, curl, and divergence.
	<b>C1202.5</b>	Apply Green's, Stokes, and the Divergence theorem to address problems related to the estimation of work done against a field, circulation, and flux.
<b>Basic Civil and Mechanical Engineering</b>	<b>C1211.1</b>	Describe the various disciplines of civil Engineering and to appreciate their role in societal development.
	<b>C1211.2</b>	Outline the concepts of surveying and obtaining the theoretical measurement of distances, angles and levels through surveying equipment
	<b>C1211.3</b>	Illustrate the fundamental principles involved in transportation network system and the quality parameters of various water resources
	<b>C1211.4</b>	An ability to know about role of mechanical engineer in industry and society and what are the types & properties and applications of engineering materials & know about smart materials
	<b>C1211.5</b>	Describe what are the fundamentals of manufacturing and types advantages disadvantages also applications and fundamentals of thermal engineering i.e., engine basic principles and its working, and also fundamentals refrigeration and air conditioning
	<b>C1211.6</b>	Illustrate the different types of power plants also its working and mechanical power transmission systems types of robotics and its working configurations
<b>Network Analysis</b>	<b>C1213.1</b>	To Define basic Electrical Quantities and associated units and relationship between charge, current, voltage and power.
	<b>C1213.2</b>	Apply the basic theorems to solve DC Circuits
	<b>C1213.3</b>	Analyze the basic concepts of DC Transients
	<b>C1213.4</b>	Analyze the concepts of sinusoidal steady state analysis and resonance

	<b>C1213.5</b>	Apply the Laplace transform techniques to solve electrical network problems
<b>Communicative English lab</b>	<b>C1207L.1</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1207L.2</b>	Demonstrate acquired language skills in performing the designated activity.
	<b>C1207L.3</b>	Evaluate and exhibit professionalism in participating in debates and group discussions.
	<b>C1207L.4</b>	Recognize the sounds of English with the help of audio visual aids
<b>Chemistry lab</b>	<b>C1209L.1</b>	Select different analytical instruments such as Conductivity meter Potentiometer and Spectrophotometer during the chemical analysis
	<b>C1209L.2</b>	Demonstrate Preparation of advanced polymeric materials and nano materials
	<b>C1209L.3</b>	Estimate the strength of an acidic and reducing chemicals present in the given sample
	<b>C1209L.4</b>	Analyze IR spectrum of some organic compounds
<b>Engineering workshop</b>	<b>C1211L.1</b>	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.
	<b>C1211L.2</b>	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.
	<b>C1211L.3</b>	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.
	<b>C1211L.4</b>	Analyze various characteristics of electrical circuits, electrical machines and measuring instruments.
	<b>C1211L.5</b>	Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.
<b>Network Analysis and simulation Lab</b>	<b>C1214L.1</b>	To analyze RLC circuits and understand resonant frequency and q factor.
	<b>C1214L.2</b>	To determine first order RC/RL networks of non-sinusoidal waveforms.
	<b>C1214L.3</b>	Apply network theorems to analyze the electrical network.
	<b>C1214L.4</b>	Characterize and model the network in terms of all parameters
<b>Health and wellness, yoga and sports</b>	<b>C1215L.1</b>	Understand the importance of yoga and sports for Physical fitness and sound health.
	<b>C1215L.2</b>	Demonstrate an understanding of health-related fitness components.
	<b>C1215L.3</b>	Compare and contrast various activities that help enhance their health.
	<b>C1215L.4</b>	Assess current personal fitness levels.
	<b>C1215L.5</b>	Develop Positive Personality
<b>INFORMATION TECHNOLOGY</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Engineering Physics</b>	<b>C1108.1</b>	Apply the knowledge of different optical phenomena in daily life.

	<b>C1108.2</b>	Study the structures and properties of solid state materials and apply this knowledge to estimate the structure of the materials
	<b>C1108.3</b>	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
	<b>C1108.4</b>	Explain fundamental concepts of quantum mechanics and analyze the behavior of electron in metals according to various theories
	<b>C1108.5</b>	Estimate concentration of charge carriers in various types of semiconductors.
<b>Linear Algebra and calculus</b>	<b>C1105.1</b>	Define the concept of matrix rank and methods used to solve systems of linear equations.
	<b>C1105.2</b>	Describe the Cayley-Hamilton Theorem and the process of reducing quadratic forms to canonical forms through orthogonal transformations.
	<b>C1105.3</b>	Solve problems in calculus using the Mean Value Theorems.
	<b>C1105.4</b>	Solve optimization problems for functions of two variables by utilizing partial differentiation.
	<b>C1105.5</b>	Apply double integrals and triple integrals for the problems related to finding areas and volumes.
<b>Basic Electrical And Electronics Engineering</b>	<b>C1109.1</b>	Explain the fundamental laws and concepts to derive the various equations which are related to electrical circuits by applying mathematical tools.
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	<b>C1109.3</b>	Demonstrate the working of various power generation stations and calculate the electrical load and electricity bill of residential and commercial buildings.
	<b>C1109.4</b>	Illustrates the formation of PN junction Diode and Transistors (BJT)
	<b>C1109.5</b>	Articulate the operation of Rectifiers and Amplifiers
	<b>C1109.6</b>	Understand the concepts of Combinational & Sequential Digital circuits
<b>Engineering Graphics</b>	<b>C1110.1</b>	Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections
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	<b>C1110.4</b>	Explain principles behind development of surfaces.
	<b>C1110.5</b>	Prepare isometric and perspective sections of simple solids
<b>Introduction to programming</b>	<b>C1107.1</b>	Discuss the Historical Development of Computers and their Basic Organization including the Key Components.
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<b>Physics Lab</b>	<b>C1109L. 1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical

		measuring instruments.
	<b>C1109L. 2</b>	Analyze various electronic circuits and its components and verify the laws of stretched string.
	<b>C1109L. 3</b>	Apply the knowledge of phenomena like LASER diffraction and resonance in sound waves
<b>Electrical And Electronics Engineering workshop</b>	<b>C1110L.1</b>	Examine the Voltage, Current, Power and Resistance in various Electrical Circuits
	<b>C1110L.2</b>	Discover the operating characteristics of DC Shunt Generator
	<b>C1110L.3</b>	Analyze the effect of reactive power and power factor in electrical loads
	<b>C1110L.4</b>	Measure Voltage, Current and Resistance in Diode Circuits (L4)
	<b>C1110L.5</b>	Discover the Ripple factors of Rectifier & Characteristics of Transistor Circuits (L4)
	<b>C1110LS.6</b>	Truth table verification of Digital logic circuits (L4)
<b>Computer Programming Lab</b>	<b>C1106L.1</b>	Discuss the Historical Development of Computers and their Basic Organisation including the Key Components.
	<b>C1106L.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
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<b>Nss/Ncc/Scouts &amp; Guides/Community Service</b>	<b>C1111L.1</b>	Understand the importance of discipline, character and service motto.
	<b>C1111L.2</b>	Solve some societal issues by applying acquired knowledge, facts, and techniques
	<b>C1111L.3</b>	Explore human relationships by analyzing social problems
	<b>C1111L.4</b>	Determine to extend their help for the fellow beings and downtrodden people
	<b>C1111L5</b>	Develop leadership skills and civic responsibilities
<b>II SEMESTER</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Communicative English</b>	<b>C1207.1</b>	Apply the four language learning skills-Listening, Speaking, Reading and Writing (LSRW) for professional success.
	<b>C1207.2</b>	Employ knowledge of vocabulary in speech and writing
	<b>C1207.3</b>	Apply effective communication skills in cross cultural context to enhance professional possibilities.
	<b>C1207.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Chemistry</b>	<b>C1209.1</b>	Understand dual nature of electron and bonding between the atoms through the quantum mechanics.
	<b>C1209.2</b>	Describe Property based applications of semiconductors, super conductors, super capacitors and nano materials

		in different disciplines of the world.
	<b>C1209.3</b>	Explain the construction and working of batteries, sensors and fuel cells based on the principles of electrochemistry
	<b>C1209.4</b>	Understand the synthetic route and impact of different polymer based materials on environment based on their properties .
	<b>C1209.5</b>	Apply the principles of spectroscopy and HPLC in chemical analysis.
<b>Differential Equations and Vector Calculus</b>	<b>C1202.1</b>	Understand linear differential equations of first order, including Bernoulli's, exact, and equations reducible to exact forms.
	<b>C1202.2</b>	Solve higher-order linear differential equations related to various engineering fields.
	<b>C1202.3</b>	Solve partial differential equations that model physical processes.
	<b>C1202.4</b>	Interpret the physical implications of vector operators like gradient, curl, and divergence.
	<b>C1202.5</b>	Apply Green's, Stoke's, and the Divergence theorem to address problems related to the estimation of work done against a field, circulation, and flux.
<b>Basic Civil and Mechanical Engineering</b>	<b>C1211.1</b>	Describe the various disciplines of civil Engineering and to appreciate their role in societal development.
	<b>C1211.2</b>	Outline the concepts of surveying and obtaining the theoretical measurement of distances, angles and levels through surveying equipment
	<b>C1211.3</b>	Illustrate the fundamental principles involved in transportation network system and the quality parameters of various water resources
	<b>C1211.4</b>	An ability to know about role of mechanical engineer in industry and society and what are the types & properties and applications of engineering materials & know about smart materials
	<b>C1211.5</b>	Describe what are the fundamentals of manufacturing and types advantages disadvantages also applications and fundamentals of thermal engineering i.e engine basic principles and its working, and also fundamentals refrigeration and air conditioning
	<b>C1211.6</b>	Illustrate the different types of power plants also its working and mechanical power transmission systems types of robotics and its working configurations
<b>Data Structures</b>	<b>C1205.1</b>	Analyze and implement searching and sorting techniques
	<b>C1205.2</b>	Implement algorithms for linked lists, demonstrating , understanding of memory location .
	<b>C1205.3</b>	Apply algorithm for stacks , manage program states and solve related problem
	<b>C1205.4</b>	Apply algorithm for queues and solve data management challenges
	<b>C1205.5</b>	Develop data structures to make use of Trees and hashing for efficient storage of data
<b>Communicative English lab</b>	<b>C1207L.1</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1207L.2</b>	Demonstrate acquired language skills in performing the designated activity.
	<b>C1207L.3</b>	Evaluate and exhibit professionalism in participating in debates and group discussions.
	<b>C1207L.4</b>	Recognize the sounds of English with the help of audio visual aids

<b>Chemistry lab</b>	<b>C1209L.1</b>	Select different analytical instruments such as Conductivity meter Potentiometer and Spectrophotometer during the chemical analysis
	<b>C1209L.2</b>	Demonstrate Preparation of advanced polymeric materials and nano materials.
	<b>C1209L.3</b>	Estimate the strength of an acidic and reducing chemicals present in the given sample.
	<b>C1209L.4</b>	Analyze IR spectrum of some organic compounds.
<b>Engineering workshop</b>	<b>C1211L.1</b>	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.
	<b>C1211L.2</b>	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.
	<b>C1211L.3</b>	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.
	<b>C1211L.4</b>	Analyze various characteristics of electrical circuits, electrical machines and measuring instruments.
	<b>C1211L.5</b>	Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.
<b>DS LAB</b>	<b>C1204L.1</b>	Implement linear data structures in order to organize and access data efficiently
	<b>C1204L.2</b>	Apply linked list for dynamic data storage and understanding of memory location
	<b>C1204L.3</b>	Implementing stack algorithms and solved related problems
	<b>C1204L.4</b>	Apply queue based algorithms and apply them appropriately to solve them appropriately to solve data management challenges.
	<b>C1204L.5</b>	Implement tree, hash based solutions for specific problems.
<b>Health and wellness, yoga and sports</b>	<b>C1215L.1</b>	Understand the importance of yoga and sports for Physical fitness and sound health.
	<b>C1215L.2</b>	Demonstrate an understanding of health-related fitness components.
	<b>C1215L.3</b>	Compare and contrast various activities that help enhance their health.
	<b>C1215L.4</b>	Assess current personal fitness levels.
	<b>C1215L.5</b>	Develop Positive Personality
<b>MECHANICAL ENGINEERING</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Engineering Physics</b>	<b>C1108.1</b>	Apply the knowledge of different optical phenomena in daily life.
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	<b>C1109L.3</b>	Apply the knowledge of phenomena like LASER diffraction and resonance in sound waves
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	<b>C1111L.2</b>	Solve some societal issues by applying acquired knowledge, facts, and techniques
	<b>C1111L.3</b>	Explore human relationships by analyzing social problems
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	<b>C1207.2</b>	Employ knowledge of vocabulary in speech and writing
	<b>C1207.3</b>	Apply effective communication skills in cross cultural context to enhance professional possibilities.
	<b>C1207.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Chemistry</b>	<b>C1209.1</b>	Understand dual nature of electron and bonding between the atoms through the quantum mechanics.
	<b>C1209.2</b>	Describe Property based applications of semiconductors, super conductors, super capacitors and nano materials in different disciplines of the world.
	<b>C1209.3</b>	Explain the construction and working of batteries, sensors and fuel cells based on the principles of electrochemistry
	<b>C1209.4</b>	Understand the synthetic root and impact of different polymer based materials on environment based on their

		properties.
	<b>C1209.5</b>	Apply the principles of spectroscopy and HPLC in chemical analysis.
<b>Differential Equations and Vector Calculus</b>	<b>C1202.1</b>	Understand linear differential equations of first order, including Bernoulli's, exact, and equations reducible to exact forms.
	<b>C1202.2</b>	Solve higher-order linear differential equations related to various engineering fields.
	<b>C1202.3</b>	Solve partial differential equations that model physical processes.
	<b>C1202.4</b>	Interpret the physical implications of vector operators like gradient, curl, and divergence.
	<b>C1202.5</b>	Apply Green's, Stoke's, and the Divergence theorem to address problems related to the estimation of work done against a field, circulation, and flux.
<b>Basic Civil and Mechanical Engineering</b>	<b>C1211.1</b>	Describe the various disciplines of civil Engineering and to appreciate their role in societal development.
	<b>C1211.2</b>	Outline the concepts of surveying and obtaining the theoretical measurement of distances, angles and levels through surveying equipment
	<b>C1211.3</b>	Illustrate the fundamental principles involved in transportation network system and the quality parameters of various water resources
	<b>C1211.4</b>	An ability to know about role of mechanical engineer in industry and society and what are the types & properties and applications of engineering materials & know about smart materials
	<b>C1211.5</b>	Describe what are the fundamentals of manufacturing and types advantages disadvantages also applications and fundamentals of thermal engineering i.e., engine basic principles and its working, and also fundamentals refrigeration and air conditioning
	<b>C1211.6</b>	Illustrate the different types of power plants also its working and mechanical power transmission systems types of robotics and its working configurations
<b>Engineering Mechanics</b>	<b>C1212.1</b>	Understand the fundamental concepts in mechanics and determine the frictional force for bodies in contact.
	<b>C1212.2</b>	Analyze different force systems such as concurrent, coplanar and spatial systems and calculate their resultant forces and moments.
	<b>C1212.3</b>	Calculate the centroids, center of gravity and moment of inertia of different geometrical shapes.
	<b>C1212.4</b>	Apply the principles of work-energy and impulse-momentum to solve the problems of rectilinear and curvilinear motion of a particle.
	<b>C1212.5</b>	Solve the problems involving the translational and rotational motion of rigid bodies.
<b>Communicative English lab</b>	<b>C1207L.1</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1207L.2</b>	Demonstrate acquired language skills in performing the designated activity.
	<b>C1207L.3</b>	Evaluate and exhibit professionalism in participating in debates and group discussions.
	<b>C1207L.4</b>	Recognize the sounds of English with the help of audio visual aids
<b>Chemistry lab</b>	<b>C1208L.1</b>	Select different analytical instruments such as Conductivity meter Potentiometer and Spectrophotometer during

		the chemical analysis
	<b>C1208L.2</b>	Demonstrate Preparation of advanced polymeric materials and nano materials
	<b>C1208L.3</b>	Estimate the strength of an acidic and reducing chemicals present in the given sample
	<b>C1208L.4</b>	Analyze IR spectrum of some organic compounds
<b>Engineering workshop</b>	<b>C1211L.1</b>	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.
	<b>C1211L.2</b>	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.
	<b>C1211L.3</b>	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.
	<b>C1211L.4</b>	Analyze various characteristics of electrical circuits, electrical machines and measuring instruments.
	<b>C1211L.5</b>	Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.
<b>Engineering Mechanics lab</b>	<b>C1213L.1</b>	Evaluate the coefficient of friction between two different surfaces and between inclined plane and the roller.
	<b>C1213L.2</b>	Verify Law of polygon of forces and law of moment using force polygon and bell crank lever.
	<b>C1213L.3</b>	Determine the centre of gravity and moment of inertia of different configurations.
	<b>C1213L.4</b>	Verify the equilibrium conditions of a rigid body under the action of different force systems.
<b>Health and wellness, yoga and sports</b>	<b>C1215L.1</b>	Understand the importance of yoga and sports for Physical fitness and sound health.
	<b>C1215L.2</b>	Demonstrate an understanding of health-related fitness components.
	<b>C1215L.3</b>	Compare and contrast various activities that help enhance their health.
	<b>C1215L.4</b>	Assess current personal fitness levels.
	<b>C1215L.5</b>	Develop Positive Personality
<b>COMPUTER SCIENCE ENGINEERING</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Communicative English</b>	<b>C1101.1</b>	Apply the four language learning skills-Listening, Speaking, Reading and Writing (LSRW) for professional success.
	<b>C1101.2</b>	Employ knowledge of vocabulary in speech and writing
	<b>C1101.3</b>	Apply effective communication skills in cross cultural context to enhance professional possibilities.
	<b>C1101.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Chemistry</b>	<b>C1103.1</b>	Understand dual nature of electron and bonding between the atoms through the quantum mechanics.
	<b>C1103.2</b>	Describe Property based applications of semiconductors, super conductors, super capacitors and nano materials

		in different disciplines of the world.
	<b>C1103.3</b>	Explain the construction and working of batteries, sensors and fuel cells based on the principles of electrochemistry
	<b>C1103.4</b>	Understand the synthetic route and impact of different polymer based materials on environment based on their properties .
	<b>C1103.5</b>	Apply the principles of spectroscopy and HPLC in chemical analysis.
<b>Linear Algebra and calculus</b>	<b>C1105.1</b>	Define the concept of matrix rank and methods used to solve systems of linear equations.
	<b>C1105.2</b>	Describe the Cayley-Hamilton Theorem and the process of reducing quadratic forms to canonical forms through orthogonal transformations.
	<b>C1105.3</b>	Solve problems in calculus using the Mean Value Theorems.
	<b>C1105.4</b>	Solve optimization problems for functions of two variables by utilizing partial differentiation.
	<b>C1105.5</b>	Apply double integrals and triple integrals for the problems related to finding areas and volumes.
<b>Basic Civil and Mechanical Engineering</b>	<b>C1106.1</b>	Describe the various disciplines of civil Engineering and to appreciate their role in societal development.
	<b>C1106.2</b>	Outline the concepts of surveying and obtaining the theoretical measurement of distances, angles and levels through surveying equipment
	<b>C1106.3</b>	Illustrate the fundamental principles involved in transportation network system and the quality parameters of various water resources
	<b>C1106.4</b>	An ability to know about role of mechanical engineer in industry and society and what are the types & properties and applications of engineering materials & know about smart materials
	<b>C1106.5</b>	Describe what are the fundamentals of manufacturing and types advantages disadvantages also applications and fundamentals of thermal engineering i.e engine basic principles and its working, and also fundamentals refrigeration and air conditioning
	<b>C1106.6</b>	Illustrate the different types of power plants also its working and mechanical power transmission systems types of robotics and its working configurations
<b>Introduction to programming</b>	<b>C1107.1</b>	Discuss the Historical Development of Computers and their Basic Organisation including the Key Components.
		Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1107.2</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1107.3</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions
	<b>C1107.4</b>	Recognize the sounds of English with the help of audio visual aids
<b>Communicative English lab</b>	<b>C1101L.1</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1101L.2</b>	Demonstrate acquired language skills in performing the designated activity.
	<b>C1101L.3</b>	Evaluate and exhibit professionalism in participating in debates and group discussions.
	<b>C1101L.4</b>	Recognize the sounds of English with the help of audio visual aids

<b>Chemistry lab</b>	<b>C1103L.1</b>	Select different analytical instruments such as Conductivity meter Potentiometer and Spectrophotometer during the chemical analysis
	<b>C1103L.2</b>	Demonstrate Preparation of advanced polymeric materials and nano materials
	<b>C1103L.3</b>	Estimate the strength of an acidic and reducing chemicals present in the given sample
	<b>C1103L.4</b>	Analyse IR spectrum of some organic compounds
<b>Engineering workshop</b>	<b>C1105L.1</b>	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.
	<b>C1105L.2</b>	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.
	<b>C1105L.3</b>	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.
	<b>C1105L.4</b>	Analyse various characteristics of electrical circuits, electrical machines and measuring instruments.
	<b>C1105L.5</b>	Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.
<b>Computer Programming Lab</b>	<b>C1106L.1</b>	Discuss the Historical Development of Computers and their Basic Organisation including the Key Components.
	<b>C1106L.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1106L.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1106L.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions
	<b>C1106L.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.
<b>Health and wellness, yoga and sports</b>	<b>C1107L.1</b>	Understand the importance of yoga and sports for Physical fitness and sound health.
	<b>C1107L.2</b>	Demonstrate an understanding of health-related fitness components.
	<b>C1107L.3</b>	Compare and contrast various activities that help enhance their health.
	<b>C1107L.4</b>	Assess current personal fitness levels.
	<b>C1107L.5</b>	Develop Positive Personality
<b>II SEMESTER</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Engineering Physics</b>	<b>C1208.1</b>	Apply the knowledge of different optical phenomena in daily life.
	<b>C1208.2</b>	Study the structures and properties of solid state materials and apply this knowledge to estimate the structure of the materials
	<b>C1208.3</b>	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
	<b>C1208.4</b>	Explain fundamental concepts of quantum mechanics and analyze the behavior of electron in metals

		according to various theories
	<b>C1208.5</b>	Estimate concentration of charge carriers in various types of semiconductors.
<b>Differential Equations and Vector Calculus</b>	<b>C1202.1</b>	Understand linear differential equations of first order, including Bernoulli's, exact, and equations reducible to exact forms.
	<b>C1202.2</b>	Solve higher-order linear differential equations related to various engineering fields.
	<b>C1202.3</b>	Solve partial differential equations that model physical processes.
	<b>C1202.4</b>	Interpret the physical implications of vector operators like gradient, curl, and divergence.
	<b>C1202.5</b>	Apply Green's, Stoke's, and the Divergence theorem to address problems related to the estimation of work done against a field, circulation, and flux.
<b>Basic Electrical And Electronics Engineering</b>	<b>C1209.1</b>	Explain the fundamental laws and concepts to derive the various equations which are related to electrical circuits by applying mathematical tools.
	<b>C1209.2</b>	Demonstrate the working and operating principles of electrical machines, measuring instruments.
	<b>C1209.3</b>	Demonstrate the working of various power generation stations and calculate the electrical load and electricity bill of residential and commercial buildings.
	<b>C1209.4</b>	Illustrates the formation of PN junction Diode and Transistors (BJT)
	<b>C1209.5</b>	Articulate the operation of Rectifiers and Amplifiers
	<b>C1209.6</b>	Understand the concepts of Combinational & Sequential Digital circuits
<b>Engineering Graphics</b>	<b>C1210.1</b>	Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections
	<b>C1210.2</b>	Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side views.
	<b>C1210.3</b>	Understand and draw projection of solids in various positions in first quadrant.
	<b>C1210.4</b>	Explain principles behind development of surfaces.
	<b>C1210.5</b>	Prepare isometric and perspective sections of simple solids
<b>Data Structures</b>	<b>C1205.1</b>	Analyze and implement searching and sorting techniques
	<b>C1205.2</b>	Implement algorithms for linked lists, demonstrating , understanding of memory location .
	<b>C1205.3</b>	Apply algorithm for stacks , manage program states and solve related problem
	<b>C1205.4</b>	Apply algorithm for queues and solve data management challenges
	<b>C1205.5</b>	Develop data structures to make use of Trees and hashing for efficient storage of data
<b>Engineering Physics Lab</b>	<b>C1209L. 1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	<b>C1209L. 2</b>	Analyze various electronic circuits and its components and verify the laws of stretched string.
	<b>C1209L. 3</b>	Apply the knowledge of phenomena like LASER diffraction and resonance in sound waves

<b>Electrical And Electronics Engineering workshop</b>	<b>C1210L.1</b>	Examine the Voltage, Current, Power and Resistance in various Electrical Circuits
	<b>C1210L.2</b>	Discover the operating characteristics of DC Shunt Generator
	<b>C1210L.3</b>	Analyze the effect of reactive power and power factor in electrical loads
	<b>C1210L.4</b>	Measure Voltage, Current and Resistance in Diode Circuits (L4)
	<b>C1210L.5</b>	Discover the Ripple factors of Rectifier & Characteristics of Transistor Circuits (L4)
	<b>C1210L.6</b>	Truth table verification of Digital logic circuits (L4)
<b>DS LAB</b>	<b>C1204L.1</b>	Implement linear data structures in order to organize and access data efficiently
	<b>C1204L.2</b>	Apply linked list for dynamic data storage and understanding of memory location
	<b>C1204L.3</b>	Implementing stack algorithms and solved related problems
	<b>C1204L.4</b>	Apply queue based algorithms and apply them appropriately to solve data management challenges.
	<b>C1204L.5</b>	Implement tree, hash based solutions for specific problems.
<b>Nss/Ncc/Scouts &amp; Guides/Community Service</b>	<b>C1211L.1</b>	Understand the importance of discipline, character and service motto.
	<b>C1211L.2</b>	Solve some societal issues by applying acquired knowledge, facts, and techniques
	<b>C1211L.3</b>	Explore human relationships by analyzing social problems
	<b>C1211L.4</b>	Determine to extend their help for the fellow beings and downtrodden people
	<b>C1211L.5</b>	Develop leadership skills and civic responsibilities.
<b>ELECTRICAL AND ELECTRONIC ENGINEERING</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Communicative English</b>	<b>C1101.1</b>	Apply the four language learning skills-Listening, Speaking, Reading and Writing (LSRW) for professional success.
	<b>C1101.2</b>	Employ knowledge of vocabulary in speech and writing
	<b>C1101.3</b>	Apply effective communication skills in cross cultural context to enhance professional possibilities.
	<b>C1101.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Chemistry</b>	<b>C1103.1</b>	Understand dual nature of electron and bonding between the atoms through the quantum mechanics.
	<b>C1103.2</b>	Describe Property based applications of semiconductors, super conductors, super capacitors and nano materials in different disciplines of the world.
	<b>C1103.3</b>	Explain the construction and working of batteries, sensors and fuel cells based on the principles of electrochemistry
	<b>C1103.4</b>	Understand the synthetic root and impact of different polymer-based materials on environment based on their properties .
	<b>C1103.5</b>	Apply the principles of spectroscopy and HPLC in chemical analysis.
<b>Linear Algebra and calculus</b>	<b>C1105.1</b>	Define the concept of matrix rank and methods used to solve systems of linear equations.

	C1105.2	Describe the Cayley-Hamilton Theorem and the process of reducing quadratic forms to canonical forms through orthogonal transformations.
	C1105.3	Solve problems in calculus using the Mean Value Theorems.
	C1105.4	Solve optimization problems for functions of two variables by utilizing partial differentiation.
	C1105.5	Apply double integrals and triple integrals for the problems related to finding areas and volumes.
<b>Basic Civil and Mechanical Engineering</b>	C1106.1	Describe the various disciplines of civil Engineering and to appreciate their role in societal development.
	C1106.2	Outline the concepts of surveying and obtaining the theoretical measurement of distances, angles and levels through surveying equipment
	C1106.3	Illustrate the fundamental principles involved in transportation network system and the quality parameters of various water resources
	C1106.4	An ability to know about role of mechanical engineer in industry and society and what are the types & properties and applications of engineering materials & know about smart materials
	C1106.5	Describe what are the fundamentals of manufacturing and types advantages disadvantages also applications and fundamentals of thermal engineering i.e engine basic principles and its working, and also fundamentals refrigeration and air conditioning
	C1106.6	Illustrate the different types of power plants also its working and mechanical power transmission systems types of robotics and its working configurations
<b>Introduction to programming</b>	C1107.1	Discuss the Historical Development of Computers and their Basic Organisation including the Key Components.
		Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	C1107.2	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	C1107.3	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions
	C1107.4	Recognize the sounds of English with the help of audio visual aids
<b>Communicative English lab</b>	C1101L.1	Build confidence and overcome inhibitions while speaking in English.
	C1101L.2	Demonstrate acquired language skills in performing the designated activity.
	C1101L.3	Evaluate and exhibit professionalism in participating in debates and group discussions.
	C1101L.4	Recognize the sounds of English with the help of audio visual aids
<b>Chemistry lab</b>	C1103L.1	Select different analytical instruments such as Conductivity meter Potentiometer and Spectrophotometer during the chemical analysis
	C1103L.2	Demonstrate Preparation of advanced polymeric materials and nano materials
	C1103L.3	Estimate the strength of an acidic and reducing chemicals present in the given sample
	C1103L.4	Analyse IR spectrum of some organic compounds
<b>Engineering workshop</b>	C1105L.1	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.

	<b>C1105L.2</b>	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.
	<b>C1105L.3</b>	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.
	<b>C1105L.4</b>	Analyse various characteristics of electrical circuits, electrical machines and measuring instruments.
	<b>C1105L.5</b>	Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.
<b>Computer Programming Lab</b>	<b>C1106L.1</b>	Discuss the Historical Development of Computers and their Basic Organisation including the Key Components.
	<b>C1106L.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1106L.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1106L.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions
	<b>C1106L.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.
<b>Health and wellness, yoga and sports</b>	<b>C1107L.1</b>	Understand the importance of yoga and sports for Physical fitness and sound health.
	<b>C1107L.2</b>	Demonstrate an understanding of health-related fitness components.
	<b>C1107L.3</b>	Compare and contrast various activities that help enhance their health.
	<b>C1107L.4</b>	Assess current personal fitness levels.
	<b>C1107L.5</b>	Develop Positive Personality
<b>II SEMISTER</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Engineering Physics</b>	<b>C1208.1</b>	Apply the knowledge of different optical phenomena in daily life.
	<b>C1208.2</b>	Study the structures and properties of solid state materials and apply this knowledge to estimate the structure of the materials
	<b>C1208.3</b>	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
	<b>C1208.4</b>	Explain fundamental concepts of quantum mechanics and analyze the behavior of electron in metals according to various theories
	<b>C1208.5</b>	Estimate concentration of charge carriers in various types of semiconductors.
<b>Differential Equations and Vector Calculus</b>	<b>C1202.1</b>	Understand linear differential equations of first order, including Bernoulli's, exact, and equations reducible to exact forms.
	<b>C1202.2</b>	Solve higher-order linear differential equations related to various engineering fields.
	<b>C1202.3</b>	Solve partial differential equations that model physical processes.
	<b>C1202.4</b>	Interpret the physical implications of vector operators like gradient, curl, and divergence.

	C1202.5	Apply Green's, Stoke's, and the Divergence theorem to address problems related to the estimation of work done against a field, circulation, and flux.
<b>Basic Electrical And Electronics Engineering</b>	C1209.1	Explain the fundamental laws and concepts to derive the various equations which are related to electrical circuits by applying mathematical tools.
	C1209.2	Demonstrate the working and operating principles of electrical machines, measuring instruments.
	C1209.3	Demonstrate the working of various power generation stations and calculate the electrical load and electricity bill of residential and commercial buildings.
	C1209.4	Illustrates the formation of PN junction Diode and Transistors (BJT)
	C1209.5	Articulate the operation of Rectifiers and Amplifiers
	C1209.6	Understand the concepts of Combinational & Sequential Digital circuits
<b>Engineering Graphics</b>	C1210.1	Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections
	C1210.2	Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side views.
	C1210.3	Understand and draw projection of solids in various positions in first quadrant.
	C1210.4	Explain principles behind development of surfaces.
	C1210.5	Prepare isometric and perspective sections of simple solids
<b>Data Structures</b>	C1205.1	Analyze and implement searching and sorting techniques
	C1205.2	Implement algorithms for linked lists, demonstrating , understanding of memory location .
	C1205.3	Apply algorithm for stacks , manage program states and solve related problem
	C1205.4	Apply algorithm for queues and solve data management challenges
	C1205.5	Develop data structures to make use of Trees and hashing for efficient storage of data
<b>Engineering Physics Lab</b>	C1209L. 1	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	C1209L. 2	Analyze various electronic circuits and its components and verify the laws of stretched string.
	C1209L. 3	Apply the knowledge of phenomena like LASER diffraction and resonance in sound waves
<b>Electrical And Electronics Engineering workshop</b>	C1210L.1	Examine the Voltage, Current, Power and Resistance in various Electrical Circuits
	C1210L.2	Discover the operating characteristics of DC Shunt Generator
	C1210L.3	Analyze the effect of reactive power and power factor in electrical loads
	C1210L.4	Measure Voltage, Current and Resistance in Diode Circuits (L4)
	C1210L.5	Discover the Ripple factors of Rectifier & Characteristics of Transistor Circuits (L4)
	C1210L.6	Truth table verification of Digital logic circuits (L4)

<b>DS LAB</b>	<b>C1204L.1</b>	Implement linear data structures in order to organize and access data efficiently
	<b>C1204L.2</b>	Apply linked list for dynamic data storage and understanding of memory location
	<b>C1204L.3</b>	Implementing stack algorithms and solved related problems
	<b>C1204L.4</b>	Apply queue based algorithms and apply them appropriately to solve them appropriately to solve data management challenges.
	<b>C1204L.5</b>	Implement tree, hash based solutions for specific problems.
<b>Nss/Ncc/Scouts &amp; Guides/Community Service</b>	<b>C1211L.1</b>	Understand the importance of discipline, character and service motto.
	<b>C1211L.2</b>	Solve some societal issues by applying acquired knowledge, facts, and techniques
	<b>C1211L.3</b>	Explore human relationships by analyzing social problems
	<b>C1211L.4</b>	Determine to extend their help for the fellow beings and downtrodden people
	<b>C1211L.5</b>	Develop leadership skills and civic responsibilities.
<b>ARTIFICIAL INTELLIGENCE AND DATA SCIENCE</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Engineering Physics</b>	<b>C1108.1</b>	Apply the knowledge of different optical phenomena in daily life.
	<b>C1108.2</b>	Study the structures and properties of solid state materials and apply this knowledge to estimate the structure of the materials
	<b>C1108.3</b>	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
	<b>C1108.4</b>	Explain fundamental concepts of quantum mechanics and analyze the behavior of electron in metals according to various theories
	<b>C1108.5</b>	Estimate concentration of charge carriers in various types of semiconductors.
<b>Linear Algebra and calculus</b>	<b>C1105.1</b>	Define the concept of matrix rank and methods used to solve systems of linear equations.
	<b>C1105.2</b>	Describe the Cayley-Hamilton Theorem and the process of reducing quadratic forms to canonical forms through orthogonal transformations.
	<b>C1105.3</b>	Solve problems in calculus using the Mean Value Theorems.
	<b>C1105.4</b>	Solve optimization problems for functions of two variables by utilizing partial differentiation.
	<b>C1105.5</b>	Apply double integrals and triple integrals for the problems related to finding areas and volumes.
<b>Basic Electrical And Electronics Engineering</b>	<b>C1109.1</b>	Explain the fundamental laws and concepts to derive the various equations which are related to electrical circuits by applying mathematical tools.
	<b>C1109.2</b>	Demonstrate the working and operating principles of electrical machines, measuring instruments.
	<b>C1109.3</b>	Demonstrate the working of various power generation stations and calculate the electrical load and electricity bill of residential and commercial buildings.
	<b>C1109.4</b>	Illustrates the formation of PN junction Diode and Transistors (BJT)
	<b>C1109.5</b>	Articulate the operation of Rectifiers and Amplifiers

	<b>C1109.6</b>	Understand the concepts of Combinational & Sequential Digital circuits
<b>Engineering Graphics</b>	<b>C1110.1</b>	Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections
	<b>C1110.2</b>	Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side views.
	<b>C1110.3</b>	Understand and draw projection of solids in various positions in first quadrant.
	<b>C1110.4</b>	Explain principles behind development of surfaces.
	<b>C1110.5</b>	Prepare isometric and perspective sections of simple solids
<b>Introduction to programming</b>	<b>C1107.1</b>	Discuss the Historical Development of Computers and their Basic Organization including the Key Components.
	<b>C1107.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1107.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1107.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions.
	<b>C1107.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.
<b>Physics Lab</b>	<b>C1109L. 1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	<b>C1109L. 2</b>	Analyze various electronic circuits and its components and verify the laws of stretched string.
	<b>C1109L. 3</b>	Apply the knowledge of phenomena like LASER diffraction and resonance in sound waves
<b>Electrical And Electronics Engineering workshop</b>	<b>C1110L.1</b>	Examine the Voltage, Current, Power and Resistance in various Electrical Circuits
	<b>C1110L.2</b>	Discover the operating characteristics of DC Shunt Generator
	<b>C1110L.3</b>	Analyze the effect of reactive power and power factor in electrical loads
	<b>C1110L.4</b>	Measure Voltage, Current and Resistance in Diode Circuits (L4)
	<b>C1110L.5</b>	Discover the Ripple factors of Rectifier & Characteristics of Transistor Circuits (L4)
	<b>C1110LS.6</b>	Truth table verification of Digital logic circuits (L4)
<b>Computer Programming Lab</b>	<b>C1106L.1</b>	Discuss the Historical Development of Computers and their Basic Organisation including the Key Components.
	<b>C1106L.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1106L.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1106L.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions
	<b>C1106L.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.

<b>Nss/Ncc/Scouts &amp; Guides/Community Service</b>	<b>C1111L.1</b>	Understand the importance of discipline, character and service motto.
	<b>C1111L.2</b>	Solve some societal issues by applying acquired knowledge, facts, and techniques
	<b>C1111L.3</b>	Explore human relationships by analyzing social problems
	<b>C1111L.4</b>	Determine to extend their help for the fellow beings and downtrodden people
	<b>C1111L5</b>	Develop leadership skills and civic responsibilities
<b>II SEMESTER</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Communicative English</b>	<b>C1207.1</b>	Apply the four language learning skills-Listening, Speaking, Reading and Writing (LSRW) for professional success.
	<b>C1207.2</b>	Employ knowledge of vocabulary in speech and writing
	<b>C1207.3</b>	Apply effective communication skills in cross cultural context to enhance professional possibilities.
	<b>C1207.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Chemistry</b>	<b>C1209.1</b>	Understand dual nature of electron and bonding between the atoms through the quantum mechanics.
	<b>C1209.2</b>	Describe Property based applications of semiconductors, super conductors, super capacitors and nano materials in different disciplines of the world.
	<b>C1209.3</b>	Explain the construction and working of batteries, sensors and fuel cells based on the principles of electrochemistry
	<b>C1209.4</b>	Understand the synthetic root and impact of different polymer based materials on environment based on their properties .
	<b>C1209.5</b>	Apply the principles of spectroscopy and HPLC in chemical analysis.
<b>Differential Equations and Vector Calculus</b>	<b>C1202.1</b>	Understand linear differential equations of first order, including Bernoulli's, exact, and equations reducible to exact forms.
	<b>C1202.2</b>	Solve higher-order linear differential equations related to various engineering fields.
	<b>C1202.3</b>	Solve partial differential equations that model physical processes.
	<b>C1202.4</b>	Interpret the physical implications of vector operators like gradient, curl, and divergence.
	<b>C1202.5</b>	Apply Green's, Stoke's, and the Divergence theorem to address problems related to the estimation of work done against a field, circulation, and flux.
<b>Basic Civil and Mechanical Engineering</b>	<b>C1211.1</b>	Describe the various disciplines of civil Engineering and to appreciate their role in societal development.
	<b>C1211.2</b>	Outline the concepts of surveying and obtaining the theoretical measurement of distances, angles and levels through surveying equipment
	<b>C1211.3</b>	Illustrate the fundamental principles involved in transportation network system and the quality parameters of various water resources
	<b>C1211.4</b>	An ability to know about role of mechanical engineer in industry and society and what are the types & properties and applications of engineering materials & know about smart materials
	<b>C1211.5</b>	Describe what are the fundamentals of manufacturing and types advantages disadvantages also applications

		and fundamentals of thermal engineering i.c engine basic principles and its working, and also fundamentals refrigeration and air conditioning
	<b>C1211.6</b>	Illustrate the different types of power plants also its working and mechanical power transmission systems types of robotics and its working configurations
<b>Data Structures</b>	<b>C1205.1</b>	Analyze and implement searching and sorting techniques
	<b>C1205.2</b>	Implement algorithms for linked lists, demonstrating , understanding of memory location .
	<b>C1205.3</b>	Apply algorithm for stacks , manage program states and solve related problem
	<b>C1205.4</b>	Apply algorithm for queues and solve data management challenges
	<b>C1205.5</b>	Develop data structures to make use of Trees and hashing for efficient storage of data
<b>Communicative English lab</b>	<b>C1207L.1</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1207L.2</b>	Demonstrate acquired language skills in performing the designated activity.
	<b>C1207L.3</b>	Evaluate and exhibit professionalism in participating in debates and group discussions.
	<b>C1207L.4</b>	Recognize the sounds of English with the help of audio visual aids
<b>Chemistry lab</b>	<b>C1209L.1</b>	Select different analytical instruments such as Conductivity meter Potentiometer and Spectrophotometer during the chemical analysis
	<b>C1209L.2</b>	Demonstrate Preparation of advanced polymeric materials and nano materials.
	<b>C1209L.3</b>	Estimate the strength of an acidic and reducing chemicals present in the given sample.
	<b>C1209L.4</b>	Analyze IR spectrum of some organic compounds.
<b>Engineering workshop</b>	<b>C1211L.1</b>	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.
	<b>C1211L.2</b>	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.
	<b>C1211L.3</b>	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.
	<b>C1211L.4</b>	Analyze various characteristics of electrical circuits, electrical machines and measuring instruments.
	<b>C1211L.5</b>	Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.
<b>DS LAB</b>	<b>C1204L.1</b>	Implement linear data structures inorder to organize and access data efficiently
	<b>C1204L.2</b>	Apply linked list for dynamic data storage and understanding of memory location
	<b>C1204L.3</b>	Implimenting stack algorithms and solved related problems
	<b>C1204L.4</b>	Apply queue based algorithms and apply them appropriately to solve them appropriately to solve data management challenges.
	<b>C1204L.5</b>	Implement tree, hash based solutions for specific problemws.
<b>Health and wellness, yoga and</b>	<b>C1215L.1</b>	Understand the importance of yoga and sports for Physical fitness and sound health.

<b>sports</b>		
	<b>C1215L.2</b>	Demonstrate an understanding of health-related fitness components.
	<b>C1215L.3</b>	Compare and contrast various activities that help enhance their health.
	<b>C1215L.4</b>	Assess current personal fitness levels.
	<b>C1215L.5</b>	Develop Positive Personality
<b>ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Engineering Physics</b>	<b>C1108.1</b>	Apply the knowledge of different optical phenomena in daily life.
	<b>C1108.2</b>	Study the structures and properties of solid state materials and apply this knowledge to estimate the structure of the materials
	<b>C1108.3</b>	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
	<b>C1108.4</b>	Explain fundamental concepts of quantum mechanics and analyze the behavior of electron in metals according to various theories
	<b>C1108.5</b>	Estimate concentration of charge carriers in various types of semiconductors.
<b>Linear Algebra and calculus</b>	<b>C1105.1</b>	Define the concept of matrix rank and methods used to solve systems of linear equations.
	<b>C1105.2</b>	Describe the Cayley-Hamilton Theorem and the process of reducing quadratic forms to canonical forms through orthogonal transformations.
	<b>C1105.3</b>	Solve problems in calculus using the Mean Value Theorems.
	<b>C1105.4</b>	Solve optimization problems for functions of two variables by utilizing partial differentiation.
	<b>C1105.5</b>	Apply double integrals and triple integrals for the problems related to finding areas and volumes.
<b>Basic Electrical And Electronics Engineering</b>	<b>C1109.1</b>	Explain the fundamental laws and concepts to derive the various equations which are related to electrical circuits by applying mathematical tools.
	<b>C1109.2</b>	Demonstrate the working and operating principles of electrical machines, measuring instruments.
	<b>C1109.3</b>	Demonstrate the working of various power generation stations and calculate the electrical load and electricity bill of residential and commercial buildings.
	<b>C1109.4</b>	Illustrates the formation of PN junction Diode and Transistors (BJT)
	<b>C1109.5</b>	Articulate the operation of Rectifiers and Amplifiers
	<b>C1109.6</b>	Understand the concepts of Combinational & Sequential Digital circuits
<b>Engineering Graphics</b>	<b>C1110.1</b>	Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections
	<b>C1110.2</b>	Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side views.
	<b>C1110.3</b>	Understand and draw projection of solids in various positions in first quadrant.
	<b>C1110.4</b>	Explain principles behind development of surfaces.
	<b>C1110.5</b>	Prepare isometric and perspective sections of simple solids

<b>Introduction to programming</b>	<b>C1107.1</b>	Discuss the Historical Development of Computers and their Basic Organization including the Key Components.
	<b>C1107.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1107.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1107.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions.
	<b>C1107.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.
<b>Physics Lab</b>	<b>C1109L. 1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	<b>C1109L. 2</b>	Analyze various electronic circuits and its components and verify the laws of stretched string.
	<b>C1109L. 3</b>	Apply the knowledge of phenomena like LASER diffraction and resonance in sound waves
<b>Electrical And Electronics Engineering workshop</b>	<b>C1110L.1</b>	Examine the Voltage, Current, Power and Resistance in various Electrical Circuits
	<b>C1110L.2</b>	Discover the operating characteristics of DC Shunt Generator
	<b>C1110L.3</b>	Analyze the effect of reactive power and power factor in electrical loads
	<b>C1110L.4</b>	Measure Voltage, Current and Resistance in Diode Circuits (L4)
	<b>C1110L.5</b>	Discover the Ripple factors of Rectifier & Characteristics of Transistor Circuits (L4)
	<b>C1110LS.6</b>	Truth table verification of Digital logic circuits (L4)
<b>Computer Programming Lab</b>	<b>C1106L.1</b>	Discuss the Historical Development of Computers and their Basic Organisation including the Key Components.
	<b>C1106L.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1106L.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1106L.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions
	<b>C1106L.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.
<b>Nss/Ncc/Scouts &amp; Guides/Community Service</b>	<b>C1111L.1</b>	Understand the importance of discipline, character and service motto.
	<b>C1111L.2</b>	Solve some societal issues by applying acquired knowledge, facts, and techniques
	<b>C1111L.3</b>	Explore human relationships by analyzing social problems
	<b>C1111L.4</b>	Determine to extend their help for the fellow beings and downtrodden people
	<b>C1111L.5</b>	Develop leadership skills and civic responsibilities
<b>II SEMESTER</b>		

<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Communicative English</b>	<b>C1207.1</b>	Apply the four language learning skills-Listening, Speaking, Reading and Writing (LSRW) for professional success.
	<b>C1207.2</b>	Employ knowledge of vocabulary in speech and writing
	<b>C1207.3</b>	Apply effective communication skills in cross cultural context to enhance professional possibilities.
	<b>C1207.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Chemistry</b>	<b>C1209.1</b>	Understand dual nature of electron and bonding between the atoms through the quantum mechanics.
	<b>C1209.2</b>	Describe Property based applications of semiconductors, super conductors, super capacitors and nano materials in different disciplines of the world.
	<b>C1209.3</b>	Explain the construction and working of batteries, sensors and fuel cells based on the principles of electrochemistry
	<b>C1209.4</b>	Understand the synthetic root and impact of different polymer based materials on environment based on their properties .
	<b>C1209.5</b>	Apply the principles of spectroscopy and HPLC in chemical analysis.
<b>Differential Equations and Vector Calculus</b>	<b>C1202.1</b>	Understand linear differential equations of first order, including Bernoulli's, exact, and equations reducible to exact forms.
	<b>C1202.2</b>	Solve higher-order linear differential equations related to various engineering fields.
	<b>C1202.3</b>	Solve partial differential equations that model physical processes.
	<b>C1202.4</b>	Interpret the physical implications of vector operators like gradient, curl, and divergence.
	<b>C1202.5</b>	Apply Green's, Stoke's, and the Divergence theorem to address problems related to the estimation of work done against a field, circulation, and flux.
<b>Basic Civil and Mechanical Engineering</b>	<b>C1211.1</b>	Describe the various disciplines of civil Engineering and to appreciate their role in societal development.
	<b>C1211.2</b>	Outline the concepts of surveying and obtaining the theoretical measurement of distances,angles and levels through surveying equipment
	<b>C1211.3</b>	Illustrate the fundamental principles involved in transportation network system and the quality parametersof various water resources
	<b>C1211.4</b>	An ability to know about role of mechanical engineer in industry and society and what are the types & properties and applications of engineering materials & know about smart materials
	<b>C1211.5</b>	Describe what are the fundamentals of manufacturing and types advantages disadvantages also applications and fundamentals of thermal engineering i.c engine basic principles and its working, and also fundamentals refrigeration and air conditioning
	<b>C1211.6</b>	Illustrate the different types of power plants also its working and mechanical power transmission systems types of robotics and its working configurations
<b>Data Structures</b>	<b>C1205.1</b>	Analyze and implement searching and sorting techniques
	<b>C1205.2</b>	Implement algorithms for linked lists, demonstrating , understanding of memory location .
	<b>C1205.3</b>	Apply algorithm for stacks , manage program states and solve related problem

	<b>C1205.4</b>	Apply algorithm for queues and solve data management challenges
	<b>C1205.5</b>	Develop data structures to make use of Trees and hashing for efficient storage of data
<b>Communicative English lab</b>	<b>C1207L.1</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1207L.2</b>	Demonstrate acquired language skills in performing the designated activity.
	<b>C1207L.3</b>	Evaluate and exhibit professionalism in participating in debates and group discussions.
	<b>C1207L.4</b>	Recognize the sounds of English with the help of audio visual aids
<b>Chemistry lab</b>	<b>C1209L.1</b>	Select different analytical instruments such as Conductivity meter Potentiometer and Spectrophotometer during the chemical analysis
	<b>C1209L.2</b>	Demonstrate Preparation of advanced polymeric materials and nano materials.
	<b>C1209L.3</b>	Estimate the strength of an acidic and reducing chemicals present in the given sample.
	<b>C1209L.4</b>	Analyze IR spectrum of some organic compounds.
<b>Engineering workshop</b>	<b>C1211L.1</b>	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.
	<b>C1211L.2</b>	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.
	<b>C1211L.3</b>	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.
	<b>C1211L.4</b>	Analyze various characteristics of electrical circuits, electrical machines and measuring instruments.
	<b>C1211L.5</b>	Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.
<b>DS LAB</b>	<b>C1204L.1</b>	Implement linear data structures in order to organize and access data efficiently
	<b>C1204L.2</b>	Apply linked list for dynamic data storage and understanding of memory location
	<b>C1204L.3</b>	Implementing stack algorithms and solved related problems
	<b>C1204L.4</b>	Apply queue based algorithms and apply them appropriately to solve them appropriately to solve data management challenges.
	<b>C1204L.5</b>	Implement tree, hash based solutions for specific problems.
<b>Health and wellness, yoga and sports</b>	<b>C1215L.1</b>	Understand the importance of yoga and sports for Physical fitness and sound health.
	<b>C1215L.2</b>	Demonstrate an understanding of health-related fitness components.
	<b>C1215L.3</b>	Compare and contrast various activities that help enhance their health.
	<b>C1215L.4</b>	Assess current personal fitness levels.
	<b>C1215L.5</b>	Develop Positive Personality
<b>CYBER SECURITY ENGINEERING</b>		

<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Engineering Physics</b>	<b>C1108.1</b>	Apply the knowledge of different optical phenomena in daily life.
	<b>C1108.2</b>	Study the structures and properties of solid state materials and apply this knowledge to estimate the structure of the materials
	<b>C1108.3</b>	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
	<b>C1108.4</b>	Explain fundamental concepts of quantum mechanics and analyze the behavior of electron in metals according to various theories
	<b>C1108.5</b>	Estimate concentration of charge carriers in various types of semiconductors.
<b>Linear Algebra and calculus</b>	<b>C1105.1</b>	Define the concept of matrix rank and methods used to solve systems of linear equations.
	<b>C1105.2</b>	Describe the Cayley-Hamilton Theorem and the process of reducing quadratic forms to canonical forms through orthogonal transformations.
	<b>C1105.3</b>	Solve problems in calculus using the Mean Value Theorems.
	<b>C1105.4</b>	Solve optimization problems for functions of two variables by utilizing partial differentiation.
	<b>C1105.5</b>	Apply double integrals and triple integrals for the problems related to finding areas and volumes.
<b>Basic Electrical And Electronics Engineering</b>	<b>C1109.1</b>	Explain the fundamental laws and concepts to derive the various equations which are related to electrical circuits by applying mathematical tools.
	<b>C1109.2</b>	Demonstrate the working and operating principles of electrical machines, measuring instruments.
	<b>C1109.3</b>	Demonstrate the working of various power generation stations and calculate the electrical load and electricity bill of residential and commercial buildings.
	<b>C1109.4</b>	Illustrates the formation of PN junction Diode and Transistors (BJT)
	<b>C1109.5</b>	Articulate the operation of Rectifiers and Amplifiers
	<b>C1109.6</b>	Understand the concepts of Combinational & Sequential Digital circuits
<b>Engineering Graphics</b>	<b>C1110.1</b>	Understand the principles of engineering drawing, including engineering curves, scales, orthographic and isometric projections
	<b>C1110.2</b>	Draw and interpret orthographic projections of points, lines, planes and solids in front, top and side views.
	<b>C1110.3</b>	Understand and draw projection of solids in various positions in first quadrant.
	<b>C1110.4</b>	Explain principles behind development of surfaces.
	<b>C1110.5</b>	Prepare isometric and perspective sections of simple solids
<b>Introduction to programming</b>	<b>C1107.1</b>	Discuss the Historical Development of Computers and their Basic Organization including the Key Components.
	<b>C1107.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1107.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1107.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions.
	<b>C1107.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.

<b>Physics Lab</b>	<b>C1109L. 1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	<b>C1109L. 2</b>	Analyze various electronic circuits and its components and verify the laws of stretched string.
	<b>C1109L. 3</b>	Apply the knowledge of phenomena like LASER diffraction and resonance in sound waves
<b>Electrical And Electronics Engineering workshop</b>	<b>C1110L.1</b>	Examine the Voltage, Current, Power and Resistance in various Electrical Circuits
	<b>C1110L.2</b>	Discover the operating characteristics of DC Shunt Generator
	<b>C1110L.3</b>	Analyze the effect of reactive power and power factor in electrical loads
	<b>C1110L.4</b>	Measure Voltage, Current and Resistance in Diode Circuits (L4)
	<b>C1110L.5</b>	Discover the Ripple factors of Rectifier & Characteristics of Transistor Circuits (L4)
	<b>C1110LS.6</b>	Truth table verification of Digital logic circuits (L4)
<b>Computer Programming Lab</b>	<b>C1106L.1</b>	Discuss the Historical Development of Computers and their Basic Organisation including the Key Components.
	<b>C1106L.2</b>	Apply Conditional Statements and Loops to Solve Programming Problems Effectively.
	<b>C1106L.3</b>	Illustrate the use of Arrays in Programming and their indexing and manipulation.
	<b>C1106L.4</b>	Apply Pointers and their role in Programming, differentiating user-defined data types such as Structures and Unions
	<b>C1106L.5</b>	Apply Variable Scope with in a program and File Handling Techniques for efficient data input and output.
<b>Nss/Ncc/Scouts &amp; Guides/Community Service</b>	<b>C1111L.1</b>	Understand the importance of discipline, character and service motto.
	<b>C1111L.2</b>	Solve some societal issues by applying acquired knowledge, facts, and techniques
	<b>C1111L.3</b>	Explore human relationships by analyzing social problems
	<b>C1111L.4</b>	Determine to extend their help for the fellow beings and downtrodden people
	<b>C1111L.5</b>	Develop leadership skills and civic responsibilities
<b>II SEMESTER</b>		
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Communicative English</b>	<b>C1207.1</b>	Apply the four language learning skills-Listening, Speaking, Reading and Writing (LSRW) for professional success.
	<b>C1207.2</b>	Employ knowledge of vocabulary in speech and writing
	<b>C1207.3</b>	Apply effective communication skills in cross cultural context to enhance professional possibilities.
	<b>C1207.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Chemistry</b>	<b>C1209.1</b>	Understand dual nature of electron and bonding between the atoms through the quantum mechanics.

	<b>C1209.2</b>	Describe Property based applications of semiconductors, super conductors, super capacitors and nano materials in different disciplines of the world.
	<b>C1209.3</b>	Explain the construction and working of batteries, sensors and fuel cells based on the principles of electrochemistry
	<b>C1209.4</b>	Understand the synthetic root and impact of different polymer based materials on environment based on their properties .
	<b>C1209.5</b>	Apply the principles of spectroscopy and HPLC in chemical analysis.
<b>Differential Equations and Vector Calculus</b>	<b>C1202.1</b>	Understand linear differential equations of first order, including Bernoulli's, exact, and equations reducible to exact forms.
	<b>C1202.2</b>	Solve higher-order linear differential equations related to various engineering fields.
	<b>C1202.3</b>	Solve partial differential equations that model physical processes.
	<b>C1202.4</b>	Interpret the physical implications of vector operators like gradient, curl, and divergence.
	<b>C1202.5</b>	Apply Green's, Stoke's, and the Divergence theorem to address problems related to the estimation of work done against a field, circulation, and flux.
<b>Basic Civil and Mechanical Engineering</b>	<b>C1211.1</b>	Describe the various disciplines of civil Engineering and to appreciate their role in societal development.
	<b>C1211.2</b>	Outline the concepts of surveying and obtaining the theoretical measurement of distances, angles and levels through surveying equipment
	<b>C1211.3</b>	Illustrate the fundamental principles involved in transportation network system and the quality parameters of various water resources
	<b>C1211.4</b>	An ability to know about role of mechanical engineer in industry and society and what are the types & properties and applications of engineering materials & know about smart materials
	<b>C1211.5</b>	Describe what are the fundamentals of manufacturing and types advantages disadvantages also applications and fundamentals of thermal engineering i.e engine basic principles and its working, and also fundamentals refrigeration and air conditioning
	<b>C1211.6</b>	Illustrate the different types of power plants also its working and mechanical power transmission systems types of robotics and its working configurations
<b>Data Structures</b>	<b>C1205.1</b>	Analyze and implement searching and sorting techniques
	<b>C1205.2</b>	Implement algorithms for linked lists, demonstrating , understanding of memory location .
	<b>C1205.3</b>	Apply algorithm for stacks , manage program states and solve related problem
	<b>C1205.4</b>	Apply algorithm for queues and solve data management challenges
	<b>C1205.5</b>	Develop data structures to make use of Trees and hashing for efficient storage of data
<b>Communicative English lab</b>	<b>C1207L.1</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1207L.2</b>	Demonstrate acquired language skills in performing the designated activity.
	<b>C1207L.3</b>	Evaluate and exhibit professionalism in participating in debates and group discussions.
	<b>C1207L.4</b>	Recognize the sounds of English with the help of audio visual aids

<b>Chemistry lab</b>	<b>C1209L.1</b>	Select different analytical instruments such as Conductivity meter Potentiometer and Spectrophotometer during the chemical analysis
	<b>C1209L.2</b>	Demonstrate Preparation of advanced polymeric materials and nano materials.
	<b>C1209L.3</b>	Estimate the strength of an acidic and reducing chemicals present in the given sample.
	<b>C1209L.4</b>	Analyze IR spectrum of some organic compounds.
<b>Engineering workshop</b>	<b>C1211L.1</b>	Understand the Electrical circuit design concept; measurement of resistance, power, power factor; concept of wiring and operation of Electrical Machines and Transformer.
	<b>C1211L.2</b>	Apply the theoretical concepts and operating principles to derive mathematical models for circuits, Electrical machines and measuring instruments; calculations for the measurement of resistance, power and power factor.
	<b>C1211L.3</b>	Apply the theoretical concepts to obtain calculations for the measurement of resistance, power and power factor.
	<b>C1211L.4</b>	Analyze various characteristics of electrical circuits, electrical machines and measuring instruments.
	<b>C1211L.5</b>	Design suitable circuits and methodologies for the measurement of various electrical parameters; Household and commercial wiring.
<b>DS LAB</b>	<b>C1204L.1</b>	Implement linear data structures in order to organize and access data efficiently
	<b>C1204L.2</b>	Apply linked list for dynamic data storage and understanding of memory location
	<b>C1204L.3</b>	Implementing stack algorithms and solved related problems
	<b>C1204L.4</b>	Apply queue based algorithms and apply them appropriately to solve them appropriately to solve data management challenges.
	<b>C1204L.5</b>	Implement tree, hash based solutions for specific problems.
<b>Health and wellness, yoga and sports</b>	<b>C1215L.1</b>	Understand the importance of yoga and sports for Physical fitness and sound health.
	<b>C1215L.2</b>	Demonstrate an understanding of health-related fitness components.
	<b>C1215L.3</b>	Compare and contrast various activities that help enhance their health.
	<b>C1215L.4</b>	Assess current personal fitness levels.
	<b>C1215L.5</b>	Develop Positive Personality

