

**ELECTRICAL AND ELECTORINICS ENGINEERING**

<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
COMMUNICATIVE ENGLISH	HS1101.1	Apply The Four Languages Learning Skills-Listening, Speaking, Reading, Writing (Lsrw) For Professional Success.
	HS1101.2	Employ Knowledge Of Grammatical Structures And Vocabulary In Speech And Writing
	HS1101.3	Apply Effective Communication Skills To Enhance Professional Possibilities.
	HS1101.4	Develop Acceptable Personality Traits Suitable For Chosen Profession.
MATHEMATICS -I	BS1101.1	Examine the convergence of series and apply mean value theorem to real life problem.
	BS1101.2	Solve the Differential Equations of first and higher order related to various engineering applications.
	BS1101.3	Apply the partial differentiation technique to solve physical problem
	BS1101.4	Apply double and triple integrals to find areas and volumes.
APPLIED CHEMISTRY	BS1106.1	Identify the advantages and limitations of plastic materials, elastomers and their use in day to day life.
	BS1106.2	Select the suitable methods of corrosion control and gain the knowledge of applications of batteries.
	BS1106.3	Recognize the need of nano materials, liquid crystals, semiconductors and super conductors.
	BS1106.4	Obtain the knowledge of computational chemistry and molecular machines .
	BS1106.5	Obtain the knowledge of generation of electricity from various Non-Conventional energy sources.
PPSUC	ES1101.1	Describe the concept of computer system, analyze a given problem, develop an algorithm, fundamental programming constructs, identify data representation formats, describe operators and their precedence, associativity.
	ES1101.2	Understand branching and loop statements.
	ES1101.3	Describe the concept of homogeneous derives data types, strings and functions.
	ES1101.4	Understand pointers and heterogeneous data types.
	ES1101.5	Describe the concept of file system and functions.
ED	ES1103.1	Construct polygons, scales and draw curves used in engineering applications, draw orthographic projection of points
	ES1103.2	Apply concept of orthographic projection to project lines inclined to both reference planes.
	ES1103.3	Produce orthographic projections of planes inclined to both the reference planes.
	ES1103.4	Produce orthographic projections of regular solids inclined to both the reference planes.
	ES1103.5	Construct isometric view from orthographic views and vice versa.
	ES1103.6	Represent objects in 3D view through isometric views from orthographic views and viceversa
ENGLISH LAB	HS1103.1	Recognize the sounds of English with the help of audio visual aids
	HS1103.2	Build confidence and overcome inhibitions while speaking in English.
	HS1103.3	Demonstrate acquired language skills in performing the designated activity.
APPLIED CHEMISTRY LAB	BS1107.1	Obtain the knowledge of acid-base titrations to determine the strength of acid and base solutions.
	BS1107.2	Gain the knowledge of Redox titrations to determine the concentration of samples such as Ores, KMnO <sub>4</sub> and Copper using different indicators.
	BS1107.3	Obtain the knowledge of complexometry titrations to determine the hardness of given water sample by EDTA method.
	BS1107.4	Gain the knowledge of commonly used instruments such as pH meter, Conductivity meter and Potentiometer to determine the strength of given acid solutions.

PPSUC LAB	ES1102.1	Describe the basics of computer and understand the problem-solving aspect.
	ES1102.2	Design and develop C program to evaluate simple expressions and logical operations.
	ES1102.3	Develop & Implement C programs with suitable modules to solve the given problem.
	ES1102.4	Demonstrate the concept of pointer and perform I/O operations in files.
<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
MATHEMICS-II	BS1202.1	Solve system of linear algebraic equations and apply eigen value computation technics to reduce a given quadratic to canonical
	BS1202.2	Solve algebraic and Transcendental equations by using Numerical methods
	BS1202.3	Apply Newton 's forward and backward interpolation and Lagrange's formula for equal and unequal intervals.
	BS1202.4	Compute numerical solutions of differential equations.
MATHEMICS-III	BS1203.1	Apply the concepts of vector calculus to the problems of work done by a force, circulation and flux
	BS1203.2	Apply Laplace Transforms to solve the ordinary differential equations
	BS1203.3	Compute Fourier series of the periodic function and Apply Fourier transform to a range of non-periodic function.
	BS1203.4	Solve the first and higher order partial differential equations and apply to various physical problems
APPLIED PHYSICS	BS1204.1	Analyze the intensity variation of light due to interference & diffraction and illustrate the resolving power of various optical instruments
	BS1204.2	Explain fundamental concepts of quantum mechanics and apply to one dimensional motion of particles.
	BS1204.3	Explain various electron theories and summarize various types of solids based on band theory.
	BS1204.4	Understand how electrons & holes behave in semiconductor and explain how they conduct current.
	BS1204.5	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
FUNDAMENTAL OF COMPUTERS	BS1212.1	Interpret how the computer is works.
	BS1212.2	Implement appropriate methods for solving problems
	BS1212.3	Examine the computer networks, types of network and topologies.
	BS1212.4	Demonstrate the concepts of Operating systems and Computer Systems Development
	BS1212.5	Demonstrate the concepts of Databases.
	BS1212.6	Organize the advanced computer technologies like distributed computing & wireless networks
ELECTRICAL CIRCUIT ANALYSIS - I	ES1217.1	Study the concepts of passive elements, types of sources and various
	ES1217.2	Understand the concept of
	ES1217.3	Solve given RLC network with variation of any one of the parameters i.e. R, L, C and f for sinusoidal input.
	ES1217.4	Apply the applications of network theorems for analysis of electrical networks
ELECTRICAL ENGINEERING	ES1218.1	To understand the limitations, tolerances, safety aspects of electrical systems and wiring.
	ES1218.2	Ability to Select wires/cables and other accessories used in different types of wiring.
	ES1218.3	To understand the basic concepts of electrical circuits and able to measure current, voltage and power in a circuit
APPLIED PHYSICS LAB	BS1205.1	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	BS1205.2	Analyze various electronic circuits and study the temperature dependence of semiconductors.
	BS1205.3	Draw the relevance between theoretical knowledge and the means to imply it in a practical manner by performing various relative experiments

COMMUNICATION SKILLS LAB	HS1203.1	Recognize the sounds of English with the help of audio visual aids
	HS1203.2	Build confidence and overcome inhibitions while speaking in English.
	HS1203.3	Demonstrate acquired language skills in performing the designated activity.
EE PROJECT	PR1201.1	Utilize the basic electronics and electrical components and sensors and micro controllers ,arduinios in minor projects.
	PR1201.2	Learn real world problems and design methodology for solving those problems.
	PR1201.3	Formulate the problems statement ,document the report and finalize the project design.
<b>MECHANICAL ENGINEERING</b>		
<b>COURSE</b>	<b>C.CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
M-1	BS1101.1	Examine the convergence of series and apply mean value theorem to real life problem
	BS1101.2	Solve the Differential Equations of first and higher order related to various engineering applications.
	BS1101.3	Apply the partial differentiation techniqueto solve physical problem
	BS1101.4	Apply double and triple integrals to find areas and volumes
Mathematics-II	BS1102.1	Solve system of linear algebraic equations and apply Eigen value computation techniques to reduce a given quadratic to
	BS1102.2	Solve algebraic and Transcendental equations by using Numerical methods
	BS1102.3	Apply Newton's forward and backward interpolation and Lagrange's formula for equal and unequal intervals.
	BS1102.4	Computer numerical solutions of differential equations.
Engineering Physics	BS1108.1	Computer numerical solutions of differential equations.
	BS1108.2	Improve the acoustic quality of concert halls and apply Ultrasonic waves concept in Non Destructive Testing.
	BS1108.3	Explain the concepts of elasticity & plasticity and distinguish different types of moduli
	BS1108.4	Distinguish between laser sources and conventional sources and identify different types of sensors
	BS1108.5	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
Programming for Problem Solving Using C	ES1101.1	Describe the concept of computer system, analyze a given problem, develop an algorithm, fundamental programming
	ES1101.2	Understand branching and loop statements.
	ES1101.3	Describe the concept of homogeneous derives data types, strings and functions.
	ES1101.4	Understand pointers and heterogeneous data types.
	ES1101.5	Describe the concept of file system and functions.
Engineering Drawing	ES1103.1	Construct polygons, scales and draw curves used in engineering applications
	ES1103.2	Apply concept of orthographic projection to project Points, St. lines inclined to one and both reference planes.
	ES1103.3	Produce orthographic projections of planes inclined to both the reference planes.
	ES1103.4	Produce orthographic projections of regular solids inclined to both the reference planes.
	ES1103.5	Construct isometric view from orthographic views and vice versa.
	ES1103.6	Drawing practice on AUTO-CAD
English Lab	HS1102.1	Recognize the sounds of English with the help of audiovisual aids.
	HS1102.2	Build confidence and overcome inhibitions while speaking in English
	HS1102.3	Demonstrate acquired language skills in performing the designated activity.
Engineering Physics Lab	BS1109.1	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring
	BS1109.2	Verify the laws of thermo dynamics, electro magnetism and stretched string.
	BS1109.3	Draw the relevance between theoretical knowledge and the means to imply it in a practical manner by performing various

ppsus lab	ES1102.1	Describe the basics of computer and understand the problem-solving aspect.
	ES1102.2	Design and develop C program to evaluate simple expressions and logical operations.
	ES1102.3	Develop & Implement C programs with suitable modules to solve the given problem.
	ES1102.4	Demonstrate the concept of pointer and perform I/O operations in files.
English	HS1201.1	Apply the four languages learning skills-listening, speaking, reading, writing (LSRW) for professional success.
	HS1201.2	Employ knowledge of grammatical structures and vocabulary in speech and writing
	HS1201.3	Apply effective communication skills to enhance professional possibilities.
	HS1201.4	Develop acceptable personality traits suitable for chosen profession.
ENGG CHEMISTRY	BS1210.1	Identify the advantages and limitations of Plastic materials, Elastomers and their use in day to day life.
	BS1210.2	Select the suitable methods of corrosion control and gain the knowledge of applications of batteries.
	BS1210.3	Identify the advantages and limitations of building materials and their use in day to day life and select the various lubricants for
	BS1210.4	Identify the fuels which are commonly used and their advantages and limitations.
	BS1210.5	Select the various methods used for purification of water for domestic and industrial purposes.
ENGG MECHANICS	ES1204.1	Analyze the system of forces acting on rigid bodies by FBD's
	ES1204.2	Apply laws of friction to find friction forces acting on the rigid bodies
	ES1204.3	Find Moment of Inertia of plane laminas by locating its Centroid and Analyze the frames and trusses to find internal forces in
	ES1204.4	Analyze motion parameters of bodies both in translation and rotation(D'Alemberts Principle)
	ES1204.5	Apply work- Energy and Impulse-momentum methods to find motion parameters of a moving bodies
BEEE	ES1206.1	To Learn the basic principles of electrical circuit laws and analysis of networks
	ES1206.2	To Understand Principle of operation and construction details of AC & DC machines
	ES1206.3	To Learn Operation of rectifiers ,IC'S and transistors
Computer Aided Engineering Drawing	ES1207.1	Produce orthographic projections of regular solids using auxiliary projection
	ES1207.2	Produce sectional drawings, developments and interpenetration of solids as per
	ES1207.3	Produce Isometric view of regular solids and machine components etc from their
	ES1207.4	Produce geometric models (orthographic, isometric etc.) of simple solids and
English Lab	HS1203.1	Recognize the sounds of English with the help of audio visualaids.
	HS1203.2	Build confidence and overcomeinhibitions while speaking inEnglish.
	HS1203.3	Demonstrate acquired language skills in performing the designated activity.
Engineering Chemistry Lab	BS1211.1	Obtain the knowledge of acid-base titrations to determine the strength of acid and base solutions.
	BS1211.2	Gain the knowledge of Redox titrations to determine the concentration of samples such as Ores, KMnO4 and Copper using
	BS1211.3	Obtain the knowledge of complexometry titrations to determine the hardness of given water sample by EDTA method.
	BS1211.4	Gain the knowledge of commonly used instruments such as pH meter, Conductivity meter and Potentiometer to determine the
Basic Electrical & Electronics Engineering Lab	ES1208.1	Examining the characteristics of different DC machines & AC Machines
	ES1208.2	compare the speed control method of different types of DC motors
	ES1208.3	Analyse the operation of devices like diodes, transistors and FETs practically
	ES1208.4	Design rectifier circuits with and without filters
Workshop Practice Lab	ES1219.1	Make simple wood joints by applying wood working knowledge
	ES1219.2	Make sheet metal objects by applying development of surfaces concept
	ES1219.3	Prepare simple fitting joints with the use of proper fitting tools
	ES1219.4	Analyze the basic house wiring circuits.

Engineering Exploration Project	PR1201.1	Build mindsets & foundations essential for designers.
	PR1201.2	Learn about the Human- Centread Design methodology and understand their real- world applications.
	PR1201.3	Use Design Thinking for problem solving methodology for investigating illdefined problems.
	PR1201.4	Undergo Several design challenges and work towards the final design challenge
<b>COMPUTER SCIENCE AND ENGINEERING</b>		
<b>COURSE</b>	<b>C.CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
English	HS1101.1	Apply the four languages learning skills-listening, speaking, reading, writing (LSRW) for professional success.
	HS1101.2	Employ knowledge of grammatical structures and vocabulary in speech and writing
	HS1101.3	Apply effective communication skills to enhance professional possibilities.
	HS1101.4	Develop acceptable personality traits suitable for chosen profession.
Mathematics-I	BS1101.1	Solve the Differential Equations of first and higher order related to various engineering applications.
	BS1101.2	Apply Laplace Transforms to solve linear differential equations with constant coefficients.
	BS1101.3	Apply the knowledge of partial differentiation techniqueto solve physical problem like maxima and minima of functions.
	BS1101.4	Solve the first and higher order of partial differential equations and apply to various engineering problems
Applied Chemistry	BS1106.1	Identify the advantages and limitations of plastic materials, elastomers and their use in day to day life.
	BS1106.2	Select the suitable methods of corrosion control and gain the knowledge of applications of batteries.
	BS1106.3	Recognize the need of nano materials, liquid crystals, semiconductors and super conductors.
	BS1106.4	Obtain the knowledge of computational chemistry and molecular machines .
	BS1106.5	Obtain the knowledge of generation of electricity from various Non-Conventional energy sources.
Fundamentals of Computer Science	ES1112.1	Interpret how the computer is works.
	ES1112.2	Implement appropriate methods for solving problems
	ES1112.3	Examine the computer networks, types of network and topologies.
	ES1112.4	Demonstrate the concepts of Operating systems and Computer Systems Development
	ES1112.5	Demonstrate the concepts of Databases.
	ES1112.6	Organize the advanced computer technologies like distributed computing & wireless networks
Engineering Drawing	ES1103.1	Construct polygons, scales and draw curves used in engineering applications, draw orthographic projection of points
	ES1103.2	Apply concept of orthographic projection to project lines inclined to both reference planes.
	ES1103.3	Produce orthographic projections of planes inclined to both the reference planes.
	ES1103.4	Produce orthographic projections of regular solids inclined to both the reference planes.
	ES1103.5	Construct isometric view from orthographic views and vice versa.
English Language lab	HS1102.1	Recognize the sounds of English with the help of audio visual aids
	HS1102.2	Build confidence and overcome inhibitions while speaking in English.
	HS1102.3	Demonstrate acquired language skills in performing the designated activity.
Chemistry Lab	BS1107.1	Obtain the knowledge of acid-base titrations to determine the strength of acid and base solutions.
	BS1107.2	different indicators.
	BS1107.3	Obtain the knowledge of complexometry titrations to determine the hardness of given water sample by EDTA method.
	BS1107.4	strength of given acid solutions.

IT Workshop	ES1105.1	Assemble and disassemble components of a PC
	ES1105.2	Construct a fully functional virtual machine, Summarize various Linux operating system commands,
	ES1105.3	Secure a computer from cyber threats, Learn and practice programming skill in Github, Hackerrank, Codechef, HackerEarth etc.
	ES1105.4	Recognize characters & extract text from scanned images, Create audio files and podcasts
	ES1105.5	Create quizzes & analyze responses.
Mathematics II	BS1202.1	Apply the concept of vector differentiation and to find scalar potential.
	BS1202.2	Apply the concept of vector integration theorems to find scalar potential.
	BS1202.3	Understand and Apply the partial differentiation in physical problem
	BS1202.4	Apply the concept of Fourier transform to evaluate the given integral
Mathematics III	BS1203.1	Apply the concepts of vector calculus to the problems of work done by a force, circulation and flux
	BS1203.2	Apply Laplace Transforms to solve the ordinary differential equations
	BS1203.3	Compute Fourier series of the periodic function and Apply Fourier transform to a range of non-periodic function.
	BS1203.4	Solve the first and higher order partial differential equations and apply to various physical problems
Applied Physics	BS1204.1	Analyze the intensity variation of light due to interference & diffraction and illustrate the resolving power of various optical
	BS1204.2	Explain fundamental concepts of quantum mechanics and apply to one dimensional motion of particles.
	BS1204.3	Explain various electron theories and summarize various types of solids based on band theory.
	BS1204.4	Understand how electrons & holes behave in semiconductor and explain how they conduct current.
	BS1204.5	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
Programming for Problem Solving Using C	ES1201.1	constructs, identify data representation formats, describe operators and their precedence, associativity.
	ES1201.2	Understand branching and loop statements.
	ES1201.3	Describe the concept of homogeneous derives data types, strings and functions.
	ES1201.4	Understand pointers and heterogeneous data types.
	ES1201.5	Describe the concept of file system and functions.
Digital Logic Design	ES1213.1	Describe various number systems, their conversions & various codes
	ES1213.2	Apply minimization techniques to simplify Boolean functions.
	ES1213.3	Apply the combinational logic to solve the Digital Design problems
	ES1213.4	Evaluate Digital Design problems using sequential logic.
	ES1213.5	Design Synchronous & Asynchronous circuits using combinational & sequential logic
Applied Physics Lab	BS1205.1	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring
	BS1205.2	Analyze various electronic circuits and study the temperature dependence of semiconductors.
	BS1205.3	Draw the relevance between theoretical knowledge and the means to imply it in a practical manner by performing various
Communication Skills Lab	HS1203.1	Recognize the sounds of English with the help of audio visual aids
	HS1203.2	Build confidence and overcome inhibitions while speaking in English.
	HS1203.3	Demonstrate acquired language skills in performing the designated activity.
Programming for Problem Solving Using C lab	ES1202.1	debugging, and linking and executing a program using the development environment.
	ES1202.2	Analyzing the complexity of problems, Modularize the problems into small modules and then convert them into programs.
	ES1202.3	Construct programs that demonstrate effective use of C features including arrays, strings, structures, pointers and files.
	ES1202.4	Apply and practice logical ability to solve the real world problems.
Engineering exploration project	PR1201.1	understand various tools regarding projects
	PR1201.2	apply innovative thinking in inventing new things
	PR1201.3	Analyzing the applications in projects

## ELECOTRONICS AND COMMUNICATION ENGINEERING

COURSE	C.CODE	COURSE OUTCOME DESCRIPTION
<b>English</b>	<b>HS1101.1</b>	Apply the four language learning skills-listening, speaking, reading, writing (LSRW)
	<b>HS1101.2</b>	Employ knowledge of grammatical structures and vocabulary in speech and writing
	<b>HS1101.3</b>	Apply effective communication skills for professional possibilities.
	<b>HS1101.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Mathematics-I</b>	<b>BS1101.1</b>	Examine the convergence of series and apply mean value theorem to real life problem.
	<b>BS1101.2</b>	Solve the Differential Equations of first and higher order related to various engineering applications
	<b>BS1101.3</b>	Apply the partial differentiation techniqueto solve physical problem
	<b>BS1101.4</b>	Apply double and triple integrals to find areas and volumes.
<b>Applied Chemistry</b>	<b>BS1106.1</b>	Identify the advantages and limitations of plastic materials, elastomers and their use in day to day life.
	<b>BS1106.2</b>	Select the suitable methods of corrosion control and gain the knowledge of applications of batteries.
	<b>BS1106.3</b>	Recognize the need of nano materials, liquid crystals, semiconductors and super conductors.
	<b>BS1106.4</b>	Obtain the knowledge of computational chemistry and molecular machines .
	<b>BS1106.5</b>	Obtain the knowledge of generation of electricity from various Non-Conventional energy sources.
<b>PPSUC</b>	<b>ES1101.1</b>	Describe the concept of computer system, analyze a given problem, develop an algorithm, fundamental programming
	<b>ES1101.2</b>	Understand branching and loop statements.
	<b>ES1101.3</b>	Describe the concept of homogeneous derives data types, strings and functions.
	<b>ES1101.4</b>	Understand pointers and heterogeneous data types.
	<b>ES1101.5</b>	Describe the concept of file system and functions.
<b>Engineering Drawing</b>	<b>ES1103.1</b>	Construct polygons, scales and draw curves used in engineering applications, draw orthographic projection of points
	<b>ES1103.2</b>	Apply concept of orthographic projection to project lines inclined to both reference planes.
	<b>ES1103.3</b>	Produce orthographic projections of planes inclined to both the reference planes.
	<b>ES1103.4</b>	Produce orthographic projections of regular solids inclined to both the reference planes.
	<b>ES1103.5</b>	Construct isometric view from orthographic views and vice versa.
<b>English Lab</b>	<b>HS1101.1</b>	Recognize the sounds of English with the help of audio visual aids
	<b>HS1101.2</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>HS1101.3</b>	Demonstrate acquired language skills in performing the designated activity.
<b>Applied Chemistry Lab</b>	<b>BS1107.1</b>	Obtain the knowledge of acid-base titrations to determine the strength of acid and base solutions.
	<b>BS1107.2</b>	Gain the knowledge of Redox titrations to determine the concentration of samples such as Ores, KMnO <sub>4</sub> and Copper using
	<b>BS1107.3</b>	Obtain the knowledge of complexometry titrations to determine the hardness of given water sample by EDTA method.
	<b>BS1107.4</b>	Gain the knowledge of commonly used instruments such as pH meter, Conductivity meter and Potentiometer to determine the
<b>PPSUC lab</b>	<b>ES1102.1</b>	Describe the basics of computer and understand the problem-solving aspect.
	<b>ES1102.2</b>	Design and develop C program to evaluate simple expressions and logical operations.
	<b>ES1102.3</b>	Develop & Implement C programs with suitable modules to solve the given problem.
	<b>ES1102.4</b>	Demonstrate the concept of pointer and perform I/O operations in files.

<b>Mathematics-II</b>	<b>BS1202.1</b>	Solve system of linear algebraic equations and apply eigen value computation technics to reduce a given quadratic to canonical
	<b>BS1202.2</b>	Solve algebraic and Transcendental equations by using Numerical methods
	<b>BS1202.3</b>	Apply Newton 's forward and backward interpolation and Lagrange's formula for equal and unequal intervals.
	<b>BS1202.4</b>	Compute numerical solutions of differential equations.
<b>Mathematics-III</b>	<b>BS1203.1</b>	Apply the concepts of vector calculus to the problems of work done by a force, circulation and flux
	<b>BS1203.2</b>	Apply Laplace Transforms to solve the ordinary differential equations
	<b>BS1203.3</b>	Compute Fourier series of the periodic function and Apply Fourier transform to a range of non-periodic function.
	<b>BS1203.4</b>	Solve the first and higher order partial differential equations and apply to various physical problems
<b>Applied Physics</b>	<b>BS1204.1</b>	Analyze the intensity variation of light due to interference & diffraction and illustrate the resolving power of various optical
	<b>BS1204.2</b>	Explain fundamental concepts of quantum mechanics and apply to one dimensional motion of particles.
	<b>BS1204.3</b>	Explain various electron theories and summarize various types of solids based on band theory.
	<b>BS1204.4</b>	Understand how electrons & holes behave in semiconductor and explain how they conduct current.
	<b>BS1204.5</b>	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
<b>BEE</b>	<b>ES1206.1</b>	Explain principle and operation of ac&dc machines
	<b>ES1206.2</b>	Analyze characteristics of dc&ac machines
	<b>ES1206.3</b>	Analyze performance of dc&ac machines by conducting various tests.
	<b>ES1206.4</b>	Solve the problems on dc&ac machines
	<b>ES1206.5</b>	Identify various applications of dc&ac machines
<b>Network Analysis</b>	<b>ES1209.1</b>	gain the knowledge on basic network elements.
	<b>ES1209.2</b>	will analyze the RLC circuits behavior in detailed.
	<b>ES1209.3</b>	analyze the performance of periodic waveforms.
	<b>ES1209.4</b>	gain the knowledge in characteristics of two port network parameters (Z, Y, ABCD, h & g).
	<b>ES1209.5</b>	analyze the dc excitation concepts in real world applications.
<b>Applied Physics Lab</b>	<b>BS1205.1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring
	<b>BS1205.2</b>	Analyze various electronic circuits and study the temperature dependence of semiconductors.
	<b>BS1205.3</b>	Draw the relevance between theoretical knowledge and the means to imply it in a practical manner by performing various
<b>BEE Lab</b>	<b>ES1208.1</b>	Analyze characteristics & performance of dc shunt and series machines
	<b>ES1208.2</b>	Analysing behaviour of 1- $\Phi$ transformer at various loads and power factor conditions
	<b>ES1208.3</b>	Analyze performance of 3- $\Phi$ induction motor and alternator
<b>Communication skills lab</b>	<b>HS1203.1</b>	Recognize the sounds of English with the help of audio visual aids
	<b>HS1203.2</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>HS1203.3</b>	Demonstrate acquired language skills in performing the designated activity.
<b>Electronic workshop lab</b>	<b>ES1215.1</b>	Examine characteristics and performance of AC and DC components
	<b>ES1215.2</b>	Analyze the behaviour of various measuring instruments.
	<b>ES1215.3</b>	Describe the working of soldering and PCB layout
<b>Engineering exploration project</b>	<b>PR1201.1</b>	Build mindsets&foundations essential for designs
	<b>PR1201.2</b>	Learn about the Human-Centred design methodology and understand their real world applications
	<b>PR1201.3</b>	Use design thinking for problem solving methodology for investigating illdefined problems.
	<b>PR1201.4</b>	Undergo several design challenges and work towards the final design challenge.



## INFORMATION TECNOLOGY

COURSE	C.CODE	COURSE OUTCOME DESCRIPTION
English	HS1101.1	Apply the four languages learning skills-listening, speaking, reading, writing (LSRW) for professional success.
	HS1101.2	Employ knowledge of grammatical structures and vocabulary in speech and writing
	HS1101.3	Apply effective communication skills to enhance professional possibilities.
	HS1101.4	Develop acceptable personality traits suitable for chosen profession.
Mathematics-I	BS1101.1	Examine the convergence of series and apply mean value theorem to real life problem.
	BS1101.2	Solve the Differential Equations of first and higher order related to various engineering applications.
	BS1101.3	Apply the partial differentiation techniqueto solve physical problem
	BS1101.4	Apply double and triple integrals to find areas and volumes.
Applied Chemistry	BS1106.1	Identify the advantages and limitations of plastic materials, elastomers and their use in day to day life.
	BS1106.2	Select the suitable methods of corrosion control and gain the knowledge of applications of batteries
	BS1106.3	Recognize the need of nano materials, liquid crystals, semiconductors and super conductors.
	BS1106.4	Obtain the knowledge of computational chemistry and molecular machines .
	BS1106.5	Obtain the knowledge of generation of electricity from various Non-Conventional energy sources.
Fundamentals of Computer Sciences	ES1104.1	Understand how the computer is works.
	ES1104.2	Able to interpret methods appropriate for solving problems.
	ES1104.3	Able to choose the types of Computer network and topologies.
	ES1104.4	able to interpret the Operating system Processes and scheduling
	ES1104.5	able to employ the various schemas and models of Database Systems
	ES1104.6	Able to relate advanced computer technologies like distributed computing & wireless networks.
Engineering Drawing	ES1103.1	Construct polygons, scales and draw curves used in engineering applications
	ES1103.2	Apply concept of orthographic projection to project points and lines inclined to both reference planes.
	ES1103.3	Produce orthographic projections of planes inclined to both the reference planes.
	ES1103.4	Produce orthographic projections of solids inclined to both the reference planes.
	ES1103.5	Represent objects in 3D view through isometric views from orthographic views and vice versa
English Language lab	HS1102.1	Recognize the sounds of English with the help of audio visualaids.
	HS1102.2	Build confidence and overcomeinhibitions while speaking inEnglish.
	HS1102.3	Demonstrate acquired language skills in performing the designated activity.
Applied Chemistry Lab	BS1107.1	Obtain the knowledge of acid-base titrations to determine the strength of acid and base solutions.
	BS1107.2	Gain the knowledge of Redox titrations to determine the concentration of samples such as Ores, KMnO4 and Copper using
	BS1107.3	Obtain the knowledge of complexometry titrations to determine the hardness of given water sample by EDTA method.
	BS1107.4	Gain the knowledge of commonly used instruments such as pH meter, Conductivity meter and Potentiometer to determine the
IT Workshop	ES1105.1	Apply working knowledge in making simple wood joints and fitting joints and simple sheet metal works
	ES1105.2	Apply electrcal working knowledge in making simple wirings
	ES1105.3	Apply knowledge for computer assembling and software installation and how to solve the trouble shooting problems.
	ES1105.4	Apply the tools for preparation of PPT, Documentation and budget sheet etc.
Mathematics-II	BS1202.1	Solve system of linear algebraic equations and apply eigen value computation technics to reduce a given quadratic to canonical
	BS1202.2	Solvealgebraic and Transcendental equations by using Numerical methods
	BS1202.3	Apply Newton 's forward and backward interpolation and Lagrange's formula for equal and unequal intervals.
	BS1202.4	Compute numerical solutions of differential equations.

Mathematics-III	BS1203.1	Apply the concepts of vector calculus to the problems of work done by a force, circulation and flux
	BS1203.2	Apply Laplace Transforms to solve the ordinary differential equations
	BS1203.3	Compute Fourier series of the periodic function and Apply Fourier transform to a range of non-periodic function.
	BS1203.4	Solve the first and higher order partial differential equations and apply to various physical problems
Applied physics	BS1204.1	Analyze the intensity variation of light due to interference & diffraction and illustrate the resolving power of various optical
	BS1204.2	Explain fundamental concepts of quantum mechanics and apply to one dimensional motion of particles.
	BS1204.3	Explain various electron theories and summarize various types of solids based on band theory.
	BS1204.4	Understand how electrons & holes behave in semiconductor and explain how they conduct current.
	BS1204.5	Summarize magnetic & dielectric material properties and recognize their need in engineering applications.
Programming for Problem solving using C	ES1201.1	Able to understand the fundamental concepts of computers and C language constructs
	ES1201.2	able to apply the concepts of C constructs Homogeneous and heterogeneous data types and pointers for solving the given
	ES1201.3	able to divide a given problem into modules using c constructs and functions to develop modular reusable code.
	ES1201.4	able to analyse the problem, choose appropriate C constructs and use the file system to solve mathematical and engineering
Digital logic Design	ES1213.1	Describe various number systems, their conversions & various codes
	ES1213.2	Apply minimization techniques to simplify Boolean functions.
	ES1213.3	Apply the combinational logic to solve the Digital Design problems
	ES1213.4	Evaluate Digital Design problems using sequential logic.
	ES1213.5	Design Synchronous & Asynchronous circuits using combinational & sequential logic
Applied physics lab	BS1205.1	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring
	BS1205.2	Analyze various electronic circuits and study the temperature dependence of semiconductors.
	BS1205.3	Draw the relevance between theoretical knowledge and the means to imply it in a practical manner by performing various
Communication skills lab	HS1203.1	Recognize the sounds of English with the help of audio visual aids
	HS1203.2	Build confidence and overcome inhibitions while speaking in English.
	HS1203.3	Demonstrate acquired language skills in performing the designated activity.
Problem solving using C lab	ES1202.1	Able to understand the concepts of C language
	ES1202.2	Able to apply the C language constructions for simple problems
	ES1202.3	Able to apply C constructs like homogeneous, heterogeneous data for a given mathematical problem
	ES1202.4	Able to analysis a given scenario using functions & file concepts
Engineering Exploration project	PR1201.1	Explore multiple fields of engineering
	PR1201.2	Ability to recognize basic requirements of project work
	PR1201.3	Apply the engineering design process to investigate and solve ill defined problems