

**ELECTRICAL AND ELECTRONICS ENGINEERING ( ANDHARA UNIVERSITY)**

<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>English</b>	<b>C1101.1</b>	Apply The Four Languages Learning Skills-Listening, Speaking, Reading, Writing (Lsrw) For Professional Success.
	<b>C1101.2</b>	Employ Knowledge Of Grammatical Structures And Vocabulary In Speech And Writing
	<b>C1101.3</b>	Apply Effective Communication Skills To Enhance Professional Possibilities.
	<b>C1101.4</b>	Develop Acceptable Personality Traits Suitable For Chosen Profession.
<b>Mathematics-I</b>	<b>C1102.1</b>	Apply The Partial Differentiation Techniques to Solve Certain Problem Arise In Engineering.
	<b>C1102.2</b>	Solve The Differential Equations Of First Order And First Degree Related To Various Engineering Applications.
	<b>C1102.3</b>	Solve The Linear Higher Order Differential Equations With Constant Coefficients.
	<b>C1102.4</b>	Examine The Nature, Interval Of Convergence Of Infinite Series.
<b>Mathematics-II</b>	<b>C1103.1</b>	Solve System Of Linear Simultaneous Equations Of Various Matrix Methods.
	<b>C1103.2</b>	Apply Eigen Value Computation Techniques To Reduce A Given Quadratic To Canonical Form
	<b>C1103.3</b>	Apply Laplace Transforms Functions For Solving Ordinary Differential Equations.
	<b>C1103.4</b>	Apply Special Functions To Evaluate Improper Integrals.
<b>Physics</b>	<b>C1104.1</b>	Explain The Laws Of Thermodynamics, Efficiency Of Heat Engine And Their Importance In Engineering.
	<b>C1104.2</b>	Study The Importance Of Maxwell Equations In Electromagnetic Fields.
	<b>C1104.3</b>	Identify Various Optical Phenomena And Their Importance In Engineering.
	<b>C1104.4</b>	Understand The Working Of Lasers & Its Propagation Through Optical Fibers And Importance Of Ultrasonic
	<b>C1104.5</b>	Acquire The Knowledge Of Superconductors, Nanomaterials And Their Utilization In Various Applications.
<b>Engg Graphics</b>	<b>C1106.1</b>	Draw Basic Components Of Engineering Drawing Viz Geometric Constructions, Curves Etc.
	<b>C1106.2</b>	Construct Scales: Plain, Diagnol And Vernier
	<b>C1106.3</b>	Draw Orthographic Projections Of Points, Lines And Solids As Per The International Standards.
	<b>C1106.4</b>	Draw Sectional Drawings And Developments As Per National And International Standards.
	<b>C1106.5</b>	Draw Solid Machine Components Using Various Drawing Techniques Viz Isometric.
<b>Professional Ethics and Moral Values</b>	<b>C1105.1</b>	Understand The Values In Education And Real Ife
	<b>C1105.2</b>	Understand The Values In Respective Professions And Analyze The Ethical Role Of Engineers
	<b>C1105.3</b>	Understand The Concept Of Harmony In Life And Moral Responsibility Of Engineers.
	<b>C1105.4</b>	Understand Environmental Ethics And Apply In Real Life
<b>Physics Lab</b>	<b>C1107.1</b>	Apply The Knowledge Of Different Phenomena Of Light Like Interference, Diffraction And Handle Various Optical
	<b>C1107.2</b>	Verify The Laws Of Thermo Dynamics, Electro Magnetism And Stretched String.
	<b>C1107.3</b>	Draw The Relevance Between Theoretical Knowledge And The Means To Imply It In A Practical Manner By
<b>Work Shop</b>	<b>C1108.1</b>	Follow Necessary Saftey Precations While Operating Equipment And Tools To Avoid Accidents In Workshop.
	<b>C1108.2</b>	Apply Wood Working Knowledge In Making Simple Wood Joints By Selecting Appropriate Carpentry Tools.
	<b>C1108.3</b>	Apply Development Of Surfaces Concept In Producing Simple Sheeet Metal Works With The Use Appropriate
	<b>C1108.4</b>	Prepare Simple Fitting Joints With The Use Of Proper Fitting Tools

<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Mathematics-III</b>	<b>C1201.1</b>	Apply The Concept Of Lines, Planes, Spheres And The Students Are Through In Defining And Evaluating
	<b>C1201.2</b>	Solve Double And Triple Integrals To Find Areas And Volumes.
	<b>C1201.3</b>	Apply Special Functions To Evaluate Improper Integrals.
	<b>C1201.4</b>	Compute Fourier Series for Different Function And Also Half Range Series Certain Types Of Functions.
<b>Computer Programming and Numerical Methods</b>	<b>C1203.1</b>	Identify Appropriate C Language Constructs To Solve Problems
	<b>C1203.2</b>	Understand The Concepts Of Homogeneous Data Types To Solve Different Problems
	<b>C1203.3</b>	Apply The Concepts Of Function Modules, Its Usage And Memory Allocation Using Pointers
	<b>C1203.4</b>	Understand The Concepts Of Heterogeneous Data Types And File Handling Feature In C
	<b>C1203.5</b>	Solve System Of Linear Algebraic Equations And Apply Newton'S Forward & Backward Interpolation For Equal Intervals, Lagrange's Formulae For Unequal Intervals
	<b>C1203.6</b>	Describe The Concept Of Numerical Integration And Numerical Solutions Of Differential Equations
<b>Metallurgy &amp; Materials Engineering</b>	<b>C123.1</b>	Understand The Crystal Structure And Classification Of Materials.
	<b>C123.2</b>	Understand Different Phase Diagrams And Its Uses.
	<b>C123.3</b>	Select Suitable Heat-Treatment Process To Achieve Desired Properties Of Metals And Alloys.
	<b>C123.4</b>	Understand The Concept Of Composites And Nano Material To Fulfil Human Needs.
<b>Chemistry</b>	<b>C1202.1</b>	Select The Methods Used For Purification Of Water For Domestic And Industrial Purposes
	<b>C1202.2</b>	Identify The Advantages And Limitations Of Plastics, Building Materials And Their Use In Day To Day Life
	<b>C1202.3</b>	Select The Suitable Methods Of Corrosion Control.
	<b>C1202.4</b>	Identify The Fuels Which Are Commonly Used And Their Economics, Advantages And Limitations.
	<b>C1202.5</b>	Obtain The Knowledge Of Semiconductors, Super Conductors And Liquid Crystals
<b>History of Science &amp; Technology</b>	<b>C1204.1</b>	Understand About The Scientific History Of India, A Particular Period's Of Indian Cultural Habitats And The How To Improvements Of Science And Tech.
	<b>C1204.2</b>	Understand About Policy Resolution Statements Of India, And CSIR Activities.
	<b>C1204.3</b>	Understand The Applications Bio-Technology & Its Applications Like DNA Finger Printing, Cloning, Tissue Culture.
	<b>C1204.4</b>	Understand About The Indian Defense Research And Their Imp. & Ocean Development And Biological Resources, & Research Institutions. Understand About The Indian Satellites, Launch Vehicle Technology, Types Of Satellites Etc., Technology Transfer And Fore Casting
<b>Chemistry Lab</b>	<b>C1207.1</b>	Obtain The Knowledge Of Acid-Base Titrations To Determine The Strength Of Acid And Base Solutions.
	<b>C1207.2</b>	Gain The Knowledge Of Redox Titrations To Determine The Concentration Of Samples Such As Ores And Oxalic Acid Using Different Indicators.
	<b>C1207.3</b>	Obtain The Knowledge Of Complexometry Titrations To Determine The Hardness Of Given Water Sample By Edta Method.
	<b>C1207.4</b>	Gain The Knowledge Of Commonly Used Instrument Ph Meter To Determine The Strength Of Given Acid Solution.
	<b>C1208.1</b>	Explain Computer Programming Concept

<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>Computer Programming and Num. Methods Lab</b>	<b>C1208.2</b>	Prepare Algorithm And Flowchart To Solve Simple Engineering Problems
	<b>C1208.3</b>	Write C Program To Solve Simple Engineering Programs Using Control Statements, Arrays And Functions
	<b>C1208.4</b>	Write C Program To Solve Simple Engineering Programs Using Pointers, Function Call By Value And Function Call By Reference
	<b>C1208.5</b>	Write C Program To Solve Simple Engineering Programs Using Structures And Files
	<b>C1208.6</b>	Explain About Sources Of Errors In Numerical Methods
	<b>C1208.7</b>	Identify Sources Of Errors In Numerical Methods
	<b>C1208.8</b>	Students Will Have A Fundamental Idea To Solve Partial Differential Equations.
	<b>English Language Lab</b>	<b>C1206.1</b>
<b>C1206.2</b>		Build confidence and overcome inhibitions while speaking in English.
<b>C1206.3</b>		Demonstrate acquired language skills in performing the designated activity.

<b>English</b>	<b>C111.1</b>	Apply the four languages learning skills- listening, speaking, reading, writing (lsrw) for professional success.
	<b>C111.2</b>	Employ knowledge of grammatical structures and vocabulary in speech and writing
	<b>C111.3</b>	Apply effective communication skills to enhance professional possibilities.
	<b>C111.4</b>	Develop acceptable personality traits suitable for chosen profession.
<b>Mathematics-I</b>	<b>C112.1</b>	Apply The Partial Differentiation Techniques to Solve Certain Problem Arise In Engineering.
	<b>C112.2</b>	Solve the differential equations of first order and first degree related to various engineering applications.
	<b>C112.3</b>	Solve The Linear Higher Order Differential Equations With Constant Co efficient.
	<b>C112.4</b>	Examine the nature, interval of convergence of infinite series.
<b>Mathematics-II</b>	<b>C113.1</b>	Solve system of linear simultaneous equations of various matrix methods.
	<b>C113.2</b>	Apply eigen value computation techniques to reduce a given quadratic to canonical form
	<b>C113.3</b>	Apply laplace transforms functions for solving ordinary differential equations.
	<b>C113.4</b>	Apply special functions to evaluate improper integrals.
<b>Physics</b>	<b>C114.1</b>	Explain the laws of thermodynamics, efficiency of heat engine and their importance in engineering.
	<b>C114.2</b>	Study the importance of maxwell equations in electromagnetic fields.
	<b>C114.3</b>	Identify various optical phenomena and their importance in engineering.
	<b>C114.4</b>	Understand the working of lasers & its propagation through optical fibers and importance of ultrasonic
	<b>C114.5</b>	Acquire the knowledge of superconductors, nanomaterials and their utilization in various applications.
<b>Engg Graphics</b>	<b>C115.1</b>	Draw basic components of engineering drawing viz geometric constructions, curves etc.
	<b>C115.2</b>	Construct scales : plain, diagonal and vernier
	<b>C115.3</b>	Draw orthographic projections of points, lines and solids as per the international standards.
	<b>C115.4</b>	Draw sectional drawings and developments as per national and international standards.
	<b>C115.5</b>	Draw solid machine components using various drawing techniques viz isometric.
<b>Ethics and Moral Values</b>	<b>C116.1</b>	Understand The Values In Education And Real life
	<b>C116.2</b>	Understand the values in respective professions and analyze the ethical role of engineers
	<b>C116.3</b>	Understand the concept of harmony in life and moral responsibility of engineers.
	<b>C116.4</b>	Understand environmental ethics and apply in real life
<b>Physics lab</b>	<b>C117.1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical
	<b>C117.2</b>	Verify the laws of thermo dynamics, electro magnetism and stretched string.
	<b>C117.3</b>	Draw The Relevance between theoretical knowledge and the means to imply it in a practical manner by
<b>Workshop</b>	<b>C118.1</b>	Follow necessary safety precautions while operating equipment and tools to avoid accidents in workshop.
	<b>C118.2</b>	Apply wood working knowledge in making simple wood joints by selecting appropriate carpentry tools.
	<b>C118.3</b>	Apply development of surfaces concept in producing simple sheet metal works with the use of appropriate
	<b>C118.4</b>	Prepare simple fitting joints with the use of proper fitting tools

<b>COURSE</b>	<b>C.OCODE</b>	<b>COURSEOUTCOMEDescription</b>
<b>Mathematics-III</b>	<b>C121.1</b>	Apply the concept of lines, planes, spheres and the students are through in defining and evaluating
	<b>C121.2</b>	Solve double and triple integrals to find areas and volumes.
	<b>C121.3</b>	Apply special functions to evaluate improper integrals.
	<b>C121.4</b>	Compute Fourier Series for Different Function And Also Half Range Series Certain Types Of Functions.
<b>Computer Programming and Numerical Methods</b>	<b>C122.1</b>	Identify appropriate c language constructs to solve problems
	<b>C122.2</b>	Understand the concepts of homogeneous data types to solve different problems
	<b>C122.3</b>	Apply the concepts of function modules, its usage and memory allocation using pointers
	<b>C122.4</b>	Understand the concepts of heterogeneous data types and file handling feature in c
	<b>C122.5</b>	Solve system of linear algebraic equations and apply newton's forward & backward interpolation for equal intervals, langrage's formulae for unequal intervals
	<b>C122.6</b>	Describe the concept of numerical integration and numerical solutions of differential equations
<b>Metallurgy &amp; Materials Engineering</b>	<b>C123.1</b>	Understand the crystal structure and classification of materials.
	<b>C123.2</b>	Understand different phase diagrams and its uses.
	<b>C123.3</b>	Select suitable heat-treatment process to achieve desired properties of metals and alloys.
	<b>C123.4</b>	Understand the concept of composites and Nano material to fulfill human needs.
<b>Chemistry</b>	<b>C124.1</b>	Select the methods used for purification of water for domestic and industrial purposes
	<b>C124.2</b>	Identify the advantages and limitations of plastics, building materials and their use in day to day life
	<b>C124.3</b>	Select the suitable methods of corrosion control.
	<b>C124.4</b>	Identify the fuels which are commonly used and their economics, advantages and limitations.
	<b>C124.5</b>	Obtain The Knowledge Of Semi conductors, Super Conductors And Liquid Crystals
<b>History of Science &amp; Technology</b>	<b>C125.1</b>	Understand about the scientific history of India, a particular period's of Indian cultural habitats and the how to improvements of science and tech.
	<b>C125.2</b>	Understand about policy resolution statements of India, and CSIR activities.
	<b>C125.3</b>	Understand the applications bio-technology & its applications like DNA finger printing, cloning, tissue culture.
	<b>C125.4</b>	Understand about the Indian defense research and their imp.& ocean development and biological resources, & research institutions. Understand about the Indian satellites, launch vehicle technology, types of satellites etc. ,technology transfer and fore casting
<b>Chemistry Lab</b>	<b>C126.1</b>	Obtain the knowledge of acid-base titrations to determine the strength of acid and base solutions.
	<b>C126.2</b>	Gain the knowledge of Redox titrations to determine the concentration of samples such as ores and oxalic acid using different indicators.
	<b>C126.3</b>	Obtain the knowledge of complexometry titrations to determine the hardness of given water sample by edta method.
	<b>C126.4</b>	Gain the knowledge of commonly used instrument ph meter to determine the strength of given acid solution.
	<b>C127.1</b>	Explain computer programming concept

<b>COURSE</b>	<b>C.O.CODE</b>	<b>COURSEOUTCOMEDescription</b>
<b>Computer Programming and Num. Methods Lab</b>	<b>C127.2</b>	Prepare Algorithm And Flow chart To Solve Simple Engineering Problems
	<b>C127.3</b>	Write c program to solve simple engineering programs using control statements, arrays and functions
	<b>C127.4</b>	Write c program to solve simple engineering programs using pointers, function call by value and function call by reference
	<b>C127.5</b>	Write C Program To Solve Simple Engineering Programs U sing Structures And Files
	<b>C127.6</b>	Explain about sources of errors in numerical methods
	<b>C127.7</b>	Identify sources of errors in numerical methods
	<b>C127.8</b>	Students will have a fundamental idea to solve partial differential equations.
	<b>English Language Lab</b>	<b>C128.1</b>
<b>C128.2</b>		Help students build their confidence and help overcome their inhibitions and self consciousness while speaking in English
<b>C128.3</b>		Familiarize the students with stress and intonation and enable them to speak English effectively.

## ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE	C.O.CODE	COURSEOUTCOMEDescription
<b>English</b>	C1101.1	Apply the four languages learning skills-listening, speaking, reading, writing (LSRW) for professional success.
	C1101.2	Employ knowledge of grammatical structures and vocabulary in speech and writing
	C1101.3	Apply effective communication skills to enhance professional possibilities.
	C1101.4	Develop acceptable personality traits suitable for chosen profession.
<b>Mathematics-I</b>	C1102.1	Apply the partial differentiation techniques to solve certain problem arise in engineering.
	C1102.2	Solve the Differential Equations of first order and first degree related to various engineering applications.
	C1102.3	Solve the linear higher order differential equations with constant coefficients.
	C1102.4	Examine the nature, interval of convergence of infinite series.
<b>Mathematics-II</b>	C1103.1	Solve system of linear simultaneous equations of various matrix methods
	C1103.2	Apply Eigen value computation techniques to reduce a given quadratic to canonical form
	C1103.3	Apply Laplace transforms functions for solving ordinary differential equations.
	C1103.4	Apply special functions to evaluate improper integrals.
<b>Physics</b>	C1105.1	Know the laws of Thermodynamics, conversion mechanism and efficiency of heat energy to work and their importance in Engineering.
	C1105.2	Learn the Electric & Magnetic fields and their relation, time varying electromagnetic fields and their energy transportation.
	C1105.3	Explain the concepts of interference, diffraction and Polarization undergo analysis of optical effects and contribute to engineering applications.
	C1105.4	Understand the Lasers & its propagation through Optical fibers and importance of Ultrasonic waves and able to apply these in different applications in engineering.
	C1105.5	Understand the importance of Superconductors Nanomaterials in various Engineering applications and also learn the concepts of Quantum mechanics to explain the electrical behavior of the materials at atomic level.
<b>EnggGraphics</b>	C1107.1	Draw basic components of engineering drawing viz geometric constructions, curves etc.
	C1107.2	Construct scales: plain, diagonal and vernier
	C1107.3	Draw orthographic projections of points, lines and solids as per the international standards.
	C1107.4	Draw sectional drawings and developments as per National and International standards.
	C1107.5	Draw solid machine components using various drawing techniques viz Isometric.
<b>Ethics and Moral Values</b>	C1109.1	Understand the values in education and real life
	C1109.2	Understand the values in respective professions and analyze the ethical role of engineers
	C1109.3	Understand the concept of harmony in life and moral responsibility of engineers
	C1109.4	Understand environmental ethics and apply in real life
<b>PhysicsLab</b>	C1111.1	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	C1111.2	Verify the laws of thermo dynamics, electro magnetism and stretched string.
	C1111.3	Draw the relevance between theoretical knowledge and the means to imply it in a practical manner by performing various relative experiments
	C1113.1	Apply wood working knowledge in making simple wood joints

<b>WorkShop</b>	<b>C1113.2</b>	Apply the development of surfaces concept in producing simple sheet metal works
	<b>C1113.3</b>	Prepare simple fitting joints with the use of proper fitting tools

<b>COURSE</b>	<b>C.OCODE</b>	<b>COURSEOUTCOMEDescription</b>
<b>Mathematics-III</b>	<b>C1201.1</b>	Apply the concept of lines, planes, spheres and the students are through in defining and evaluating geometric figure.
	<b>C1201.2</b>	Solve double and triple integrals to find areas and volumes.
	<b>C1201.3</b>	Apply special functions to evaluate improper integrals.
	<b>C1201.4</b>	Compute Fourier series for different function and also half range series certain types of functions.
<b>Chemistry</b>	<b>C1203.1</b>	Select the methods used for purification of water for domestic and industrial purposes
	<b>C1203.2</b>	Understand life Identify the advantages and limitations of plastics, building materials and their use in day to daythe advantages and limitations of plastic materials and building materials and their use in day-to-day life
	<b>C1203.3</b>	Select the suitable methods of corrosion control.
	<b>C1203.4</b>	Identify the fuels which are commonly used and their economics, advantages and limitations.
	<b>C1203.5</b>	Obtain the knowledge of semiconductors, super conductors and liquid crystals
<b>Computer programming and numerical methods</b>	<b>C1205.1</b>	Students will be able to identify appropriate C language constructs to solve problem
	<b>C1205.2</b>	Understand the concepts of homogeneous data types to solve different problems
	<b>C1205.3</b>	Apply the concepts of function modules, its usage and memory allocation using pointers
	<b>C1205.4</b>	Understand the concepts of heterogeneous data types and file handling feature in C
	<b>C1205.5</b>	Solve system of linear algebraic equations and apply Newton's forward & backward interpolation for equal intervals, Lagrange's formulae for unequal intervals
	<b>C1205.6</b>	Describe the concept of numerical integration and numerical solutions of differential equations
<b>History of Science &amp; Technology</b>	<b>C1207.1</b>	Able to understand about the scientific history of India, a particular period of Indian cultural habitats and the how-to improvements of science and tech.
	<b>C1207.2</b>	Able to understand about policy resolution statements of India, and CSIR activities.
	<b>C1207.3</b>	Able to understand the applications Bio-technology & its applications like DNA finger printing, cloning, Tissue culture.
	<b>C1207.4</b>	Able to understand about the Indian Defense research and their imp. &Ocean development and biological resources, & research institutions. understand about the Indian satellites, launch vehicle technology, types of satellites etc., technology transfer and fore casting
<b>Basic Electrical Engineering</b>	<b>C1208.1</b>	Understand electronic materials and their properties
	<b>C1208.2</b>	Outline Active & Passive components, Kirchhoff laws, measuring meters.
	<b>C1208.3</b>	List various types of Diodes, Transistors and their applications
	<b>C1208.4</b>	Comprehend power electronic devices and Integrated Circuits.
<b>Chemistry lab</b>	<b>C1210.1</b>	Obtain the knowledge of acid-base titrations to determine the strength of acid and base solutions.
	<b>C1210.2</b>	Gain the knowledge of Redox titrations to determine the concentration of samples such as Ores and oxalic acid using different indicators.
	<b>C1210.3</b>	Obtain the knowledge of complexometry titrations to determine the hardness of given water sample by EDTA method
	<b>C1210.4</b>	Gain the knowledge of commonly used instrument pH meter to determine the strength of given acid solution.
	<b>C1212.1</b>	Students will have a fundamental idea about computer programming concept
	<b>C1212.2</b>	Students will have a fundamental idea to prepare algorithm and flowchart to solve simple engineering problems
	<b>C1212.3</b>	Students will have a fundamental idea to write C program to solve simple engineering programs using control



<b>Cpnm Lab</b>		statements, arrays and functions
	<b>C1212.4</b>	Students will have a fundamental idea to write C program to solve simple engineering programs using pointers, function call by value and function call by reference
	<b>C1212.5</b>	Students will have a fundamental idea to write C program to solve simple engineering programs using structures and files
	<b>C1212.6</b>	Students will have a fundamental idea about sources of errors in numerical methods
	<b>C1212.7</b>	Students will have a fundamental idea about sources of errors in numerical methods
	<b>C1212.8</b>	Students will have a fundamental idea to solve partial differential equations.

## Computer science and engineering

<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>English</b>	<b>C1101.1</b>	Apply The Four Languages Learning Skills-Listening, Speaking, Reading, Writing (Lsrw) For Professional Success.
	<b>C1101.2</b>	Employ Knowledge Of Grammatical Structures And Vocabulary In Speech And Writing
	<b>C1101.3</b>	Apply Effective Communication Skills To Enhance Professional Possibilities.
	<b>C1101.4</b>	Develop Acceptable Personality Traits Suitable For Chosen Profession.
<b>Mathematics-I</b>	<b>C1102.1</b>	Apply The Partial Differentiation Techniques to Solve Certain Problem Arise In Engineering.
	<b>C1102.2</b>	Solve The Differential Equations Of First Order And First Degree Related To Various Engineering Applications.
	<b>C1102.3</b>	Solve The Linear Higher Order Differential Equations With Constant Coefficients.
	<b>C1102.4</b>	Examine The Nature, Interval Of Convergence Of Infinite Series.
<b>Mathematics-II</b>	<b>C1103.1</b>	Solve System Of Linear Simultaneous Equations Of Various Matrix Methods.
	<b>C1103.2</b>	Apply Eigen Value Computation Techniques To Reduce A Given Quadratic To Canonical Form
	<b>C1103.3</b>	Apply Laplace Transforms Functions For Solving Ordinary Differential Equations.
	<b>C1103.4</b>	Apply Special Functions To Evaluate Improper Integrals.
<b>Chemistry</b>	<b>C1104.1</b>	Select the methods used for purification of water for domestic and industrial purposes
	<b>C1104.2</b>	Identify the advantages and limitations of plastics, building materials and their use in day to day life
	<b>C1104.3</b>	Select the suitable methods of corrosion control.
	<b>C1104.4</b>	Identify the fuels which are commonly used and their economics, advantages and limitations.
	<b>C1104.5</b>	Obtain the knowledge of semiconductors, super conductors and liquid crystals
<b>History of science and Technology</b>	<b>C1106.1</b>	Understand About The Scientific History Of India, A Particular Period'S Of Indian Cultural Habitats And The How To Improvements Of Science And Tech.
	<b>C1106.2</b>	Understand About Policy Resolution Statements Of India, And Csir Activities.
	<b>C1106.3</b>	Understand The Applications Bio-Technology & Its Applications Like Dna Finger Printing, Cloning, Tissue Culture.
	<b>C1106.4</b>	Understand About The Indian Defense Research And Their Imp. & Ocean Development And Biological Resources, & Research Institutions. Understand About The Indian Satellites, Launch Vehicle Technology, Types Of Satellites Etc., Technology Transfer And Fore Casting
<b>CPNM</b>	<b>C1105.1</b>	Students will be able to identify appropriate C language constructs to solve problem

	C1105.2	Understand the concepts of homogeneous data types to solve different problems
	C1105.3	Apply the concepts of function modules, its usage and memory allocation using pointers
	C1105.4	Understand the concepts of heterogeneous data types and file handling feature in C
	C1105.5	Solve system of linear algebraic equations and apply Newton's forward & backward interpolation for equal intervals, Langranges's formula for unequal intervals
	C1105.6	Describe the concept of numerical integration and numerical solutions of differential equations
<b>CPNM Lab</b>	C1108.1	Students will have a fundamental idea about computer programming concept
	C1108.2	Students will have a fundamental idea to prepare algorithm and flowchart to solve simple engineering problems
	C1108.3	Students will have a fundamental idea to write C program to solve simple engineering programs using control statements, arrays and functions
	C1108.4	Students will have a fundamental idea to write C program to solve simple engineering programs using pointers, function call by value and function call by reference
	C1108.5	Students will have a fundamental idea to write C program to solve simple engineering programs using structures and files
	C1108.6	Students will have a fundamental idea about sources of errors in numerical methods
	C1108.7	Students will have a fundamental idea to carry out interpolation using Lagrange technique and numerical integration
	C1108.8	Students will have a fundamental idea to solve partial differential equations.
<b>Mathematics-III</b>	C1201.1	Apply the concept of lines, planes, spheres and the students are through in defining and evaluating geometric figure
	C1201.2	Solve double and triple integrals to find areas and volumes.
	C1201.3	Apply special functions to evaluate improper integrals.
	C1201.4	Compute Fourier series for different function and also half range series certain types of functions.
<b>Physics</b>	C1202.1	Learn the laws of Thermodynamics, efficiency of heat engine and their importance in Engineering.
	C1202.2	Study the importance of Maxwell equations in electromagnetic fields.
	C1202.3	Gains the knowledge of optical phenomena and identify their importance in Engineering.
	C1202.4	Understand the working of Lasers & its propagation through Optical fibers and importance of Ultrasonic waves in engineering applications
	C1202.5	Acquire the knowledge of Superconductors, Nanomaterials and their utilization in various applications.
<b>Engg Graphics</b>	C1204.1	Draw basic components of engineering drawing viz scales, curves etc.
	C1204.2	Produce orthographic projections, make sectional drawings and developments as per National and International standards.
	C1204.3	Produce solid machine components using various drawing techniques viz Isometric.
<b>Professional Ethics And</b>	C1205.1	Understand the values in education and real life

<b>Moral values</b>	<b>C1205.2</b>	Understand the values in respective professions and analyze the ethical role of engineers
	<b>C1205.3</b>	Understand the concept of harmony in life and moral responsibility of engineers.
	<b>C1205.4</b>	Understand environmental ethics and apply in real life
<b>PSQT</b>	<b>C1203.1</b>	Apply various probability distribution for both discrete and continuous random variable
	<b>C1203.2</b>	Apply the terms of the sampling distribution and test the hypothesis for small samples
	<b>C1203.3</b>	Apply the terms of the sampling distribution and test the hypothesis for large samples
	<b>C1203.4</b>	Solve the numerical data to fit the curves and apply queue models to real life problems
<b>WORKSHOP</b>	<b>C1207.1</b>	Apply wood working knowledge in making simple wood joints
	<b>C1207.2</b>	Apply the development of surfaces concept in producing simple sheet metal works
	<b>C1207.3</b>	Prepare simple fitting joints with the use of proper fitting tools
	<b>C1207.4</b>	Acquire the knowledge on usage of different Tools used in carpentry, Tinsmithy and Fitting
<b>English Language Lab</b>	<b>C1208.1</b>	Recognize the sounds of English with the help of audio visual aids
	<b>C1208.2</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1208.3</b>	Demonstrate acquired language skills in performing the designated activity.
<b>Physics Lab</b>	<b>C1206.1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	<b>C1206.2</b>	Verify the laws of thermo dynamics, electro magnetism and stretched string.
	<b>C1206.3</b>	Draw the relevance between theoretical knowledge and the means to imply it in a practical manner by performing various relative experiments

## Information Technology

<b>COURSE</b>	<b>C.O CODE</b>	<b>COURSE OUTCOME DESCRIPTION</b>
<b>English</b>	<b>C1101.1</b>	Apply The Four Languages Learning Skills-Listening, Speaking, Reading, Writing (Lsrw) For Professional Success.
	<b>C1101.2</b>	Employ Knowledge Of Grammatical Structures And Vocabulary In Speech And Writing
	<b>C1101.3</b>	Apply Effective Communication Skills To Enhance Professional Possibilities.

	<b>C1101.4</b>	Develop Acceptable Personality Traits Suitable For Chosen Profession.
<b>Mathematics-I</b>	<b>C1102.1</b>	Apply the partial differentiation techniques in physical problem.
	<b>C1102.2</b>	Apply the ordinary differential equation of first order and concerned applications.
	<b>C1102.3</b>	Apply higher order differential equations and concerned applications.
	<b>C1102.4</b>	Apply different type of tests to evaluate convergence of infinite series.
<b>Mathematics-II</b>	<b>C1103.1</b>	Solve System Of Linear Simultaneous Equations Of Various Matrix Methods.
	<b>C1103.2</b>	Apply Eigen Value Computation Techniques To Reduce A Given Quadratic To Canonical Form
	<b>C1103.3</b>	Apply Laplace Transforms Functions For Solving Ordinary Differential Equations.
	<b>C1103.4</b>	Apply Special Functions To Evaluate Improper Integrals.
<b>Chemistry</b>	<b>C1104.1</b>	Select the methods used for purification of water for domestic and industrial purposes
	<b>C1104.2</b>	Identify the advantages and limitations of plastics, building materials and their use in day to day life
	<b>C1104.3</b>	Select the suitable methods of corrosion control.
	<b>C1104.4</b>	Identify the fuels which are commonly used and their economics, advantages and limitations.
	<b>C1104.5</b>	Obtain the knowledge of semiconductors, super conductors and liquid crystals
<b>Computer programming &amp; Numerical Methods</b>	<b>C1106.1</b>	Students will be able to identify appropriate C language constructs to solve problems
	<b>C1106.2</b>	Understand the concepts of homogeneous data types to solve different problems
	<b>C1106.3</b>	Apply the concepts of function modules, its usage and memory allocation using pointers
	<b>C1106.4</b>	Understand the concepts of heterogeneous data types and file handling feature in C
	<b>C1106.5</b>	Solve system of linear algebraic equations and apply Newton's forward & backward interpolation for equal intervals, Lagrange's formulae for unequal intervals
	<b>C1106.6</b>	Describe the concept of numerical integration and numerical solutions of differential equations
<b>History of science &amp; Technology</b>	<b>C1108.1</b>	Understand about the scientific history of India, a particular period's of Indian cultural habitats and the how to improvements of science and tech..
	<b>C1108.2</b>	Understand about policy resolution statements of India, and CSIR activities..
	<b>C1108.3</b>	Understand the applications Bio-technology & its applications like DNA Finger printing, cloning, Tissue culture....
	<b>C1108.4</b>	Understand about the Indian Defence research and their imp. & ocean development and biological resources, & research institutions. Understand about the Indian satellites, launch vehicle technology, types of satellites etc., technology Transfer and forecasting..

<b>Chemistry Lab</b>	<b>C1110.1</b>	Obtain the knowledge of acid-base titrations to determine the strength of acid and base solutions.
	<b>C1110.2</b>	Gain the knowledge of Redox titrations to determine the concentration of samples such as Ores and oxalic acid using different indicators.
	<b>C1110.3</b>	Obtain the knowledge of complexometry titrations to determine the hardness of given water sample by EDTA method.
	<b>C1110.4</b>	Gain the knowledge of commonly used instrument PH meter to determine the strength of given acid solution.
<b>CP Lab</b>	<b>C1112.1</b>	Students will have a fundamental idea about computer programming concept.
	<b>C1112.2</b>	Students will have a fundamental idea to prepare algorithm and flowchart to solve simple engineering problems
	<b>C1112.3</b>	Construct programs that demonstrate effective use of C features including arrays, strings, structures, pointers and files
	<b>C1112.4</b>	Students will have a fundamental idea about sources of errors in numerical methods
	<b>C1112.5</b>	Students will have a fundamental idea to carry out interpolation using Lagrange technique and numerical integration
	<b>C1112.6</b>	Students will have a fundamental idea to solve partial differential equations.
<b>Mathematics-III</b>	<b>C1201.1</b>	Apply the concept of lines, planes, spheres and the students are through in defining and evaluating geometric figure.
	<b>C1201.2</b>	Solve double and triple integrals to find areas and volumes.
	<b>C1201.3</b>	Apply special functions to evaluate improper integrals.
	<b>C1201.4</b>	Compute Fourier series for different function and also half range series certain types of functions.
<b>Physics</b>	<b>C1202.1</b>	Know the laws of Thermodynamics, conversion mechanism and efficiency of heat energy to work and their importance in Engineering..
	<b>C1202.2</b>	Learn the Electric & Magnetic fields and their relation, time varying electromagnetic fields and their energy transportation.
	<b>C1202.3</b>	Explain the concepts of interference, diffraction and Polarization undergo analysis of optical effects and contribute to engineering applications..
	<b>C1202.4</b>	Understand the Lasers & its propagation through Optical fibers and importance of Ultrasonic waves and able to apply these in different applications in engineering..
	<b>C1202.5</b>	Understand the importance of Superconductors Nanomaterials in various Engineering applications and also learn the concepts of Quantum mechanics to explain the electrical behaviour of the materials at atomic level..
<b>Engineering Graphics</b>	<b>C1204.1</b>	Draw basic components of engineering drawing viz scales, curves etc.
	<b>C1204.2</b>	Produce projections; make sectional drawings and developments as per National and International standards.
	<b>C1204.3</b>	Produce solid machine components using various drawing techniques viz Isometric.
	<b>C1206.1</b>	Understand the values in education and real life
	<b>C1206.2</b>	Understand the values in respective professions and analyze the ethical role of engineers

<b>Professional Ethics &amp; Moral Values</b>	<b>C1206.3</b>	Understand the concept of harmony in life and moral responsibility of engineers.
	<b>C1206.4</b>	Understand environmental ethics and apply in real life
<b>PSQT</b>	<b>C1208.1</b>	Apply various probability distributions for both discrete and continuous random variable.
	<b>C1208.2</b>	Apply the terms of the sampling distribution and test the hypothesis for small samples
	<b>C1208.3</b>	Apply the terms of the sampling distribution and test the hypothesis for large samples
	<b>C1208.4</b>	Solve the numerical data to fit the curves and apply queue models to real life problems.
<b>Physics Lab</b>	<b>C1209.1</b>	Apply the knowledge of different phenomena of light like interference, diffraction and handle various optical measuring instruments.
	<b>C1209.2</b>	Verify the laws of thermo dynamics, electro magnetism and stretched string.
	<b>C1209.3</b>	Draw the relevance between theoretical knowledge and the means to imply it in a practical manner by performing various relative experiments
<b>Workshop</b>	<b>C1211.1</b>	Apply wood working knowledge in making simple wood joints
	<b>C1211.2</b>	Apply the development of surfaces concept in producing simple sheet metal works
	<b>C1211.3</b>	Prepare simple fitting joints with the use of proper fitting tools
<b>Eng Lab</b>	<b>C1213.1</b>	Recognize the sounds of English with the help of audio visual aids
	<b>C1213.2</b>	Build confidence and overcome inhibitions while speaking in English.
	<b>C1213.3</b>	Demonstrate acquired language skills in performing the designated activity.