Attainment of Course Outcomes of first year courses

Once the syllabus is approved by academic council, the relevant COs & POs are defined for a particular course. Then CO-PO attainment target levels are finalized at the department level/DQAC and are presented in articulation matrix. The procedure for calculation of CO attainment is given below.

CO Attainment Method / Process:

Theory:

- 1. Data is collected for Theory courses comprising of MSE-I, II, TA, ESE, with mapping of COs to each question.
- 2. The ratio of number of students scoring above 40% marks to the number of students attempted the questions, is calculated.
- 3. Average attainment of each CO for every course, is calculated in every semester.
- 4. As per the benchmark mentioned below, the attainment of each CO is determined.

Benchmark: < 55%: not attained; 55 to 64%: level 1; 65-74%: level 2 and >=75%: level 3

Practical:

- 5. Data is collected for Practical courses comprising of MSPAs and ESE with mapping of COs to each Experiment.
- 6. The ratio of number of students scoring above 50% marks to the number of students attempted the experiments, is calculated.
- 7. As per the benchmark mentioned below the attainment of each CO is verified.

Benchmark: < 55%: not attained; 55 to 64%: level 1; 65-74%: level 2 and >=75%: level 3

Overall Attainment:

- 8. Attainment of all COs of a course, is calculated by combining attainment of **TH** + **PR**.
- 9. Overall CO attainment is collected for all first-year courses by above method..

Record the attainment of Course Outcomes of all first-year courses (5)

Year 2022-23

CO-PO Articulation Matrix / Set Attainment Levels:

COURSE CODE: COURSE NAME	CO	CO STATEMENTS	P01	P02	P03	P04	P05	P06	P07	P08	909	P010	P011	P012
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems.	2	2								1		1
22AML101	CO2	Determine the expansion and derivatives of functions of several variables and use it to find extreme values of functions.	2	2	2							1		1
Calculus, Sequence and Series	CO3	Evaluate the improper integrals, multiple integrals and apply it to compute the area and volume of various structures.	2	2	2							1		1
	CO4	Solve higher order differential equations and its applications.	2	2	2							1		1
		Average	2.00	2.00	2.00							1.00		1.00
	C01	Apply different modes of effective communication										2		2
22AML102 Technical	CO2	Produce competently the Phonology of English Language										2		2
Communication 22AML103 Lab:	CO3	Apply the nuances of LSRW Skills										2		2
Technical Communication	C04	Practice communication through different channels									2	2		2
		Average									2.00	2.00		2.00

	C01	To understand the Computer Hardware and networking components and their interconnection	2					2	1	2
22AML104 Lab:	CO2	To work with Linux/UNIX System using shell commands	1		1	1		1		2
Workshop	CO3	To learn to use software tools such as Excel, JSON format, etc.	1			3		1	1	2
		Average	1.33		1.00	2.00		1.33	1.00	2.00
	C01	Describe the basics of computer system components, operation and basic of algorithms and flowcharts.	3							
22AML105 Programming for	CO2	Understand C language syntax and their usage and to understand the given piece of code.	2							
Problem Solving	CO3	To develop logic to solve given problem and write a working C program for the same.	3	2						
Programming for Problem Solving	CO4	Write useful programs for solving real world problems using suitable features of C programming language.	2	2						2
		Average	2.50	2.00						2.00
	C01	Illustrate different thermodynamic functions and chemical reaction rates.	2	2			1		1	1
22AML107 Engineering	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1			1		1	1
Chemistry 22AML108 Lab.:	CO3	Explain basic principles and applications of spectroscopy.	1	1					1	1
Engineering Chemistry	CO4	Establish insight into engineering materials.	2	2			1		1	1
		Average	1.75	1.50			1.00		1.00	1.00
22AML201 Probability and	C01	Identify an appropriate probability distribution for a given discrete or continuous random variable and	2	2					1	1

Statistics		compute probabilities.								
	CO2	Make use of probability distributions to solve real life problems.	2	2					1	1
	CO3	Apply concepts of sampling theory to find probabilities and estimate parameters of various problems solve the integrals.	2	2	2				1	1
	CO4	Inspect scientific data, use proper curve fitting and find correlation, regression of variables	2	2	2				1	1
		Average	2.0	2.0	2.0				1.0	1.0
	C01	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2						1
22AML202	CO2	Assess the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bnads.	2	2						1
Engineering Physics	CO3	Illustrate working principle of lasers and optical fibre for their use in the field of industry.	2	2						1
22AML203 Lab: Engineering	CO4	Identify the requirements of sensor material for technological application.	3	3						1
Physics	CO5	Analyze the motion of charged particle in electric and magnetic field and its applications to electron optic devices.	2	2						1
		Average	2.20	2.20						1.00
22AML204 Digital	C01	Understand and demonstrate the various codes and illustrate their addition subtraction	2							
Electronics 22AML205 Lab:	CO2	Apply the laws of Boolean algebra to simplify logical equations and combination logic circuits.	2	2						
Digital Electronics	CO3	Solve logical functions using K- map to implement combinational logic circuits.	2	2		1				2

	CO4	Design and analyze Synchronous and Asynchronous Sequential Circuits.	2	2	1	1					2
	CO5	Understand the function of elementary digital circuits under real and simulated environment.				2					2
		Average	2.00	2.00	1.00	1.00					2.00
	C01	Demonstrate the understanding of Object oriented concepts.	2								
22AML206 Object Oriented	CO2	Analyze problem statement and identify appropriate objects and methods for problem solving.	2	2							
Programming22A ML207 Object	CO3	Make use of predefined classes and frameworks for reducing coding efforts and improving performance.	2								
Oriented Programming	CO4	Apply features of object oriented programming to write programs to solve real world problems.	2	2							
		Average	2.00	2.00							
	C01	Understand various internet technologies	2								
	CO2	To design the web pages using some basic techniques	2	2	3	2		1	1	1	2
22AML208 Web Technology Lab	CO3	To design and implement the interactive web pages	2	2	2	1					2
	CO4	To design and develop the interactive web pages using the advanced technique	1	1	1	 2					1
		Average	1.75	1.67	2.00	1.67		1.00	1.00	1.00	1.67
22AML209 Social	C01	Explain the basic concepts of Social Sciences				 	2				
Science	CO2	Describe the development of various civilizations and their culture					2				

	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
		Average					2.00				2.00	2.00
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems.	2	2						1		1
22ADS101	CO2	Determine the expansion and derivatives of functions of several variables and use it to find extreme values of functions.	2	2	2					1		1
Calculus, Sequence and Series	CO3	Evaluate the improper integrals, multiple integrals and apply it to compute the area and volume of various structures.	2	2	2					1		1
	CO4	Solve higher order differential equations and its applications.	2	2	2					1		1
		Average	2.00	2.00	2.00					1.00		1.00
	C01	Illustrate different thermodynamic functions and chemical reaction rates.	2	2				1		1		1
22ADS102 Engineering	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1				1		1		1
Chemistry 22ADS103 Lab.:	CO3	Discuss drug molecules synthesis.	1	1				1		1		1
Engineering Chemistry	CO4	Establish insight into engineering materials.	2	2				1		1		1
		Average	1.75	1.50				1.00		1.00		1.00
22ADS104 Technical	C01	Apply different modes of effective communication								2		2

Communications 22ADS105 Lab.:	CO2	Produce competently the Phonology of English Language									2	2
Technical Communications	CO3	Apply the nuances of LSRW Skills									2	2
	CO4	Practice communication through different channels								2	2	2
		Average								2.00	2.00	2.00
	C01	To understand the fundamentals of data analysis.	1	3								1
22ADS106 Foundations of	CO2	To understand the data preparation and representation of data for analysis	3					1				1
Data Science 22ADS107 Lab.:	CO3	To learn the fundamentals of probability theory and probability distribution	3					1				1
Foundations of Data Science	C04	To comprehend the application domains of data analysis	3			2		1				1
		Average	2.50	3.00		2.00		1.00				1.00
	C01	To understand the computer system, basics of writing the algorithm & designing of flowchart.	2	3	2				2			2
22ADS108	CO2	To understand & write straight line program by using basic,,C" programming language constructs	2	2	2		2		2			2
Computer Programing	CO3	To design & Develop programs using different loop control structures.	3		3		2				2	
Computer Programing	CO4	To design & develop user defined functions, understand the concept of Pointers & Modular programming	3		3		2				2	
	CO5	To understand and analyze different dimensional Arrays as a data structure & development of programs.	2	3	2							2

	CO6	To understand the basics of Strings, Structures, union and File handling in 'C' language.	2		2					2
		Average	2.33	2.67	2.33	2.00		2.00	2.00	2.00
	C01	Identify an appropriate probability distribution for a given discrete or continuous random variable and compute probabilities.	2	2					1	1
22456201	CO2	Make use of probability distributions to solve real life problems.	2	2					1	1
22ADS201 Probability and Statistics	CO3	Apply concepts of sampling theory to find probabilities and estimate parameters of various problems solve the integrals.	2	2	2				1	1
	CO4	Inspect scientific data, use proper curve fitting and find correlation, regression of variables	2	2	2				1	1
	Avera	ge	2.00	2.00	2.00				1.00	1.00
	CO1	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2						1
22ADS202	CO2	Assess the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2	2						1
Engineering Physics	CO3	Illustrate working principle of lasers and optical fibres for their use in the field of industry.	2	2						1
22ADS203 Lab: Engineering Physics	CO4	Analyze the motion of charge particlein electric field and magnetic field and its applications to electron optic devices.	3	3						1
5	CO5	Develop ability to classify nanomaterials for their potential applications.	2	2						1
	Avera	ge	2.20	2.20						1.00
22ADS204 Social Science	C01	Explain the basic concepts of Social Sciences					2			

	CO2	Describe the development of various civilizations and their culture					2					
	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
	Avera	ge					2.00				2.00	2.00
	CO1	Relate & Identify the function and design of the various units of computers that process data and store the information.	3	2							3	3
	CO2	Understand issues involved in the instruction and microinstructions execution and different addressing modes.	3	2				 			3	3
Computer	CO3	Understand the different types of Hazards and its mitigation, and working of computer peripherals.	3	2				 	3	2	3	3
Organization	CO4	Apply the arithmetic operations on signed/un-signed integer and floating point operands.	3			3					3	3
	C05	Apply the concept of memory circuits , organization of memory management and cache memory.	3						3	2	3	3
	Avera	ge	3.00	2.00		3.00			3.00	2.00	3.00	3.00
22ADS206 Object	C01	Understand the concept of object-oriented programming and modeling.	2					2				2
Oriented Programming	CO2	Apply the knowledge of object-oriented programming to solve the given problem.	3	3	3	3	2					2
22ADS207 Object Oriented	CO3	Apply the advanced programming concepts of OOP to solve the given problem		3	3	3	2					2
Programming	CO4	Design the event driven web based solution for the problem.		3	3	3	2		2	2		2

	Avera	ge	2.50	3.00	3.00		3.00	2.00	2.00	2.00	2.00	2.00
	CO1	Acquire the basic concepts of data structures and select appropriate data structures for solving real life problems.	2	2	1							3
22ADS208 Data	CO2	Demonstrate various operations on linked list, skip list based on the requirements of real life problems.	3	3	2	2						3
Structures 22ADS209 Lab:	CO3	Describe the hash function and concepts of collision and its resolution methods.	3	3	2	2						3
Data Structures	CO4	Implement different types of trees and graph data structures and use them to solve problems dealing with non-linear data.	3	2	2	2						3
	Avera	ge	2.75	2.50	1.75	2.00						3.00
	CO1	Select any framework for python programming as per their understanding	3	2	2		2					
	CO2	Write any python program using various data structures and control statements	3	2	2		2					
22ADS210 Software Lab	CO3	Write program where file handling and concepts of classes and objects are needed	3	2	2		2					
	CO4	Develop advanced applications using functionalities provided under various packages of python	3	2	2		2					
	Avera	ge	3.00	2.00	2.00		2.00					
00777104	C01	Apply the knowledge of differentiation to solve the Engineering problems.	2	2							1	1
Structures 22ADS209 Lab: Data Structures CO Av 22ADS210 Software Lab CC 22ET101 Differential and Integral Calculus	CO2	Determine the derivatives of functions of several variables and develop the mathematical equation.	2	2							1	1
	CO3	Apply the knowledge of Beta and Gamma functions to solve the integrals.	2	2	2						1	1

	CO4	Evaluate the multiple integrals and apply it to compute the area and volume of various structures.	2	2	2					1		1
		Average	2.00	2.00	2.00					1.00		1.00
	C01	Illustrate qualitative and quantitative aspects of water for industrial and domestic applications.	2	2			1			1		1
22ET102 Engineering	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1			1			1		1
Chemistry 22ET103 Lab:	CO3	Identify corrosion and discuss its prevention.	1	1			1			1		1
Engineering Chemistry	CO4	Establish insight into engineering materials.	2	2			1			1		1
		Average	1.75	1.50			1.00			1.00		1.00
	C01	Apply different modes of effective communication								2		2
22ET104	CO2	Produce competently the Phonology of English Language								2		2
Professional	CO3	Apply the nuances of LSRW Skills								2		2
communication	CO4	Practice communication through different channels							2	2		2
		Average							2.00	2.00		2.00
22ET105 Engineering	C01	Describe the fundamental concepts of statics and dynamics.	3	3				2	2	2	2	
Mechanics 22ET106 Lab:	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system	3	3				2	2	2	2	

Engineering Mechanics	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body.	3	3			2	2	2	2	
	CO4	Analyze pin jointed truss frame structure and beam structure analytically and graphically	3	3			2	2	2	2	
	CO5	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3			2	2	2	2	
		Average	3.00	3.00			2.00	2.00	2.00	2.00	
	C01	Understand, define and explain the fundamental conc epts of Analog Electronic and Electrical Circuits	1	1							
22FT107 Basic	CO2	Apply the concepts of Electrical and Electronic Circuits to obtain the desired parameter	3	3	2						
Electrical and Electronics	CO3	Analyze Analog Electrical and Electronic Circuits to arrive at suitable Conclusions.	2	2	3						
Engineering	CO4	Design simple circuits using fundamentals of analog Electrical and Electronic circuit for given application.	2	2	3						
		Average	2.00	2.00	2.67						
22ET108	C01	Describe the basics of computer system components and operation, basics of algorithms and flowcharts	3								
Programming for Problem Solving	CO2	Develop programs using conditional statements and loops user defined functions, and pointers.	3								
22ET109 Lab: Programming for	CO3	Analyze single and multi-dimensional arrays as a data structure and its use in problem solving.	2	2							
Problem Solving	CO4	Describe the basics of Strings, Structures, Unions, and File handling and its use for problem solving.		1	2						

		Average	2.67	1.50	2.00					
	C01	Use appropriate Methods to solve first order and higher order differential equations and apply it to find solutions of engineering problems.	2	2					1	1
22ET201 Differential	CO2	Determine the various functions of complex numbers.	2	2					1	1
Equation, Complex	CO3	Evaluate the integration of function of complex variables.	2	2	2				1	1
Variables & Matrices	CO4	Use Matrix method to solve system of linear equations, evaluate eigen values - eigen vectors and its applications.	2	2	2				1	1
		Average	2.00	2.00	2.00				1.00	1.00
	C01	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2						1
22ET202	CO2	Assess the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2	2						1
Engineering Physics	CO3	Examine the intensity variation of light due to interference, diffraction, laser and its applications.	3	3						1
22ET203 Lab: Engineering	CO4	Analyze the motion in electric field and magnetic field and its applications to electron optic devices.	3	3						1
Physics	CO5	Illustrate the nature and characterization of magnetic materials and superconductors for engineering applications.	2	2						1
		Average	2.40	2.40						1.00
22ET204 Social Science	C01	Explain the basic concepts of Social Sciences					2			

	CO2	Describe the development of various civilizations and their culture					2					
	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
		Average					2.00				2.00	2.00
	C01	Construct orthographic drawing and isometric drawing of a given object	3	2		3			2	3		3
22ET205 Engineering	CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2		3			2	3		3
Graphics 22ET206 Lab:	CO3	Develop the lateral surfaces of various solids and their section.	3	2		3			2	3		3
Engineering Graphics	CO4	Practice the use of software tools used for Two dimensional drawings.	3	2		3			2	3		3
		Average	3.00	2.00		3.00			2.00	3.00		3.00
	C01	Develop an understanding what is involved in AIML.	2					1	2			3
	CO2	Understand learning algorithms of AIML.	2			3			2			3
2257207	CO3	Understand the deep learning .	2						2			3
Elements of AIML	CO4	Apply the knowledge for the selection of tool and lanuages for problem solving	3			3	3		2			3
	CO5	Understand the use of AIML for real world problems	2			3	3		2			3
		Average	2.20			3.00	3.00	1.00	2.00			3.00

	C01	Choose the electrical and electronics components/equipment for various application.	3	1	1				1		3
	CO2	Implement and test small electonics and electrical circuits.	3	1	1				1		2
22ET208 Electrical	CO3	Build the various electrical wiring for different application.	3						1		2
worksnop	CO4	Select various sensors and measuring instruments for different applications.	3						1		
		Average	3.00	1.00	1.00				1.00		2.33
	C01	Represent the data numerically and detect and correct errors.	2	2							
22ET209 Digital	CO2	Develop the properties of partially ordered sets and lattices	2	2							
Logic Design 22ET210 Lab:	CO3	Simplify the logical functions using minimization techniques	3	3	3			2	2	2	2
Digital Logic Design	CO4	Design and analyse combinational Circuits	3	3	3			2	2	2	2
	CO5	Design and analyse sequential Circuits and sequential machines	2	2	3			2	2	2	2
		Average	2.40	2.40	3.00			2.00	2.00	2.00	2.00
	C01	Apply the knowledge of differentiation to solve the Engineering problems.	2	2					1		1
22CV101 Calculus	CO2	Determine the derivatives of functions of several variables and develop the relations among the derivatives of variables.	2	2					1		1
and Vector	CO3	Apply the knowledge of Beta and Gamma functions to find area, volume and mass.	2	2	2				1		1
	CO4	Discuss Calculus of Scalar and vector point function and use appropriate theorems to evaluate integrals of functions of single and multiple variables.	2	2	2				1		1

		Average	2.00	2.00	2.00					1.00		1.00
22CV102	C01	Illustrate qualitative and quantitative aspects of water for industrial and domestic applications.	2	2			1			1		1
Engineering Chemistry	CO2	Identify corrosion and discuss its prevention.	1	1			1			1		1
22CV103 Lab: Engineering	CO3	Establish insight into engineering materials.	2	2			1			1		1
Chemistry		Average	1.67	1.67			1.00			1.00		1.00
	C01	Apply different modes of effective communication								2		2
220104	CO2	Produce competently the Phonology of English Language								2		2
Professional	CO3	Apply the nuances of LSRW Skills								2		2
Communication	CO4	Practice communication through different channels							2	2		2
		Average							2.00	2.00		2.00
	C01	Describe the fundamental concepts of statics and dynamics.	3	3				2	2	2	2	
22CV105	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system	3	3				2	2	2	2	
Mechanics 22CV106 Lab:	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body.	3	3				2	2	2	2	
Mechanics	CO4	Analyze pin jointed truss frame structure and beam structure analytically and graphically	3	3				2	2	2	2	
	C05	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3				2	2	2	2	

		Average	3.00	3.00				2.00	2.00	2.00	2.00	
	C01	Understand, define and explain the fundamental conc epts of Analog Electronic and Electrical Circuits	1	1								
22CV107 Basic	CO2	Apply the concepts of Electrical and Electronic Circuits to obtain the desired parameter	3	3	2							
Electrical and Electronics	CO3	Analyze Analog Electrical and Electronic Circuits to arrive at suitable Conclusions.	2	2	3							
Engineering	CO4	Design simple circuits using fundamentals of analog Electrical and Electronic circuit for given application.	2	2	3							
		Average	2.00	2.00	2.67							
	C01	Describe the basics of computer system components and operation, basics of algorithms and flowcharts	3									
22CV108 Programming for	CO2	Develop programs using conditional statements and loops user defined functions, and pointers.	3									
Problem Solving 22CV109 Lab:	CO3	Analyze single and multi-dimensional arrays as a data structure and its use in problem solving.	2	2								
Programming for Problem Solving	CO 4	Describe the basics of Strings, Structures, Unions, and File handling and its use for problem solving.		1	2							
		Average	2.67	1.50	2.00							
22CV201	C01	Use appropriate Methods to solve first order and higher order differential equations and apply it to find solutions of engineering problems.	2	2						1		1
Equation, Matrices &	CO2	Use Matrix method to solve linear system of equations, evaluate eigen values - eigen vectors and its applications.	2	2						1		1
Statistics	CO3	Make use of probability distributions to solve real life problems.	2	2	2					1		1

	CO4	Inspect scientific data, use proper curve fitting and find correlation, regression of variables	2	2	2					1		1
		Average	2.00	2.00	2.00					1.00		1.00
	C01	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2								1
22CV202	CO2	Justify the characteristics of semiconductor materials in terms of crystal structure, charge carriers and energy bands.	2	2								1
Engineering Physics	CO3	Assess the fundamentals of interference and their significance in optical measurements.	3	3								1
22CV203 Lab: Engineering	CO4	Illustrate working principle of lasers and optical fibers for their use in the field of industry.	3	3								1
Physics	C05	Identify and analyze the fundamentals of ultrasonic and acoustic waves and their applications in technology.	2	2								1
		Average	2.40	2.40								1.00
	C01	Explain the basic concepts of Social Sciences					2					
	CO2	Describe the development of various civilizations and their culture					2					
22CV204 Social Science	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
		Average					2.00				2.00	2.00
22CV205 Engineering	C01	Construct orthographic drawing and isometric drawing of a given object	3	2		3			2	3		3

Graphics 22CV206 Lab:	CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2		3			2	3	3
Engineering Graphics	CO3	Develop the lateral surfaces of various solids and their section.	3	2		3			2	3	3
	CO4	Practice the use of software tools used for Two dimensional drawings.	3	2		3			2	3	3
		Average	3.00	2.00		3.00			2.00	3.00	3.00
	C01	Develop an understanding what is involved in AIML.	2					1	2		3
	CO2	Understand learning algorithms of AIML.	2			3			2		3
22CV207	CO3	Understand the deep learning .	2						2		3
2CV207 Elements of AIML	CO4	Apply the knowledge for the selection of tool and lanuages for problem solving	3			3	3		2		3
	CO5	Understand the use of AIML for real world problems	2			3	3		2		3
		Average	2.20			3.00	3.00	1.00	2.00		3.00
	CO1	Discuss about various manufacturing process like smithy, carpentry, assembling, welding etc and different machines.					3		3		3
22CV208 FAB	CO2	Operate the various hand tools used in the basic mechanical engineering workshop sections-smithy, carpentry, assembling, welding etc.					3		3		3
- Suop	CO3	Distinguish different measuring devices according to the work.					3		3		3
	CO4	Develop various shapes through different manufacturing methods.					3		3		3

		Average					3.00		3.00		3.00
	C01	Explain the basic concept and mechanical properties of materials.	3	2		3			1		
of Materials	CO2	Construct graphically the variation of shear force, bending moment and stresses.	3	2	2	3			1		
Strength of Materials	CO3	Analyze the behavior of various structural components under different types of loading.	3	2	3				1	1	
		Average	3.00	2.00	2.50	3.00			1.00	1.00	
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems.	2	2						1	1
	CO2	Determine the expansion and derivatives of functions of several variables and use it to find extreme values of functions.	2	2						1	1
Sequences and Series	CO3	Evaluate the improper integrals, multiple integrals and apply it to compute the area and volume of various structures.	2	2	2					1	1
	CO4	Solve higher order differential equations and its applications.	2	2	2					1	1
		Average	2.00	2.00	2.00					1.00	1.00
22IT102	C01	Illustrate different thermodynamic functions and chemical reaction rates.	2	2				1		1	1
Engineering Chemistry	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1				1		1	1
22IT103 Lab: Engineering	CO3	Develop awareness about global environmental concerns.	1					1		1	1
Chemistry	CO4	Establish insight into engineering materials.	2	2				1		1	1

		Average	1.75	1.67			1.00			1.00		1.00
	C01	Apply different modes of effective communication								2		2
22177104	CO2	Produce competently the Phonology of English Language								2		2
Professional Communication	CO3	Apply the nuances of LSRW Skills								2		2
communication	CO4	Practice communication through different channels							2	2		2
		Average							2.00	2.00		2.00
	C01	Describe the fundamental concepts of statics and dynamics.	3	3				2	2	2	2	
22JTT 1 0F	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system	3	3				2	2	2	2	
Engineering Mechanics	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body.	3	3				2	2	2	2	
22IT106 Lab: Engineering	CO4	Analyze pin jointed truss frame structure and beam structure analytically and graphically	3	3				2	2	2	2	
Mechanics	C05	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3				2	2	2	2	
		Average	3.00	3.00				2.00	2.00	2.00	2.00	
22IT107 Basic	C01	Understand, define and explain the fundamental conc epts of Analog Electronic and Electrical Circuits	1	1								
Electrical and Electronics	CO2	Apply the concepts of Electrical and Electronic Circuits to obtain the desired parameter	3	3	2							
Engineering	CO3	Analyze Analog Electrical and Electronic Circuits to arrive at suitable Conclusions.	2	2	3							

	CO4	Design simple circuits using fundamentals of analog Electrical and Electronic circuit for given application.	2	2	3					
		Average	2.00	2.00	2.67					
	C01	Describe the basics of computer system components and operation, basics of algorithms and flowcharts	3							
22IT108 Programming for	CO2	Develop programs using conditional statements and loops user defined functions, and pointers.	3							
Problem Solving 22IT109 Lab:	CO3	Analyze single and multi-dimensional arrays as a data structure and its use in problem solving.	2	2						
Programming for Problem Solving	CO4	Describe the basics of Strings, Structures, Unions, and File handling and its use for problem solving.		1	2					
		Average	2.67	1.50	2.00					
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems	2	2	2				1	1
22IT201	CO2	Determine the derivatives of functions of several variables and develop the mathematical equation.	2	2	2				1	1
Differential Equation &	CO3	Apply the knowledge of Beta and Gamma functions to solve the integrals.	2	2					1	1
Complex Analysis	CO4	Evaluate the multiple integrals and apply it to compute the area and volume of various structures.	2	2					1	1
		Average	2.00	2.00	2.00				1.00	1.00
22IT202 Engineering	C01	Correlate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2						1
Physics 22IT203 Lab:	CO2	Justify the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2	2						1

Engineering Physics	CO3	Illustrate working principle of lasers and optical fibers for their use in the field of industry.	2	2							1
	CO4	Analyse the motion of charged particles in electric and magnetic field and its applications to electron optic devices.	3	3							1
	C05	Assess the characteristics of nano materials, synthesis methods and their applications.	2	2							1
		Average	2.20	2.20							1.00
	C01	Explain the basic concepts of Social Sciences				2					
	CO2	Describe the development of various civilizations and their culture				2					
22IT204 Social Science	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.				2				2	
	CO4	Explain Industrial Organization and Management.				2				2	2
						2.00				2.00	2.00
		Average									
	C01	Average Construct orthographic drawing and isometric drawing of a given object	3	2	3			2	3		3
22IT205 Engineering	CO1 CO2	AverageConstruct orthographic drawing and isometric drawing of a given objectEvaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2	3			2	3		3
22IT205 Engineering Graphics 22IT206 Lab:	C01 C02 C03	AverageConstruct orthographic drawing and isometric drawing of a given objectEvaluate Projections of various One Dimensional, Two dimensional, Three dimensional objectsDevelop the lateral surfaces of various solids and their section.	3 3 3	2 2 2 2	3 3 3			2 2 2 2	3 3 3		3 3 3
22IT205 Engineering Graphics 22IT206 Lab: Engineering Graphics	C01 C02 C03 C04	AverageConstruct orthographic drawing and isometric drawing of a given objectEvaluate Projections of various One Dimensional, Two dimensional, Three dimensional objectsDevelop the lateral surfaces of various solids and their section.Practice the use of software tools used for Two dimensional drawings.	3 3 3 3 3	2 2 2 2 2	3 3 3 3 3			2 2 2 2 2	3 3 3 3 3		3 3 3 3 3
22IT205 Engineering Graphics 22IT206 Lab: Engineering Graphics	C01 C02 C03 C04	AverageConstruct orthographic drawing and isometric drawing of a given objectEvaluate Projections of various One Dimensional, Two dimensional, Three dimensional objectsDevelop the lateral surfaces of various solids and their section.Practice the use of software tools used for Two dimensional drawings.Average	3 3 3 3 3.00	2 2 2 2 2 2.00	3 3 3 3 3 3.00			2 2 2 2 2 2.00	3 3 3 3 3.00		3 3 3 3 3.00

	CO2	Understand learning algorithms of AIML.	2			3			2		3
	CO3	Understand the deep learning .	2						2		3
	CO4	Apply the knowledge for the selection of tool and lanuages for problem solving	3			3	3		2		3
	CO5	Understand the use of AIML for real world problems	2			3	3		2		3
		Average	2.20			3.00	3.00	1.00	2.00		3.00
	C01	Understand the fundamentals of computer hardware and working of Linux operating system	2			3					3
221T208	CO2	Use Linux commands to manage files and file systems	2			3					3
Computer	CO3	Execute Scripts and C Programs	3			3					3
workshop	CO4	Debug Programs on various IDEs	3			3					3
		Average	2.50			3.00					3.00
22IT200 Pasies of	C01	Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.	3	3	1	2			1	1	2
Python Programming	CO2	Express proficiency in the handling of strings and functions.	3	3	1	2			1	1	2
22IT210 Lab: Basics of Python	CO3	Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets	3	3	1	2			1	1	2
r i ogi allillillig	CO4	Data visualization provides good, organized pictorial representation of the data which makes it easier to understand, observe, and analyze.	3	3	1	2			1	1	2

		Average	3.00		3.00	1.00	2.00		1.00	1.00	2.00
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems.	2	2						1	1
22CT101 Calculus	CO2	Determine the expansion and derivatives of functions of several variables and use it to find extreme values of functions.	2	2						1	1
Sequences and Series	CO3	Apply the knowledge of Curve Tracing, Beta and Gamma functions to solve various problems.	2	2	2					1	1
	CO4	Evaluate the multiple integrals and apply it to compute the area and volumes of various structures.	2	2	2					1	1
		Average	2.00	2.00	2.00					1.00	1.00
	C01	Illustrate different thermodynamic functions and chemical reaction rates.	2	2				1		1	1
22CT102 Engineering	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1				1		1	1
Chemistry 22CT103 Lab:	CO3	Develop awareness about global environmental concerns.	1					1		1	1
Engineering Chemistry	CO4	Establish insight into engineering materials.	2	2				1		1	1
		Average	1.75	1.67				1.00		1.00	1.00
	C01	Apply different modes of effective communication								2	2
22CT104 Professional	CO2	Produce competently the Phonology of English Language								2	2
Communication	CO3	Apply the nuances of LSRW Skills								2	2
	CO4	Practice communication through different channels							2	2	2

		Average							2.00	2.00		2.00
	C01	Describe the fundamental concepts of statics and dynamics.	3	3				2	2	2	2	
2207105	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system	3	3				2	2	2	2	
Engineering Mechanics	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body.	3	3				2	2	2	2	
Engineering	CO4	Analyze pin jointed truss frame structure and beam structure analytically and graphically	3	3				2	2	2	2	
Mechanics	CO5	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3				2	2	2	2	
		Average	3.00	3.00				2.00	2.00	2.00	2.00	
	C01	Understand, define and explain the fundamental conc epts of Analog Electronic and Electrical Circuits	1	1								
22CT107 Basic	CO2	Apply the concepts of Electrical and Electronic Circuits to obtain the desired parameter	3	3	2							
Electrical and	CO3	Analyze Analog Electrical and Electronic Circuits to arrive at suitable Conclusions.	2	2	3							
Engineering	CO4	Design simple circuits using fundamentals of analog Electrical and Electronic circuit for given application.	2	2	3							
		Average	2.00	2.00	2.67							
22CT108 Programming for	C01	Describe the basics of computer system components and operation, basics of algorithms and flowcharts	3									
Problem Solving 22CT109 Lab:	CO2	Develop programs using conditional statements and loops user defined functions, and pointers.	3									

Programming for Problem Solving	CO3	Analyze single and multi-dimensional arrays as a data structure and its use in problem solving.	2	2						
	CO4	Describe the basics of Strings, Structures, Unions, and File handling and its use for problem solving.		1	2					
		Average	2.67	1.50	2.00					
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems	2	2	2				1	1
22CT201	CO2	Determine the derivatives of functions of several variables and develop the mathematical equation.	2	2	2				1	1
Differential Equation and	CO3	Apply the knowledge of Beta and Gamma functions to solve the integrals.	2	2					1	1
Equation and	CO4	Evaluate the multiple integrals and apply it to compute the area and volume of various structures.	2	2					1	1
		Average	2.00	2.00	2.00				1.00	1.00
	C01	Average Correlate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2.00 2	2.00 2	2.00				1.00	1.00 1
22CT202	CO1 CO2	AverageCorrelate fundamentals of quantum mechanics to solve problems dealing with quantum particle.Justify the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2.00 2 2	2.00 2 2	2.00				1.00	1.00 1 1
22CT202 Engineering Physics	CO1 CO2 CO3	AverageCorrelate fundamentals of quantum mechanics to solve problems dealing with quantum particle.Justify the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.Illustrate working principle of lasers and optical fibers for their use in the field of industry.	2.00 2 2 2 2	2.00 2 2 2 2	2.00				1.00	1.00 1 1 1
22CT202 Engineering Physics 22CT203 Lab: Engineering Physics	CO1 CO2 CO3 CO4	AverageCorrelate fundamentals of quantum mechanics to solve problems dealing with quantum particle.Justify the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.Illustrate working principle of lasers and optical fibers for their use in the field of industry.Analyse the motion of charged particles in electric and magnetic field and its applications to electron optic devices.	2.00 2 2 2 2 3	2.00 2 2 2 2 3	2.00				1.00	1.00 1 1 1 1 1
22CT202 Engineering Physics 22CT203 Lab: Engineering Physics	CO1 CO2 CO3 CO4 CO5	AverageCorrelate fundamentals of quantum mechanics to solve problems dealing with quantum particle.Justify the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.Illustrate working principle of lasers and optical fibers for their use in the field of industry.Analyse the motion of charged particles in electric and magnetic field and its applications to electron optic devices.Assess the characteristics of nano materials, synthesis methods and their applications.	2.00 2 2 2 3 2	2.00 2 2 2 3 2	2.00				1.00	1.00 1 1 1 1 1 1

	C01	Explain the basic concepts of Social Sciences					2					
	CO2	Describe the development of various civilizations and their culture					2					
22CT204 Social Science	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
		Average					2.00				2.00	2.00
	C01	Construct orthographic drawing and isometric drawing of a given object	3	2		3			2	3		3
22CT205 Engineering	CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2		3			2	3		3
Engineering Graphics 22CT206 Lab: Engineering Graphics	CO3	Develop the lateral surfaces of various solids and their section.	3	2		3			2	3		3
	CO4	Practice the use of software tools used for Two dimensional drawings.	3	2		3			2	3		3
		Average	3.00	2.00		3.00			2.00	3.00		3.00
	C01	Develop an understanding what is involved in AIML.	2					1	2			3
	CO2	Understand learning algorithms of AIML.	2			3			2			3
22CT207	CO3	Understand the deep learning .	2						2			3
22CT207 Elements of AIML	CO4	Apply the knowledge for the selection of tool and lanuages for problem solving	3			3	3		2			3
	CO5	Understand the use of AIML for real world problems	2			3	3		2			3
		Average	2.20			3.00						3.00

-	C01	Understand the fundamentals of computer hardware and working of Linux operating system	2				3				3
22CT208	CO2	Use Linux commands to manage files and file systems	2				3				3
Computer workshop	CO3	Execute Scripts and C Programs	3				3				3
	CO4	Debug Programs on various IDEs	3				3				3
		Average	2.50				3.00				3.00
	C01	Acquire the basic concepts of data structures and select appropriate data structures for solving real life problems	2	2	3						3
22CT209 Data	CO2	Demonstrate various operations on linked list, skip list based on the requirements of real life problems	1	3	3				1		3
Structures 22CT210 Lab:	CO3	Implement various hashing techniques.	3	3	3	2			1		3
22CT210 Lab: Data Structures	CO4	Implement different types of trees and graph data structures and use them to solve problems dealing with non-linear data	3	3	2				1		3
		Average	2.25	2.75	2.75	2.00			1.00		3.00
	CO1	Identify an appropriate probability distribution for a given discrete or continuous random variable and compute probabilities.	2	2						1	1
22660101	CO2	Make use of probability distributions to solve real life problems.	2	2						1	1
22CSD101 Probability and Statistics	CO3	Apply concepts of sampling theory to find probabilities and estimate parameters of various problems solve the integrals.	2	2	2					1	1
	CO4	Inspect scientific data, use proper curve fitting and find correlation, regression of variables	2	2	2					1	1
		Average	2.00	2.00	2.00					1.00	1.00

	C01	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2							1
22665102	CO2	Analyze crystal structures in terms of lattice parameters with identification of crystal planes.	2	2							1
Engineering Physics	CO3	Assess the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2	2							1
22CSD103 Lab.: Engineering	CO4	Illustrate working principle of lasers and optical fibres for their use in the field of industry.	3	3							1
Thysics	C05	Analyze the motion in electric field and magnetic field and its applications to electron optic devices.	2	2							1
		Average	2.20	2.20							1.00
	CO1	Explain the basic concepts of Social Sciences				2					
	CO2	Describe the development of various civilizations and their culture				2					
22CSD104 Social Science	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.				2				2	
	CO4	Explain Industrial Organization and Management.				2				2	2
		Average				2.00				2.00	2.00
22CSD105	C01	Describe the fundamental concepts of statics and dynamics.	3	3			2	2	2	2	
Mechanics 22CSD106	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system.	3	3			2	2	2	2	
Lab.:Engineering Mechanics	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body	3	3			2	2	2	2	

	CO4	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3			2	2	2	2	
		Average	3.00	3.00			2.00	2.00	2.00	2.00	
	C01	Understand computer system, basics of algorithm & flowchart, and demonstrate straight line program using basic 'C' programming language constructs.	3								
22CSD107	CO2	Implement basic Linux commands and simple programs using different constructs in C.	3								
Computer Programming	CO3	Design & Develop programs using different loop control structures, user defined functions, and Pointers.	2	2							
22CSD108 Lab.: Introduction to Computer	CO4	Analyze and apply concepts of different dimensional Arrays as a data structure & development of programs using the same.		1	2						
Programming	CO5	Design and develop programs using basics of Strings, Structures, union and Files in 'C' language.	2	2	2						
		Average	2.50	1.67	2.00						
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems.	2	2					1		1
22CSD201	CO2	Determine the expansion and derivatives of functions of several variables and use it to find extreme values of functions.	2	2					1		1
Calculus, Sequences and Series	CO3	Evaluate the improper integrals, multiple integrals and apply it to compute the area and volume of various structures.	2	2	2				1		1
	CO4	Solve higher order differential equations and its applications.	2	2	2				1		1
		Average	2.00	2.00	2.00				1.00		1.00

-	C01	Illustrate different thermodynamic functions and chemical reaction rates.	2	2			1		1	1
22CSD202Engine	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1			1		1	1
ering Chemistry 22CSD203	CO3	Develop awareness about global environmental concerns.	1				1		1	1
Chemistry	CO4	Establish insight into engineering materials.	2	2			1		1	1
		Average	1.75	1.67			1.00		1.00	1.00
	C01	Apply different modes of effective communication							2	2
22CSD204 Technical Communication 22CSD205	CO2	Produce competently the Phonology of English Language							2	2
	CO3	Apply the nuances of LSRW Skills							2	2
Lab:Technical Communication	CO4	Practice communication through different channels						2	2	2
		Average						2.00	2.00	2.00
	C01	Understand and demonstrate the various codes and illustrate their addition subtraction	2							
22CSD206 Digital	CO2	Apply the laws of Boolean algebra to simplify logical equations and combination logic circuits.	2	2						
Circuit Design 22CSD207 Lab:Digital Circuit Design	CO3	Solve logical functions using K- map to implement combinational logic circuits.	2	2		1				2
	CO4	Design and analyze Synchronous and Asynchronous Sequential Circuits.	2	2	1	1				2
	CO5	Understand the function of elementary digital circuits under real and simulated environment.				2				2

		Average	2.00	2.00	1.00		1.33						2.00
	C01	Reproduce fundamentals of dc circuits.	3	1	1	1			1	1	1	1	1
22CSD208 Basic	CO2	Explain, construction, working and applications of various electrical machines.	3	1	1	1			1	1	1	1	1
Electrical Machines	CO3	Analyze performance of various electrical machines.	3	1	1	1			1	1	1	1	1
22CSD209 Lab: Basic Electrical Machines	CO4	Perform laboratory experiments and demonstrate competency in collecting, interpreting, analyzing data, communicate and present effectively through laboratory journals.	3	1	1	1			1	1	1	1	1
		Average	3.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00
	C01	Construct orthographic drawing and isometric drawing of a given object.	3	2			3			2	3		3
- 22CSD210 Lab.: -	CO2	Distinguish the various CAD CAM tools and also evaluate criteria for CAD CAM systems	3	2			3			2	3		3
Engineering	CO3	Design 2D and 3D Transformation matrices Graphics representation of curves	3	2			3			2	3		3
	CO4	Calculate the parametric equations for wire frame solid modelling entities and evaluate data exchange formats	3	2			3			2	3		3
		Average	3.00	2.00			3.00			2.00	3.00		3.00
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems.	2	2							1		1
22IOT101	CO2	Determine the expansion and derivatives of functions of several variables and use it to find extreme values of functions.	2	2							1		1
	CO3	Evaluate the improper integrals, multiple integrals and apply it to compute the area and volume of various structures.	2	2							1		1

	CO4	Solve higher order differential equations and its applications.	2	2					1		1
		Average	2.00	2.00					1.00		1.00
	C01	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2							1
22IOT102	CO2	Justify the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2	2							1
Semiconductor Physics	CO3	Identify the requirements of sensor material for technological application.	2	2							1
22101103 Lab.: Semiconductor	CO4	Illustrate optical interactions associated with semiconductor materials for their use in the devices.	3	3							1
Physics	C05	Analyze the electron motion in electric and magnetic field contributing to electronic display devices.	2	2							1
		Average	2.20	2.20							1.00
	C01	Explain the basic concepts of Social Sciences					2				
	CO2	Describe the development of various civilizations and their culture					2				
22IOT104 Social Science	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2			2	
	CO4	Explain Industrial Organization and Management.					2			2	2
		Average					2.00			2.00	2.00
22IOT105 Basic Electronics	C01	Understand, define and explain the fundamental concepts of Digital & Analog Electronic Circuits , Sensors and Measurements	1	1							
Engineering	CO2	Apply the concepts of Digital & Analog Electronic Circuits, Sensors and Measurements to obtain the	3	3	2						

		desired parameter											
	CO3	Analyze Digital & Analog Electronic Circuits to arrive at suitable Conclusions	2	2	3								
	CO4	Design simple circuits using fundamentals of digital and analog electronic circuit for given application	2	2	3								
		Average	2.00	2.00	2.67								
	C01	Reproduce fundamentals of dc circuits, single phase, and three phase ac circuits.	3	1	1	1	1		1	1	1	1	1
	C02	Calculate basic electrical quantities such as current, voltage, power etc. for dc circuits, single phase and three phase ac circuits.	3	1	1	1	1		1	1	1	1	1
Electrical	CO3	Explain construction, working, testing, and applications of various electrical machines.	3	1	1	1	1		1	1	1	1	1
22IOT107 Lab.: Basic Electrical	C04	Determine performance of various electrical machines.	3	1	1	1	1		1	1	1	1	1
Engineering	CO5	Perform laboratory experiments and demonstrate competency in collecting, interpreting, analyzing data, communicate and present effectively through laboratory journals.	3	1	1	1	1		1	1	1	1	1
		Average	3.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
22IOT108	C01	Understand Programing Logic	2	1	1								
Programming for problem solving	CO2	Write algorithm & Draw a flow chart for a given problem	<u>2</u>	<u>1</u>	<u>2</u>			<u>1</u>		<u>2</u>			
22IOT109 Lab.: Programming for	C03	Design & Develop programs using different control Flow Statement.	2	2	2			<u>1</u>		2			
problem solving	C04	Design & Develop programs using basics of Arrays, functions, pointers, structures etc.	<u>2</u>	2	2			1		<u>2</u>			

		Average	2.00	1.50	1.75		1.00		2.00		
	C01	Solve systems of linear equations using rank of matrix.	2	2						1	1
	CO2	Determine eigen values and eigen vectors and solve eigen value problems.	2	2						1	1
22IOT201 Linear Algebra	CO3	Explain the concepts of vector space and subspace, span and basis.	2	2						1	1
	CO4	Apply principles of matrix algebra to linear transformations and inner product.	2	2						1	1
		Average	2.00	2.00						1.00	1.00
2210T202Engines	C01	Illustrate different thermodynamic functions and chemical reaction rates.	2	2				1		1	1
22IOT202Enginee	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1				1		1	1
2210T203	CO3	Develop awareness about global environmental concerns.	1					1		1	1
Chemistry	CO4	Establish insight into engineering materials.	2	2				1		1	1
		Average	1.75	1.67				1.00		1.00	1.00
	C01	Apply different modes of effective communication								2	2
22IOT204	CO2	Produce competently the Phonology of English Language								2	2
Communication	CO3	Apply the nuances of LSRW Skills								2	2
	CO4	Practice communication through different channels							2	2	2
		Average							2.00	2.00	2.00
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	C01	Construct orthographic drawing and isometric drawing of a given object	3	2		3			2	3	3
22IOT205 Engineering	CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2		3			2	3	3
Graphics 22IOT206	CO3	Develop the lateral surfaces of various solids and their section.	3	2		3			2	3	3
Lab:Engineering Graphics	CO4	Practice the use of software tools used for Two dimensional drawings.	3	2		3			2	3	3
		Average	3.00	2.00		3.00			2.00	3.00	3.00
22107207	C01	Student will be able to Differentiate various machining processes	2					2		1	3
Fundamentals of	CO2	Student will be able to Elaborate and classify different joining processes.	2			2		2			3
Process 22I0T208	CO3	Student will be able to Illustrate the basics of moulding process and compare various casting processes	3					2		1	3
Fundamentals of Manufacturing	CO4	Student will be able to Discuss and analyse unconventional machining processes.	2			2		2			3
1100035		Average	2.25			2.00		2.00		1.00	3.00
	C01	To understand syntax and semantics of language	3	2		3			2	3	3
22IOT209 Lab.: Puthon	CO2	To understand and apply the basics of the programming language	3	2		3			2	3	3
Programming	CO3	To analyse and apply special language features	3	2		3			2	3	3
	CO4	To evaluate and create functions for any application	3	2		3			2	3	3

		Average	3.00	2.00		3.00			2.00	3.00	3.00
	C01	Use appropriate Methods to solve first order and higher order differential equations and apply it to find solutions of engineering problems.	2	2						1	1
22EL101 Differential	CO2	Determine the various functions of complex numbers.	2	2						1	1
Equation, Complex	CO3	Evaluate the integration of function of complex variables.	2	2	2					1	1
Variables and Matrices	CO4	Use Matrix method to solve system of linear equations, evaluate eigen values - eigen vectors and its applications.	2	2	2					1	1
		Average	2.00	2.00	2.00					1.00	1.00
-	C01	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2							1
22EL102	CO2	Assess the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2	2							1
Engineering Physics	CO3	Examine the intensity variation of light due to interference, diffraction, laser and its applications.	3	3							1
22EL103 Lab: Engineering	CO4	Analyze the motion in electric field and magnetic field and its applications to electron optic devices.	3	3							1
Physics	CO5	Illustrate the nature and characterization of magnetic materials and superconductors for engineering applications.	2	2							1
		Average	2.40	2.40							1.00
22EL104 Social	C01	Explain the basic concepts of Social Sciences					2				
Science	CO2	Describe the development of various civilizations and their culture					2				

	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
		Average					2.00				2.00	2.00
	C01	Construct orthographic drawing and isometric drawing of a given object	3	2		3			2	3		3
22EL105 Engineering	CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2		3			2	3		3
Graphics 22EL106 Lab:	CO3	Develop the lateral surfaces of various solids and their section	3	2		3			2	3		3
Engineering Graphics	CO4	Practice the use of software tools used for Two dimensional drawings.	3	2		3			2	3		3
		Average	3.00	2.00		3.00			2.00	3.00		3.00
	C01	Develop an understanding what is involved in AIML.	2					1	2			3
	CO2	Understand learning algorithms of AIML.	2			3			2			3
22EL107	CO3	Understand the deep learning .	2						2			3
Elements of AIML	CO4	Apply the knowledge for the selection of tool and lanuages for problem solving	3			3	3		2			3
	C05	Understand the use of AIML for real world problems	2			3	3		2			3
		Average	2.20			3.00	3.00	1.00	2.00			3.00
22EL108 Electrical	C01	Choose the electrical and electronics components/equipment for various application.	2	1	1					1		3

workshop	CO2	Implement and test small electonics and electrical circuits.	2	1	1						1		2
	CO3	Build the various electrical wiring for different application.	2								1		2
		Average	2.00	1.00	1.00						1.00		2.33
	C01	Reproduce fundamentals of dc circuits, single phase, and three phase ac circuits.	3	1	1	1	1		1	1	1	1	1
22EL109	CO2	Calculate basic electrical quantities such as current, voltage, power etc. for dc circuits, single phase and three phase ac circuits.	3	1	1	1	1		1	1	1	1	1
Electrical	CO3	Explain construction, working, testing, and applications of various electrical machines.	3	1	1	1	1		1	1	1	1	1
Engineering 22EL110 Lab: Fundamentals of Electrical	CO4	Determine performance of various electrical machines.	3	1	1	1	1		1	1	1	1	1
Electrical Engineering	CO5	Perform laboratory experiments and demonstrate competency in collecting, interpreting, analyzing data, communicate and present effectively through laboratory journals.	3	1	1	1	1		1	1	1	1	1
		Average	3.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
	C01	Apply the knowledge of differentiation to solve the Engineering problems.	2	2							1		1
2251201	CO2	Determine the derivatives of functions of several variables and develop the mathematical equation.	2	2							1		1
Differential and	CO3	Apply the knowledge of Beta and Gamma functions to solve the integrals.	2	2	2						1		1
integral calculus	CO4	Evaluate the multiple integrals and apply it to compute the area and volume of various structures.	2	2	2						1		1
		Average	2.00	2.00	2.00						1.00		1.00

	C01	Illustrate qualitative and quantitative aspects of water for industrial and domestic applications.	2	2			1			1		1
22EL202Engineer	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1			1			1		1
22EL203	CO3	Identify corrosion and discuss its prevention.	1	1			1			1		1
Chemistry	CO 4	Establish insight into engineering materials.	2	2			1			1		1
		Average	1.75	1.50			1.00			1.00		1.00
	C01	Apply different modes of effective communication								2		2
2251 204	CO2	Produce competently the Phonology of English Language								2		2
22EL204 Professional Communication	CO3	Apply the nuances of LSRW Skills								2		2
	CO4	Practice communication through different channels							2	2		2
		Average							2.00	2.00		2.00
	C01	Describe the fundamental concepts of statics and dynamics.	3	3				2	2	2	2	
22EL205	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system	3	3				2	2	2	2	
2EL205 Engineering Aechanics 2EL206	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body.	3	3				2	2	2	2	
Mechanics	CO4	Analyze pin jointed truss frame structure and beam structure analytically and graphically	3	3				2	2	2	2	
	C05	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3				2	2	2	2	

		Average	3.00	3.00				2.00	2.00	2.00	2.00	
	C01	Understand, define and explain the fundamental concepts of Analog Electronic and Electrical Circuits	1	1								
22FI 207 Basic	CO2	Apply the concepts of Electrical and Electronic Circuits to obtain the desired parameter	3	3	2							
Electrical and Electronics	CO3	Analyze Analog Electrical and Electronic Circuits to arrive at suitable Conclusions.	2	2	3							
Engineering	CO4	Design simple circuits using fundamentals of analog Electrical and Electronic circuit for given application.	2	2	3							
		Average	2.00	2.00	2.67							
	C01	Describe the basics of computer system components and operation, basics of algorithms and flowcharts	3									
22EL208 Programming for	CO2	Develop programs using conditional statements and loops user defined functions, and pointers.	3									
Problem Solving 22EL209 Lab.:	CO3	Analyze single and multi-dimensional arrays as a data structure and its use in problem solving.	2	2								
Programming for Problem Solving	CO4	Describe the basics of Strings, Structures, Unions, and File handling and its use for problem solving.		1	2							
		Average	2.67	1.50	2.00							
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems	2	2	2					1		1
22CSE101 Differential	CO2	Determine the derivatives of functions of several variables and develop the mathematical equation.	2	2	2					1		1
Equation and Complex Analysis	CO3	Apply the knowledge of Beta and Gamma functions to solve the integrals.	2	2						1		1
	CO4	Evaluate the multiple integrals and apply it to compute the area and volume of various structures.	2	2						1		1

		Average	2.00	2.00	2.00					1.00		1.00
	C01	Correlate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2								1
22CSE102	CO2	Justify the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2	2								1
Engineering Physics	CO3	Illustrate working principle of lasers and optical fibers for their use in the field of industry.	2	2								1
22CSE103 Lab: Engineering Physics	CO4	Analyse the motion of charged particles in electric and magnetic field and its applications to electron optic devices.	3	3								1
	CO5	Assess the characteristics of nano materials, synthesis methods and their applications.	2	2								1
		Average	2.20	2.20								1.00
	C01	Explain the basic concepts of Social Sciences					2					
	CO2	Describe the development of various civilizations and their culture					2					
22CSE104 Social Science	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
		Average					2.00				2.00	2.00
22CSE105 Engineering	C01	Construct orthographic drawing and isometric drawing of a given object	3	2		3			2	3		3
Graphics 22CSE106 Lab:	CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2		3			2	3		3
Engineering Graphics	CO3	Develop the lateral surfaces of various solids and their section	3	2		3			2	3		3

	CO4	Practice the use of software tools used for Two dimensional drawings.	3	2		3			2	3	3
		Average	3.00	2.00		3.00			2.00	3.00	3.00
	C01	Develop an understanding what is involved in AIML.	2					1	2		3
	CO2	Understand learning algorithms of AIML.	2			3			2		3
22CSE107	CO3	Understand the deep learning .	2						2		3
Elements of AIML	CO4	Apply the knowledge for the selection of tool and lanuages for problem solving	3			3	3		2		3
	C05	Understand the use of AIML for real world problems	2			3	3		2		3
		Average	2.20			3.00	3.00	1.00	2.00		3.00
	C01	Understand the fundamentals of computer hardware and working of Linux operating system	2			3					3
00.0000	CO2	Use Linux commands to manage files and file systems	2			3					3
22CSE108 Computer	CO3	Execute Scripts and C Programs	3			3					3
workshop	CO4	Debug Programs on various IDEs	3			3					3
		Average	2.50			3.00					3.00
22CSE109 Introduction to	C01	Understand the basic data types, built in data structures, control statements and loops and write simple programs in Python	3								
Computing with Python	CO2	Apply the concepts of functions modules and packages and write programs using them		2							

22CSE110 Lab: Introduction to	CO3	Design and develop classes in Python.			2					
Computing with Python	CO4	Solve real world problems and develop applications using Python			2					
		Average	3.00	2.00	2.00					
	C01	Apply the knowledge of differentiation, sequence and series to solve engineering problems.	2	2					1	1
22CSE201	CO2	Determine the expansion and derivatives of functions of several variables and use it to find extreme values of functions.	2	2					1	1
Calculus Sequences and Series	CO3	Evaluate the improper integrals, multiple integrals and apply it to compute the area and volume of various structures.	2	2	2				1	1
Series	CO4	Solve higher order differential equations and its applications.	2	2	2				1	1
		Average	2.00	2.00	2.00				1.00	1.00
	C01	Illustrate different thermodynamic functions and chemical reaction rates.	2	2			1		1	1
22CSE202Enginee	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1			1		1	1
22CSE203	CO3	Develop awareness about global environmental concerns.	1				1		1	1
Chemistry	CO4	Establish insight into engineering materials.	2	2			1		1	1
		Average	1.75	1.67			1.00		1.00	1.00
22CSE204 Professional	C01	Apply different modes of effective communication							2	2

Communication	CO2	Produce competently the Phonology of English Language								2		2
	CO3	Apply the nuances of LSRW Skills								2		2
	CO4	Practice communication through different channels							2	2		2
		Average							2.00	2.00		2.00
	C01	Describe the fundamental concepts of statics and dynamics.	3	3				2	2	2	2	
22055205	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system	3	3				2	2	2	2	
Engineering Mechanics	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body.	3	3				2	2	2	2	
Aechanics 2CSE206 Lab:Engineering Mechanics –	CO4	Analyze pin jointed truss frame structure and beam structure analytically and graphically	3	3				2	2	2	2	
Mechanics	CO5	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3				2	2	2	2	
		Average	3.00	3.00				2.00	2.00	2.00	2.00	
	C01	Understand, and explain the fundamental concepts of analog and digital electronic circuits	1	1								
22CSE207 Basic	CO2	Understand, and explain the fundamental concepts of Electrical circuit elements	3	3	2							
Electrical and Electronics	CO3	Analyse simple analog and digital electronic circuits.	2	2	3							
Engineering	CO4	Analyse simple electrical and electronic circuits for a given application	2	2	3							
		Average	2.00	2.00	2.67							

	C01	Describe the basics of computer system components and operation, basics of algorithms and flowcharts	3							
22CSE208 Programming for	CO2	Develop programs using conditional statements and loops user defined functions, and pointers.	3							
Problem Solving 22CSE209 Lab.:	CO3	Analyze single and multi-dimensional arrays as a data structure and its use in problem solving.	2	2						
Programming for Problem Solving	CO4	Describe the basics of Strings, Structures, Unions, and File handling and its use for problem solving.		1	2					
		Average	2.67	1.50	2.00					
	C01	Use appropriate Methods to solve first order and higher order differential equations and apply it to find solutions of engineering problems.	2	2					1	1
22ME101 Differential Equation,	CO2	Use Matrix method to solve linear system of equations, evaluate eigen values - eigen vectors and its applications.	2	2					1	1
Equation, matrices and	CO3	Make use of probability distributions to solve real life problems.	2	2	2				1	1
Statistics	C04	Inspect scientific data, use proper curve fitting and find correlation, regression of variables	2	2	2				1	1
		Average	2.00	2.00	2.00				1.00	1.00
22ME102	C01	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2						1
Engineering Physics	CO2	Justify the characteristics of semiconductor materials in terms of crystal structure, charge carriers and energy bands.	2	2						1
22ME103 Lab: Engineering	CO3	Assess the fundamentals of interference and their significance in optical measurements.	3	3						1
FIIYSIUS	C04	Illustrate working principle of lasers and optical fibers for their use in the field of industry.	3	3						1

	C05	Identify and analyze the fundamentals of ultrasonic and acoustic waves and their applications in technology.	2	2								1
		Average	2.40	2.40								1.00
	C01	Explain the basic concepts of Social Sciences					2					
	CO2	Describe the development of various civilizations and their culture					2					
22ME104 Social Science	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
		Average					2.00				2.00	2.00
	C01	Construct orthographic drawing and isometric drawing of a given object	3	2		3			2	3		3
22ME105 Engineering	CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2		3			2	3		3
Graphics 22ME106 Lab:	CO3	Develop the lateral surfaces of various solids and their section	3	2		3			2	3		3
Engineering Graphics	CO4	Practice the use of software tools used for Two dimensional drawings.	3	2		3			2	3		3
		Average	3.00	2.00		3.00			2.00	3.00		3.00
	C01	Develop an understanding what is involved in AIML.	2					1	2			3
22ME107 Elements of AIML	CO2	Understand learning algorithms of AIML.	2		 	3			2			3
	CO3	Understand the deep learning .	2						2			3

	CO4	Apply the knowledge for the selection of tool and lanGuages for problem solving	3				3	3			2			3
	C05	Understand the use of AIML for real world problems	2				3	3			2			3
		Average	2.20				3.00	3.00		1.00	2.00			3.00
	C01	Discuss about various manufacturing process like smithy, carpentry, assembling, welding etc and different machines.						3			3			3
22ME100 EAD	C02	Operate the various hand tools used in the basic mechanical engineering workshop sections-smithy, carpentry, assembling,welding etc.						3			3			3
Shop	CO3	Distinguish different measuring devices according to the work.						3			3			3
-	C04	Develop various shapes through different manufacturing methods						3			3			3
_														
		Average						3.00			3.00			3.00
	C01	Average Demonstrate the cutting tool geometry of SPCT, mechanism	3	1	3			3.00 2			3.00	1		3.00 2
22ME109	C01 C02	Average Demonstrate the cutting tool geometry of SPCT, mechanism Analyze the cutting tool geometry of MPCT, mechanism of chip formation, mechanism used and working principle with applications	3	1	3			3.00 2 1	1	1	3.00	1		3.00 2 2
22ME109 Machining Process 22ME110 Lab:	C01 C02 C03	Average Demonstrate the cutting tool geometry of SPCT, mechanism Analyze the cutting tool geometry of MPCT, mechanism of chip formation, mechanism used and working principle with applications Identify basic parts and operations of machine tools including lathe, shaper, planer	3 3 2	1 3 1	3 1 1			3.00 2 1 1	1	1	3.00	1		3.00 2 2 1
22ME109 Machining Process 22ME110 Lab: Machining Process	C01 C02 C03 C04	AverageDemonstrate the cutting tool geometry of SPCT, mechanismAnalyze the cutting tool geometry of MPCT, mechanism of chip formation, mechanism used and working principle with applicationsIdentify basic parts and operations of machine tools including lathe, shaper, planerCategorize basic parts and operations of machine tools including drilling, boring,	3 3 2 2	1 3 1 1	3 1 1			3.00 2 1 1 1	1	1 1 1	3.00	1		3.00 2 2 1 2
22ME109 Machining Process 22ME110 Lab: Machining Process	CO1 CO2 CO3 CO4 CO5	AverageDemonstrate the cutting tool geometry of SPCT, mechanismAnalyze the cutting tool geometry of MPCT, mechanism of chip formation, mechanism used and working principle with applicationsIdentify basic parts and operations of machine tools including lathe, shaper, planerCategorize basic parts and operations of machine tools including drilling, boring,Select a machining operation and corresponding machine tool for a specific application in real time.	3 3 2 2 3	1 3 1 1 3	3 1 1 3	2		3.00 2 1 1 1 1 1	1	1 1 1 1	3.00	1	1	3.00 2 2 1 2 2 2

-	C01	Apply the knowledge of differentiation to solve the Engineering problems.	2	2					1	1
	CO2	Determine the derivatives of functions of several variables and develop the relations among the derivatives of variables.	2	2					1	1
22ME201 Calculus and	CO3	Apply the knowledge of Beta and Gamma functions to find area, volume and mass.	2	2	2				1	1
Vector	CO4	Discuss Calculus of Scalar and vector point function and use appropriate theorems to evaluate integrals of functions of single and multiple variables.	2	2	2				1	1
		Average	2.00	2.00	2.00				1.00	1.00
22ME202Enginee	C01	Illustrate qualitative and quantitative aspects of water for industrial and domestic applications.	2	2			1		1	1
22ME202Enginee ring Chemistry	CO2	Identify corrosion and discuss its prevention.	1	1			1		1	1
Lab:Engineering	CO3	Establish insight into engineering materials.	2	2			1		1	1
Gilennistry		Average	1.67	1.67			1.00		1.00	1.00
	C01	Apply different modes of effective communication							2	2
22145204	CO2	Produce competently the Phonology of English Language							2	2
Professional	CO3	Apply the nuances of LSRW Skills							2	2
Communication –	C04	Practice communication through different channels						2	2	2
		Average						2.00	2.00	2.00

-	C01	Describe the fundamental concepts of statics and dynamics.	3	3			2	2	2	2	
22ME20E	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system	3	3			2	2	2	2	
Engineering Mechanics	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body.	3	3			2	2	2	2	
Lab:Engineering	CO4	Analyze pin jointed truss frame structure and beam structure analytically and graphically	3	3			2	2	2	2	
Mechanics	CO5	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3			2	2	2	2	
		Average	3.00	3.00			2.00	2.00	2.00	2.00	
	C01	Understand, define and explain the fundamental concepts of Analog Electronic and Electrical Circuits	1	1							
22ME207 Basic	CO2	Apply the concepts of Electrical and Electronic Circuits to obtain the desired parameter	3	3	2						
Electrical and	CO3	Analyze Analog Electrical and Electronic Circuits to arrive at suitable Conclusions.	2	2	3						
Electrical and Electronics Engineering	CO4	Design simple circuits using fundamentals of analog Electrical and Electronic circuit for given application.	2	2	3						
		Average	2.00	2.00	2.67						
22ME208Programming forProblem Solving22ME209 Lab.:Programming forProblem Solving	C01	Describe the basics of computer system components and operation, basics of algorithms and flowcharts	3								
	CO2	Develop programs using conditional statements and loops user defined functions, and pointers.	3								
	CO3	Analyze single and multi-dimensional arrays as a data structure and its use in problem solving.	2	2							

	CO4	Describe the basics of Strings, Structures, Unions, and File handling and its use for problem solving.		1	2					
		Average	2.67	1.50	2.00					
	C01	Use appropriate Methods to solve first order and higher order differential equations and apply it to find solutions of engineering problems.	2	2					1	1
22EE101: Differential	C02	Determine the various functions of complex numbers.	2	2					1	1
Equation, Complex	CO3	Evaluate the integration of function of complex variables.	2	2	2				1	1
Variables & Matrices C	C04	Use Matrix method to solve system of linear equations, evaluate eigen values - eigen vectors and its applications.	2	2	2				1	1
		Average	2.00	2.00	2.00				1.00	1.00
	C01	Co-relate fundamentals of quantum mechanics to solve problems dealing with quantum particle.	2	2						1
22EE102:	C02	Assess the characteristics of semiconductor materials in terms of crystal structures, charge carriers and energy bands.	2	2						1
Engineering Physics	CO3	Examine the intensity variation of light due to interference, diffraction, laser and its applications.	3	3						1
22EE103: Lab: Engineering	C04	Analyze the motion in electric field and magnetic field and its applications to electron optic devices.	3	3						1
Engineering Physics	C05	Illustrate the nature and characterization of magnetic materials and superconductors for engineering applications.	2	2						1
		Average	2.40	2.40						1.00
22EE104: Social Science	C01	Explain the basic concepts of Social Sciences					2			

	C02	Describe the development of various civilizations and their culture					2					
	CO3	Analyze the impact of industrialization on society and discuss the Fundamental Concepts of Society.					2				2	
	CO4	Explain Industrial Organization and Management.					2				2	2
		Average					2.00				2.00	2.00
	C01	Construct orthographic drawing and isometric drawing of a given object	3	2		3			2	3		3
22EE105: Engineering	CO2	Evaluate Projections of various One Dimensional, Two dimensional, Three dimensional objects	3	2		3			2	3		3
Graphics 22EE106: Lab:	CO3	Develop the lateral surfaces of various solids and their section	3	2		3			2	3		3
22EE106: Lab: Engineering Graphics	C04	Practice the use of software tools used for Two dimensional drawings.	3	2		3			2	3		3
		Average	3.00	2.00		3.00			2.00	3.00		3.00
	C01	Develop an understanding what is involved in AIML.	2					1	2			3
	CO2	Understand learning algorithms of AIML.	2			3			2			3
22EE107:	CO3	Understand the deep learning .	2						2			3
Elements of AIML	C04	Apply the knowledge for the selection of tool and lanuages for problem solving	3			3	3		2			3
_	C05	Understand the use of AIML for real world problems	2			3	3		2			3
		Average	2.20			3.00	3.00	1.00	2.00			3.00

-	C01	Choose the electrical and electronics components/equipment for various application.	2	1	1				1	3
22EE108:	CO2	Implement and test small electonics and electrical circuits.	2	1	1				1	2
workshop	CO3	Build the various electrical wiring for different application.	2						1	2
		Average	2.00	1.00	1.00				1.00	2.33
	C01	Understand and demonstrate the various codes and illustrate their addition subtraction	2							
22EE109: Digital	CO2	Apply the laws of Boolean algebra to simplify logical equations and combination logic circuits	2	2						
22EE109: Digital Logic Design 22EE110: Lab:	CO3	Solve logical functions using K- map to implement combinational logic circuits	2	2		1				2
Digital Logic	CO4	Design and analyze Synchronous and Asynchronous Sequential Circuits	2	2	1	1				2
Design	C05	Understand the function of elementary digital circuits under real and simulated environment.				2				2
		Average	2.00	2.00	1.00	1.33				2.00
	C01	Apply the knowledge of differentiation to solve the Engineering problems.	2	2					1	1
2255204	CO2	Determine the derivatives of functions of several variables and develop the mathematical equation.	2	2					1	1
22EE201 Differential & Integral Calculus	CO3	Apply the knowledge of Beta and Gamma functions to solve the integrals.	2	2	2				1	1
	CO4	Evaluate the multiple integrals and apply it to compute the area and volume of various structures.	2	2	2				1	1
		Average	2.00	2.00	2.00				1.00	1.00

-	C01	Illustrate qualitative and quantitative aspects of water for industrial and domestic applications.	2	2			1			1		1
22EE202Engineer	CO2	Apply concepts of electrochemistry for energy storage devices.	2	1			1			1		1
22EE203	CO3	Identify corrosion and discuss its prevention.	1	1			1			1		1
Chemistry	CO4	Establish insight into engineering materials.	2	2			1			1		1
		Average	1.75	1.50			1.00			1.00		1.00
	C01	Apply different modes of effective communication								2		2
- 22EE204 Professional Communication -	CO2	Produce competently the Phonology of English Language								2		2
	CO3	Apply the nuances of LSRW Skills								2		2
communication	CO4	Practice communication through different channels							2	2		2
		Average							2.00	2.00		2.00
	C01	Describe the fundamental concepts of statics and dynamics.	3	3				2	2	2	2	
22EE205	CO2	Apply the basic concepts of applied mechanics for solution of problems on planar force system	3	3				2	2	2	2	
Engineering Mechanics 22EE206 Lab:Engineering Mechanics	CO3	Determine the properties of surface like centroid, moment of inertia, etc. for planar surfaces and mass moment of inertia for rigid body.	3	3				2	2	2	2	
	CO4	Analyze pin jointed truss frame structure and beam structure analytically and graphically	3	3				2	2	2	2	
	C05	Evaluate the dynamic variables of kinetics of particles and simple lifting machine	3	3				2	2	2	2	

		Average	3.00	3.00				2.00	2.00	2.00	2.00	
	C01	Understand, define and explain the fundamental concepts of Analog Electronic and Electrical Circuits	1	1								
22EE207 Basic	CO2	Apply the concepts of Electrical and Electronic Circuits to obtain the desired parameter	3	3	2							
Electrical and Electronics Engineering	CO3	Analyze Analog Electrical and Electronic Circuits to arrive at suitable Conclusions.	2	2	3							
	CO4	Design simple circuits using fundamentals of analog Electrical and Electronic circuit for given application.	2	2	3							
		Average	2.00	2.00	2.67							
	C01	Describe the basics of computer system components and operation, basics of algorithms and flowcharts	3									
22EE208 Programming for Problem Solving 22EE209 Lab.: Programming for Problem Solving	CO2	Develop programs using conditional statements and loops user defined functions, and pointers.	3									
	CO3	Analyze single and multi-dimensional arrays as a data structure and its use in problem solving.	2	2								
	CO4	Describe the basics of Strings, Structures, Unions, and File handling and its use for problem solving.		1	2							
		Avorago	2.67	1 50	2.00							

Attainment of Course Outcomes of All First-Year Courses: 2022-23

COURSE CODE: COURSE NAME	Semester	CO PARTICULAR	CO1	CO2	CO3	CO4	CO5	CO6
		CO Average Percentage	86.39	82.66	87.05	78.56		
22AML101 Calculus, Sequence and Series	Ι	CO Score (Out of 3)	2.59	2.48	2.61	2.36		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22 AMI 102 Technical Communication		CO Average Percentage	75.28	71.23	71.47	65.38		
22AML 102 Lethical Communication	Ι	CO Score (Out of 3)	2.26	2.14	2.14	1.96		
22AWE103 Lab. Technical Communication		CO Attainment Level (1 / 2 /3)	3	2	2	2		
		CO Average Percentage	92.42	90.91	89.39			
22AML104 Computer Workshop	Ι	CO Score (Out of 3)	2.77	2.73	2.68			
		CO Attainment Level (1 / 2 /3)	3	3	3			
22 AMI 105 Drogramming for Droblem Solving		CO Average Percentage	87.11	80.04	91.05	85.78		
22 AMI 106 Lab: Programming for Problem Solving	Ι	CO Score (Out of 3)	2.61	2.40	2.73	2.57		
22AIvil 100 Lab. Frogramming for Froblem Solving		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22 AMI 107 Engineering Chemistry		CO Average Percentage	87.16	81.34	82.46	88.06		
22AML107 Engineering Chemistry	Ι	CO Score (Out of 3)	2.61	2.44	2.47	2.64		
22AWE108 Eab.: Englicering Chemistry		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	79.05	82.66	72.83	61.56		
22AML201 Probability and Statistics	II	CO Score (Out of 3)	2.37	2.48	2.18	1.85		
		CO Attainment Level (1 / 2 /3)	3	3	2	1		
22 AMI 202 Engineering Physics		CO Average Percentage	87.69	85.82	81.34	92.54	81.72	
22AMI 203 Lab: Engineering Physics	II	CO Score (Out of 3)	2.63	2.57	2.44	2.78	2.45	
22AWIE203 Ea0. Engineering Titysics		CO Attainment Level (1 / 2 /3)	3	3	3	3	3	
22 AMI 204 Digital Electronics		CO Average Percentage	75.48	80.35	77.60	68.62	96.06	
22AMI 205 Lab: Digital Electronics	II	CO Score (Out of 3)	2.26	2.41	2.33	2.06	2.88	
221 WIL203 Lab. Digital Electronics		CO Attainment Level (1 / 2 /3)	3	3	3	2	3	
22 AMI 206 Object Oriented Programming		CO Average Percentage	81.57	79.21	83.45	81.28		
22AMI 207 Object Oriented Programming	II	CO Score (Out of 3)	2.45	2.38	2.50	2.44		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	100	92.31	95.38	96.92		
22AML208 Web Technology Lab	II	CO Score (Out of 3)	3.00	2.77	2.86	2.91		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		ļ
22 AMI 209 Social Science	п	CO Average Percentage	87.66	88.67	95.25	93.33		
	11	CO Score (Out of 3)	2.63	2.66	2.86	2.80		

		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	81.61	81.43	78.91	83.90		
22ADS101 Calculus, Sequences & Series	I	CO Score (Out of 3)	2.45	2.44	2.37	2.52		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22 A DG 102 Environment Observice		CO Average Percentage	83.19	82.04	86.59	82.97		
22ADS102 Engineering Chemistry	I	CO Score (Out of 3)	2.50	2.46	2.60	2.49		
22ADS103 Lab.: Engineering Chemistry		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	72.81	70.41	69.81	66.41		
22ADS104 Technical Communications	I	CO Score (Out of 3)	2.18	2.11	2.09	1.99		
22ADS105 Lab.: Technical Communications		CO Attainment Level (1 / 2 /3)	2	2	2	2		
22 ADG106 From Intime of Data Gainer		CO Average Percentage	86	58	60	74	60	
22ADS106 Foundations of Data Science	I	CO Score (Out of 3)	2.58	1.74	1.80	2.22	1.80	
22ADS107 Lab.: Foundations of Data Science		CO Attainment Level (1 / 2 /3)	3	1	1	2	1	
22 A DG 109 Commenter Decommenter		CO Average Percentage	77	64	60	56	49	46
22ADS108 Computer Programing	I	CO Score (Out of 3)	2.31	1.92	1.80	1.68	1.47	1.38
22ADS109 Lab.: Computer Programming		CO Attainment Level (1 / 2 /3)	3	1	1	1	0	0
		CO Average Percentage	79.84	66.76	69.86	64.15		
22ADS201 Probability and Statistics	II	CO Score (Out of 3)	2.40	2.00	2.10	1.92		
		CO Attainment Level (1 / 2 /3)	3	2	2	1		
22 ADS202 Engineering Dissoins		CO Average Percentage	83.46	80.15	75.09	80.87	67.60	
22ADS202 Engineering Physics	II	CO Score (Out of 3)	2.50	2.40	2.25	2.43	2.03	
22ADS205 Lab: Engineering Physics		CO Attainment Level (1 / 2 /3)	3	3	3	3	2	
		CO Average Percentage	96	93	98.25	97.66		
22ADS204 Social Science	II	CO Score (Out of 3)	2.88	2.79	2.95	2.93		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	40.63	71.43	46.67	65.08	18.32	
22ADS205 Computer Architecture and Organization	II	CO Score (Out of 3)	1.22	2.14	1.40	1.95	0.55	
		CO Attainment Level (1 / 2 /3)	0	2	0	2	0	
22ADS206 Object Oriented Programming		CO Average Percentage	72.81	70.41	69.81	66.41	65.08	
22ADS200 Object Oriented Programming	II	CO Score (Out of 3)	2.18	2.11	2.09	1.99	1.95	
22ADS207 Object Offented Programming		CO Attainment Level (1 / 2 /3)	2	2	2	2	2	
22 ADS208 Data Structures		CO Average Percentage	75.68	77.62	80.64	90.92		
22ADS200 Data Structures 22ADS200 Lab: Data Structures	II	CO Score (Out of 3)	2.27	2.33	2.42	2.73		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22ADS210 Software Lab	II	CO Average Percentage	77.94	73.53	61.76	83.82		

		CO Score (Out of 3)	2.34	2.21	1.85	2.51		
		CO Attainment Level (1 / 2 /3)	3	2	1	3		
		CO Average Percentage	72.09	58.98	84.36	58.69		
22ET101 Differential and Integral Calculus	Ι	CO Score (Out of 3)	2.16	1.77	2.53	1.76		
		CO Attainment Level (1 / 2 /3)	2	1	3	1		
22ET102 Engineering Chamistery		CO Average Percentage	78.02	70.84	65.66	68.96		
22ET102 Engineering Chemistry	I	CO Score (Out of 3)	2.34	2.13	1.97	2.07		
22E1103 Lab. Eligneering Chemistry		CO Attainment Level (1 / 2 /3)	3	2	2	2		
		CO Average Percentage	61.2	51	55	50		
22ET104 Professional Communication	I	CO Score (Out of 3)	1.84	1.53	1.65	1.50		
		CO Attainment Level (1 / 2 /3)	1	0	1	0		
22ET105 Engineering Machanics		CO Average Percentage	81.21	83.21	76.91	73.7	68.22	
22E1105 Engineering Mechanics	Ι	CO Score (Out of 3)	2.44	2.50	2.31	2.21	2.05	
22E1100 Eao: Eligneering Mechanics		CO Attainment Level (1 / 2 /3)	3	3	3	2	2	
		CO Average Percentage	66.82	64.30	62.75	63.46		
22ET107 Basic Electrical and Electronics Engineering	I	CO Score (Out of 3)	2.00	1.93	1.88	1.90		
		CO Attainment Level (1 / 2 /3)	2	1	1	1		
22ET108 Programming for Problem Solving		CO Average Percentage	68.00	70.00	65.00	70.00		
22ET100 Flogramming for Problem Solving	I	CO Score (Out of 3)	2.04	2.10	1.95	2.10		
22E1109 Eao. 110gramming for 1100em Solving		CO Attainment Level (1 / 2 /3)	2	2	2	2		
22ET201 Differential Equation Complex Variables &		CO Average Percentage	62.41	46.46	62.35	65.91		
Matrices	II	CO Score (Out of 3)	1.87	1.39	1.87	1.98		
Matrices		CO Attainment Level (1 / 2 /3)	1	0	1	2		
22ET202 Engineering Division		CO Average Percentage	69.84	69.18	61.96	60.92	61.51	
22ET202 Engineering Physics	II	CO Score (Out of 3)	2.10	2.08	1.86	1.83	1.85	
		CO Attainment Level (1 / 2 /3)	2	2	1	1	1	
		CO Average Percentage	91.66	88.67	95.5	93.33		
22ET204 Social Science	II	CO Score (Out of 3)	2.75	2.66	2.87	2.80		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22ET205 Engineering Graphics		CO Average Percentage	88.00	78.00	70.00	91.00		
22ET205 Engineering Graphics	II	CO Score (Out of 3)	2.64	2.34	2.10	2.73		
2221200 Euo. Engineering Oraphics		CO Attainment Level (1 / 2 /3)	3	3	2	3		
		CO Average Percentage	36.63	43.34	50.4	39.99	87.09	
22ET207 Elements of AIML	II	CO Score (Out of 3)	1.10	1.30	1.51	1.20	2.61	
		CO Attainment Level (1 / 2 /3)	0	0	0	0	3	

		CO Average Percentage	80.00	76.30	77.90	72.30		
22ET208 Electrical workshop	II	CO Score (Out of 3)	2.40	2.29	2.34	2.17		
-		CO Attainment Level (1 / 2 /3)	3	3	3	2		
		CO Average Percentage	54.02	53.73	53.75	50.04	52.67	
22E1209 Digital Logic Design	II	CO Score (Out of 3)	1.62	1.61	1.61	1.50	1.58	
22E1210 Lao: Digital Logic Design		CO Attainment Level (1 / 2 /3)	0	0	0	0	0	
		CO Average Percentage	56.87	50.57	58.02	56.60		
22CV101 Calculus and Vector	Ι	CO Score (Out of 3)	1.71	1.52	1.74	1.70		
		CO Attainment Level (1 / 2 /3)	1	0	1	1		
22CV102 Encineering Chamister		CO Average Percentage	77.11	56	63.91			
22CV102 Engineering Chemistry	Ι	CO Score (Out of 3)	2.31	1.68	1.92			
22C v 103 Lab: Engineering Chemistry		CO Attainment Level (1 / 2 /3)	3	1	1			
		CO Average Percentage	58.7	46	51	41		
22CV104 Professional Communication	Ι	CO Score (Out of 3)	1.76	1.38	1.53	1.23		
		CO Attainment Level (1 / 2 /3)	1	0	0	0		
22CV105 Engineering Markaging		CO Average Percentage	70.72	73.62	68.38	67.16	61.34	
22CV105 Engineering Mechanics	Ι	CO Score (Out of 3)	2.12	2.21	2.05	2.01	1.84	
22C v 100 Lab: Engineering Mechanics		CO Attainment Level (1 / 2 /3)	2	2	2	2	2	
		CO Average Percentage	65.44	62.92	68.79	66.76		
22CV107 Basic Electrical and Electronics Engineering	Ι	CO Score (Out of 3)	1.96	1.89	2.06	2.00		
		CO Attainment Level (1 / 2 /3)	2	1	2	2		
22CV100 Programming for Problem Solving		CO Average Percentage	65	70	65	70		
22CV100 Lab: Programming for Problem Solving	Ι	CO Score (Out of 3)	1.95	2.10	1.95	2.10		
22C V109 Lab. 110gramming for 1100icm Solving		CO Attainment Level (1 / 2 /3)	2	2	2	2		
22CV201 Differential Equation Matrices & Statistics		CO Average Percentage	62.3	54.11	54.02	82.38		
(DEMS)	II	CO Score (Out of 3)	1.87	1.62	1.62	2.47		
(DEMS)		CO Attainment Level (1 / 2 /3)	1	0	0	3		
22CV202 Engineering Division		CO Average Percentage	64.75	68.18	56.82	74.63	64.58	
22C V202 Engineering Physics	Π	CO Score (Out of 3)	1.94	2.05	1.70	2.24	1.94	
22C V203 Lab. Elignicering Filysics		CO Attainment Level (1 / 2 /3)	1	2	1	3	1	
		CO Average Percentage	84.66	77.69	90	82.33		
22CV204 Social Science	Π	CO Score (Out of 3)	2.54	2.33	2.70	2.47		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22CV205 Engineering Graphics		CO Average Percentage	77	72	70	78		
22CV206 Lab: Engineering Graphics	11	CO Score (Out of 3)	2.31	2.16	2.10	2.34		

		CO Attainment Level (1 / 2 /3)	3	2	2	3		
		CO Average Percentage	57.61	56.72	55.87	68.13	65.93	
22CV207 Elements of AIML	II	CO Score (Out of 3)	1.73	1.70	1.68	2.04	1.98	
		CO Attainment Level (1 / 2 /3)	1	1	1	2	2	
		CO Average Percentage	100	100	100	100		
22CV208 FAB Shop	II	CO Score (Out of 3)	3.00	3.00	3.00	3.00		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	79.29	73.95	74.04			
22CV210 Leby Strength of Materials	II	CO Score (Out of 3)	2.38	2.22	2.22			
22C v 210 Lab: Strength of Materials		CO Attainment Level (1 / 2 /3)	3	2	2			
		CO Average Percentage	77.67	78.67	72.33	53.67		
22IT101 Calculus Sequences and Series	Ι	CO Score (Out of 3)	2.33	2.36	2.17	1.61		
		CO Attainment Level (1 / 2 /3)	3	3	2	0		
		CO Average Percentage	89.47	88.53	97.44	73.53		
22IT102 Engineering Chemistry 22IT103 Lab: Engineering Chemistry	Ι	CO Score (Out of 3)	2.68	2.66	2.92	2.21		
		CO Attainment Level (1 / 2 /3)	3	3	3	2		
		CO Average Percentage	66.75	66.75	60.5	62.25		
22IT104 Professional Communication	Ι	CO Score (Out of 3)	2.00	2.00	1.82	1.87		
		CO Attainment Level (1 / 2 /3)	2	2	1	1		
22JT105 Engineering Machanias		CO Average Percentage	83.88	86.65	79.75	76.17	73.19	
22IT 105 Engineering Mechanics	Ι	CO Score (Out of 3)	2.52	2.60	2.39	2.29	2.20	
2211100 Lab. Engineering Mechanics		CO Attainment Level (1 / 2 /3)	3	3	3	3	2	
		CO Average Percentage	77.75	80.23	72.52	69.67		
22IT107 Basic Electrical and Electronics Engineering	Ι	CO Score (Out of 3)	2.33	2.41	2.18	2.09		
		CO Attainment Level (1 / 2 /3)	3	3	2	2		
22JT109 Drogramming for Drohlam Solving		CO Average Percentage	79	70	65	70		
22IT100 Flogramming for Problem Solving	Ι	CO Score (Out of 3)	2.37	2.10	1.95	2.10		
2211109 Lab. Flogramming for Floblem Solving		CO Attainment Level (1 / 2 /3)	3	2	2	2		
		CO Average Percentage	80	61	41	24		
22IT201 Differential Equation & Complex Analysis	II	CO Score (Out of 3)	2.40	1.83	1.23	0.72		
		CO Attainment Level (1 / 2 /3)	3	1	0	0		
22JT202 Engineering Physics		CO Average Percentage	87.71	82.00	80.70	70.18	69.75	
2211 202 Eligiteting Physics 2217203 Lab: Engineering Physics	II	CO Score (Out of 3)	2.63	2.46	2.42	2.11	2.09	
		CO Attainment Level (1 / 2 /3)	3	3	3	2	2	
22IT204 Social Science	II	CO Average Percentage	86	92	95.5	93.33		

		CO Score (Out of 3)	2.58	2.76	2.87	2.80		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
201T205 Engineering Cranhies		CO Average Percentage	94	83	69	95		
2211205 Engineering Graphics	II	CO Score (Out of 3)	2.82	2.49	2.07	2.85		
2211200 Lab: Engineering Graphics		CO Attainment Level (1 / 2 /3)	3	3	2	3		
		CO Average Percentage	58	65	71	59	63	
22IT207 Elements of AIML	II	CO Score (Out of 3)	1.74	1.95	2.13	1.77	1.89	
		CO Attainment Level (1 / 2 /3)	1	2	2	1	1	
		CO Average Percentage	98.53	97.79	97.79	100		
22IT208 Computer workshop	II	CO Score (Out of 3)	2.96	2.93	2.93	3.00		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	94	89	65	87		
2211209 Basics of Python Programming	II	CO Score (Out of 3)	2.82	2.67	1.95	2.61		
2211210 Lab: Basics of Python Programming		CO Attainment Level (1 / 2 /3)	3	3	2	3		
		CO Average Percentage	85.09	79.09	81.43	84.09		
22CT101 Calculus Sequences and Series	Ι	CO Score (Out of 3)	2.55	2.37	2.44	2.52		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22CT102 Encineering Chamistry		CO Average Percentage	85.34	85.08	90.13	69.79		
22CT102 Engineering Chemistry	Ι	CO Score (Out of 3)	2.56	2.55	2.70	2.09		
22C1105 Lao: Engineering Chemistry		CO Attainment Level (1 / 2 /3)	3	3	3	2		
		CO Average Percentage	86.50	78.00	79.20	71.20		
22CT104 Professional Communication	Ι	CO Score (Out of 3)	2.60	2.34	2.38	2.14		
		CO Attainment Level (1 / 2 /3)	3	3	3	2		
22CT105 Engineering Machanias		CO Average Percentage	87.05	91.24	81.91	78.16	76.72	
22CT105 Engineering Mechanics	Ι	CO Score (Out of 3)	2.61	2.74	2.46	2.34	2.30	
22C1100 Lao. Engineering Mechanics		CO Attainment Level (1 / 2 /3)	3	3	3	3	3	
		CO Average Percentage	74.83	72.31	73.80	73.49		
22CT107 Basic Electrical and Electronics Engineering	Ι	CO Score (Out of 3)	2.24	2.17	2.21	2.20		
		CO Attainment Level (1 / 2 /3)	3	2	2	2		
22CT108 Programming for Problem Solving		CO Average Percentage	90.00	70.00	72.00	70.00		
22CT100 Lab: Programming for Problem Solving	Ι	CO Score (Out of 3)	2.70	2.10	2.16	2.10		
		CO Attainment Level (1 / 2 /3)	3	2	2	2		
		CO Average Percentage	75.00	61.00	29.00	24.00		
22CT201 Differential Equation and Complex Analysis	Π	CO Score (Out of 3)	2.25	1.83	0.87	0.72		
		CO Attainment Level (1 / 2 /3)	3	1	0	0		

22CT202 Engineering Division		CO Average Percentage	80.6	72.66	76.45	70.69	67.59	
22CT202 Engineering Physics	II	CO Score (Out of 3)	2.42	2.18	2.29	2.12	2.03	
22C1203 Lab: Engineering Physics		CO Attainment Level (1 / 2 /3)	3	23	3	2	2	
		CO Average Percentage	81.66	91.33	95	92.33		
22CT204 Social Science	II	CO Score (Out of 3)	2.45	2.74	2.85	2.77		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	92.00	81.00	70.00	93.00		
22CT205 Engineering Graphics	II	CO Score (Out of 3)	2.76	2.43	2.10	2.79		
22C1206 Lab: Engineering Graphics		CO Attainment Level (1 / 2 /3)	3	3	2	3		
		CO Average Percentage	66.7	60.38	72.08	57.09	56.97	
22CT207 Elements of AIML	II	CO Score (Out of 3)	2.00	1.81	2.16	1.71	1.71	
		CO Attainment Level (1 / 2 /3)	2	1	2	1	1	
		CO Average Percentage	72.66	69.78	92.81	94.96		
22CT208 Computer workshop	II	CO Score (Out of 3)	2.18	2.09	2.78	2.85		
		CO Attainment Level (1 / 2 /3)	2	2	3	3		
22CT209 Data Structures 22CT210 Lab: Data Structures	П	CO Average Percentage	78.24	66.05	63.28	73.94		
		CO Score (Out of 3)	2.35	1.98	1.90	2.22		
		CO Attainment Level (1 / 2 /3)	3	2	1	2		
		CO Average Percentage	82.40	59.48	79.33	62.14		
22CSD101 Probability and Statistics	I	CO Score (Out of 3)	2.47	1.78	2.38	1.86		
		CO Attainment Level (1 / 2 /3)	3	1	3	2		
22CSD102 Engineering Dhusies		CO Average Percentage	75.97	87.93	65.29	91.67	67.75	
22CSD102 Engineering Physics	I	CO Score (Out of 3)	2.28	2.64	1.96	2.75	2.03	
22CSD105 Lab Engineering Physics		CO Attainment Level (1 / 2 /3)	3	3	2	3	2	
		CO Average Percentage	91.80	89.47	91.20	92.77		
22CSD104 Social Science	I	CO Score (Out of 3)	2.75	2.68	2.74	2.78		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22CGD105 Engineering Machania		CO Average Percentage	87.66	85.79	88.59	85.34		
22CSD105 Engineering Mechanics	I	CO Score (Out of 3)	2.63	2.57	2.66	2.56		
22CSD106 Lab.: Engineering Mechanics		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22CSD107 Introduction to Computer Programming		CO Average Percentage	86.00	72.00	68.00	72.00		
22CSD108 Lab.: Introduction to Computer	I C	CO Score (Out of 3)	2.60	2.16	2.04	2.16		
Programming		CO Attainment Level (1 / 2 /3)	3	2	2	2		
22CSD201 Coloulus, Segueness and Series	тт	CO Average Percentage	80.83	78.33	79.82	78.26		
22C5D201 Calculus, Sequences and Series	11	CO Score (Out of 3)	2.42	2.35	2.39	2.35		

		CO Attainment Level (1 / 2 /3)	3	3	3	3		l
22CSD202En sin sorin a Chamistra		CO Average Percentage	93.91	89.86	92.70	89.13		
22CSD202Engineering Chemistry	II	CO Score (Out of 3)	2.82	2.70	2.78	2.67		
22CSD203 Lab: Engineering Chemistry		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	80.60	79.20	80.00	79.00		
22CSD204 Technical Communication	II	CO Score (Out of 3)	2.42	2.38	2.40	2.37		
22CSD205 Lab: Technical Communication		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22CSD20C Dividel Circuit Device		CO Average Percentage	84.96	85.86	79.72	83.91		
22CSD206 Digital Circuit Design	II	CO Score (Out of 3)	2.55	2.58	2.39	2.52		
22CSD207 Lab: Digital Circuit Design		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22CSD200 Deale Electrical Marking		CO Average Percentage	76.89	75.38	63.26	98.48		
22CSD208 Basic Electrical Machines	II	CO Score (Out of 3)	2.31	2.26	1.90	2.95		
22CSD209 Lab: Basic Electrical Machines		CO Attainment Level (1 / 2 /3)	3	3	1	3		
		CO Average Percentage	95.23	95.23	95.23	95.23	95.23	
22CSD210 Lab.: Engineering Design	II	CO Score (Out of 3)	2.86	2.86	2.86	2.86	2.86	
		CO Attainment Level (1 / 2 /3)	3	3	3	3	3	
22IOT101 Calculus		CO Average Percentage	76.68	72.15	58.17	72.61		
	Ι	CO Score (Out of 3)	2.30	2.16	1.75	2.18		
		CO Attainment Level (1 / 2 /3)	3	2	1	2		
2210T102 Semiconductor Division		CO Average Percentage	76.47	73.16	91.91	76.47	69.12	1
2210T102 Semiconductor Physics	Ι	CO Score (Out of 3)	2.29	2.19	2.76	2.29	2.07	1
22101 103 Eab Semiconductor Physics		CO Attainment Level (1 / 2 /3)	3	2	3	3	2	1
		CO Average Percentage	90.07	92.10	88.45	93.10		I
22IOT104 Social Science	Ι	CO Score (Out of 3)	2.70	2.76	2.65	2.79		I
		CO Attainment Level (1 / 2 /3)	3	3	3	3		I
		CO Average Percentage	57.96	57.96	63.61	60.3		
22IOT105 Basic Electronics Engineering	Ι	CO Score (Out of 3)	1.74	1.74	1.91	1.81		I
		CO Attainment Level (1 / 2 /3)	1	1	1	1		I
22IOT106 Pasia Electrical Engineering		CO Average Percentage	80.84	87.86	87.82	86.89		
2210T100 Basic Electrical Engineering	Ι	CO Score (Out of 3)	2.43	2.64	2.63	2.61		I
22101 107 Eao Basic Electrical Eligineering		CO Attainment Level (1 / 2 /3)	3	3	3	3		I
2210T108 Programming for problem solving		CO Average Percentage	89.12	86.19	87.58	87.16		_
2210T100 Flogramming for problem solving	I	CO Score (Out of 3)	2.67	2.59	2.63	2.61		
		CO Attainment Level $(1 / 2 / 3)$	3	3	3	3		_
22IOT201 Linear Algebra II		CO Average Percentage	86.88	78.65	77.91	76.64		

		CO Score (Out of 3)	2.61	2.36	2.34	2.30		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
2210T202En sin sorin a Chamistra		CO Average Percentage	88.24	82.72	87.5	86.03		
22101202Engineering Chemistry	II	CO Score (Out of 3)	2.65	2.48	2.63	2.58		
22101 205 Lab. Engineering Chemistry		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	66.50	53.75	54.50	53.25		
22IOT204 Professional Communication	II	CO Score (Out of 3)	2.00	1.61	1.64	1.60		
		CO Attainment Level (1 / 2 /3)	2	1	1	1		
2210T205 Engineering Greenhies		CO Average Percentage	90.00	79.00	70.00	90.00		
2210T205 Engineering Graphics	II	CO Score (Out of 3)	2.70	2.37	2.10	2.70		
22101200 Lab. Eligineering Oraphics		CO Attainment Level (1 / 2 /3)	3	3	2	3		
2210T207 Eurodemontals of Manufacturing Process		CO Average Percentage	80.84	87.86	87.82	86.89		
22101207 Fundamentals of Manufacturing Process	II	CO Score (Out of 3)	2.43	2.64	2.63	2.61		
22101208 Fundamentals of Manufacturing Flocess		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	88.22	90.11	91.54	86.78		
22IOT209 Lab.: Python Programming	II	CO Score (Out of 3)	2.65	2.70	2.75	2.60		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22EI 101 Differential Equation Complex Veriables and		CO Average Percentage	68.75	52.34	47.01	64.68		
Matrices	Ι	CO Score (Out of 3)	2.06	1.57	1.41	1.94		
Maurees		CO Attainment Level (1 / 2 /3)	2	0	0	1		
22EI 102 Engineering Division		CO Average Percentage	64.00	64.00	55.83	62.13	47.02	
22EL102 Eligineering Physics 22EL 103 Lab: Engineering Physics	Ι	CO Score (Out of 3)	1.92	1.92	1.67	1.86	1.41	
22EE103 Eao: Engineering Filysics		CO Attainment Level (1 / 2 /3)	1	1	1	1	0	
		CO Average Percentage	90.13	85.93	79.45	75.73		
22EL104 Social Science	Ι	CO Score (Out of 3)	2.70	2.58	2.38	2.27		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22EL 105 Engineering Graphics		CO Average Percentage	73.00	70.00	71.00	87.00		
22EL105 Engineering Graphics	Ι	CO Score (Out of 3)	2.19	2.10	2.13	2.61		
222E100 Eao. Englicering Graphics		CO Attainment Level (1 / 2 /3)	2	2	2	3		
		CO Average Percentage	60.95	38.38	70.87	51.11	82.41	
22EL107 Elements of AIML	Ι	CO Score (Out of 3)	1.83	1.15	2.13	1.53	2.47	
		CO Attainment Level (1 / 2 /3)	1	0	2	0	3	
		CO Average Percentage	76	80	78			
22EL108/Electrical workshop	Ι	CO Score (Out of 3)	2.28	2.40	2.34			
		CO Attainment Level (1 / 2 /3)	3	3	3			

22EL 100 Evendence (1) of Electrical Environment		CO Average Percentage	83.33	51.00	78.33	40.67	88.67
22EL109 Fundamentals of Electrical Engineering	Ι	CO Score (Out of 3)	2.50	1.53	2.35	1.22	2.66
22ELTIO Lab: Fundamentais of Electrical Engineering		CO Attainment Level (1 / 2 /3)	3	0	3	0	3
		CO Average Percentage	55.46	42.60	51.87	38.76	
22EL201 Differential and Integral Calculus	II	CO Score (Out of 3)	1.66	1.28	1.56	1.16	
		CO Attainment Level (1 / 2 /3)	1	0	0	0	
		CO Average Percentage	75.75	80.41	78.17	77.99	
22EL202Engineering Chemistry	II	CO Score (Out of 3)	2.27	2.41	2.35	2.34	
22EL205 Lab: Engineering Chemistry		CO Attainment Level (1 / 2 /3)	3	3	3	3	
		CO Average Percentage	63.75	53.71	57.00	48.50	
22EL204 Professional Communication	II	CO Score (Out of 3)	1.91	1.61	1.71	1.46	
		CO Attainment Level (1 / 2 /3)	1	0	1	0	
22EL 205 Engineering Machanics		CO Average Percentage	77.55	80.03	74.31	70.8	66.97
22EL205 Engineering Mechanics	II	CO Score (Out of 3)	2.33	2.40	2.23	2.12	2.01
22EE200 Lab. Engineering Wechanics		CO Attainment Level (1 / 2 /3)	3	3	2	2	2
22EL207 Basic Electrical and Electronics Engineering	II	CO Average Percentage	66.53	66.53	60.39	59.81	
		CO Score (Out of 3)	2.00	2.00	1.81	1.79	
		CO Attainment Level (1 / 2 /3)	2	2	1	1	
22EI 208 Programming for Problem Solving		CO Average Percentage	74.00	66.00	60.00	65.00	
22EL208 Flogramming for Problem Solving	II	CO Score (Out of 3)	2.22	1.98	1.80	1.95	
22EE209 Lab.: Frogramming for Froblem Solving		CO Attainment Level (1 / 2 /3)	2	2	1	2	
		CO Average Percentage	83.74	82.42	71.74	78.77	
22CSE101 Differential Equation and Complex Analysis	Ι	CO Score (Out of 3)	2.51	2.47	2.15	2.36	
		CO Attainment Level (1 / 2 /3)	3	3	2	3	
22CSE102 Engineering Physics		CO Average Percentage	72.1	65.17	76.75	72.82	83.55
22CSE102 Engineering Physics	Ι	CO Score (Out of 3)	2.16	1.96	2.30	2.18	2.51
22CSE103 Lab. Engineering Physics		CO Attainment Level (1 / 2 /3)	2	2	3	2	3
		CO Average Percentage	93.63	93.13	80.88	77.57	
22CSE104 Social Science	Ι	CO Score (Out of 3)	2.81	2.79	2.43	2.33	
		CO Attainment Level (1 / 2 /3)	3	3	3	3	
22CSE105 Engineering Graphics 22CSE106 Lab:		CO Average Percentage	94.00	87.00	74.00	96.00	
Engineering Graphics	Ι	CO Score (Out of 3)	2.82	2.61	2.22	2.88	
		CO Attainment Level (1 / 2 /3)	3	3	2	3	
22CSE107 Elements of AIMI	T	CO Average Percentage	85.37	54.36	92.12	61.49	70.43
	I	CO Score (Out of 3)	2.56	1.63	2.76	1.84	2.11

		CO Attainment Level (1 / 2 /3)	3	1	3	1	2	
		CO Average Percentage	65.44	66.91	65.44	67.65		
22CSE108 Computer workshop	Ι	CO Score (Out of 3)	1.96	2.01	1.96	2.03		
		CO Attainment Level (1 / 2 /3)	2	2	2	2		
22CCEP100 International to Community mith Dath and		CO Average Percentage	66.21	46.11	47	51.07		
22CSE109 Introduction to Computing with Python 22CSE110 Laby Introduction to Computing with Python	Ι	CO Score (Out of 3)	1.98	1.38	1.41	1.53		
22CSE110 Lab: Introduction to Computing with Python		CO Attainment Level (1 / 2 /3)	2	0	0	0		
		CO Average Percentage	83.70	86.04	85.14	79.80		
22CSE201 Calculus Sequences and Series	II	CO Score (Out of 3)	2.51	2.58	2.55	2.39		
-		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	94.25	93.52	92.09	81.8		
22CSE202Engineering Chemistry	II	CO Score (Out of 3)	2.83	2.81	2.76	2.45		
22CSE205 Lab: Engineering Chemistry		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	78.75	74.25	78.00	73.75		
22CSE204 Professional Communication	II	CO Score (Out of 3)	2.36	2.23	2.34	2.21		
		CO Attainment Level (1 / 2 /3)	3	2	3	2		
22CSE205 Engineering Mechanics		CO Average Percentage	81.36	80.8	77.32	72.31	77.08	
22CSE205 Engineering Mechanics	II	CO Score (Out of 3)	2.44	2.42	2.32	2.17	2.31	
22CSE200 Lab. Engineering Mechanics		CO Attainment Level (1 / 2 /3)	3	3	3	2	3	
		CO Average Percentage	74.83	72.31	73.80	73.49		
22CSE207 Basic Electrical and Electronics Engineering	II	CO Score (Out of 3)	2.24	2.17	2.21	2.20		
		CO Attainment Level (1 / 2 /3)	2	2	2	2		
22CSE208 Programming for Problem Solving		CO Average Percentage	100.00	100.00	89.00	97.00		
22CSE208 Flogramming for Problem Solving	II	CO Score (Out of 3)	3.00	3.00	2.67	2.91		
22CSE207 Eao 110gramming for 1100/cm Solving		CO Attainment Level (1 / 2 /3)	3	3	3	3		
		CO Average Percentage	53.41	66.30	45.99	79.99		
22ME101 Differential Equation, matrices and Statistics	Ι	CO Score (Out of 3)	1.60	1.99	1.38	2.40		
		CO Attainment Level (1 / 2 /3)	0	2	0	3		
22ME102 Engineering Physics		CO Average Percentage	60.64	55.76	53.57	80.31	61.54	
22ME102 Engineering Physics	Ι	CO Score (Out of 3)	1.82	1.67	1.61	2.41	1.85	
221111105 Edu. Engineering r nysies		CO Attainment Level (1 / 2 /3)	1	0	0	3	1	
		CO Average Percentage	88.60	78.70	73.10	74.50		
22ME104 Social Science	Ι	CO Score (Out of 3)	2.66	2.36	2.19	2.24		
		CO Attainment Level (1 / 2 /3)	3	3	2	2		
22ME105 Engineering Graphics	Ι	CO Average Percentage	74.00	71.00	70.00	89.00		

22ME106 Lab: Engineering Graphics		CO Score (Out of 3)	2.22	2.13	2.10	2.67		
		CO Attainment Level (1 / 2 /3)	2	2	2	3		
		CO Average Percentage	66.18	48.53	70.50	65.71	87.92	
22ME107 Elements of AIML	Ι	CO Score (Out of 3)	1.99	1.46	2.12	1.97	2.64	
		CO Attainment Level (1 / 2 /3)	1	0	2	2	3	
		CO Average Percentage	100.00	100.00	100.00	100.00		
22ME108 FAB Shop	Ι	CO Score (Out of 3)	3.00	3.00	3.00	3.00		
		CO Attainment Level (1 / 2 /3)	3	3	3	3		
22ME100 Markining Draws		CO Average Percentage	62.36	44.47	49.07	44.36	46.35	
22ME109 Machining Process	I	CO Score (Out of 3)	1.87	1.33	1.47	1.33	1.39	
22METTO Lab: Machining Process		CO Attainment Level (1 / 2 /3)	1	0	0	0	0	
		CO Average Percentage	74.62	55.99	75.29	74.46		
22ME201 Calculus and Vector	II	CO Score (Out of 3)	2.24	1.68	2.26	2.23		
		CO Attainment Level (1 / 2 /3)	2	0	3	2		
		CO Average Percentage	72.26	59.25	65.92			
22ME202Engineering Chemistry	II	CO Score (Out of 3)	2.17	1.78	1.98			
22ME203 Lab: Engineering Chemistry		CO Attainment Level (1 / 2 /3)	2	1	2			
		CO Average Percentage	59.25	50.25	49.75	45.5		
22ME204 Professional Communication	II	CO Score (Out of 3)	1.78	1.51	1.49	1.37		
		CO Attainment Level (1 / 2 /3)	1	0	0	0		
22ME205 Engine Machanica		CO Average Percentage	77.97	80.39	71.01	71.69	65.67	
22ME205 Engineering Mechanics	II	CO Score (Out of 3)	2.34	2.41	2.13	2.15	1.97	
22ME206 Lab: Engineering Mechanics		CO Attainment Level (1 / 2 /3)	3	3	2	2	2	
		CO Average Percentage	65.44	62.92	68.79	66.76		
22ME207 Basic Electrical and Electronics Engineering	II	CO Score (Out of 3)	1.96	1.89	2.06	2.00		
		CO Attainment Level (1 / 2 /3)	2	1	2	2		
22ME208 Dragromming for Drohlem Solving		CO Average Percentage	65.00	65.00	60.00	65.00		
22ME200 Lob - Programming for Problem Solving	II	CO Score (Out of 3)	1.95	1.95	1.80	1.95		
22ME209 Lab.: Programming for Problem Solving		CO Attainment Level (1 / 2 /3)	2	2	1	2		
22EE101, Differential Equation Complex Variables &		CO Average Percentage	77.63	55.94	51.65	67.2		
Metricos	Ι	CO Score (Out of 3)	2.33	1.68	1.55	2.02		
Maurces		CO Attainment Level (1 / 2 /3)	3	0	0	2		
22EE102: Engineering Physics		CO Average Percentage	65.73	62.95	57.9	65.52	56.52	
22EE102: Engineering Physics 22EE103: Lab: Engineering Division	I	CO Score (Out of 3)	1.97	1.89	1.74	1.97	1.70	
		CO Attainment Level (1 / 2 /3)	2	1	1	2	1	

		CO Average Percentage	88.60	78.70	73.10	74.50		
22EE104: Social Science	Ι	CO Score (Out of 3)	2.66	2.36	2.19	2.24		
		CO Attainment Level (1 / 2 /3)	3	3	2	2		
		CO Average Percentage	74.00	71.00	72.00	88.00		
22EE105: Engineering Graphics	I	CO Score (Out of 3)	2.22	2.13	2.16	2.64		
22EE106: Lab: Engineering Graphics		CO Attainment Level (1 / 2 /3)	2	2	2	3		
		CO Average Percentage	77.42	51.67	74.67	64.00	73.00	
22EE107: Elements of AIML	Ι	CO Score (Out of 3)	2.32	1.55	2.24	1.92	2.19	
		CO Attainment Level (1 / 2 /3)	3	0	3	1	2	
		CO Average Percentage	83.3	72.6	78.72	77.3		
22EE108: Electrical workshop	Ι	CO Score (Out of 3)	2.50	2.18	2.36	2.32		
		CO Attainment Level (1 / 2 /3)	3	2	3	3		
22EE100, Disitel Lesis Design		CO Average Percentage	92.11	73.61	90.82	77.40	94.62	
22EE109: Digital Logic Design	Ι	CO Score (Out of 3)	2.76	2.21	2.72	2.32	2.84	
22EETTO: Lab: Digital Logic Design		CO Attainment Level (1 / 2 /3)	3	2	3	3	3	
22EE201 Differential & Integral Calculus		CO Average Percentage	69.44	58.64	52.56	44.5		
	II	CO Score (Out of 3)	2.08	1.76	1.58	1.34		
		CO Attainment Level (1 / 2 /3)	2	1	0	0		
		CO Average Percentage	74.77	78.55	76.21	73.23		
22EE202Engineering Chemistry	II	CO Score (Out of 3)	2.24	2.36	2.29	2.20		
22EE203 Lab: Engineering Chemistry		CO Attainment Level (1 / 2 /3)	3	3	3	2		
		CO Average Percentage	59.5	55.11	59.71	53.2		
22EE204 Professional Communication	II	CO Score (Out of 3)	1.79	1.65	1.79	1.60		
		CO Attainment Level (1 / 2 /3)	1	1	1	0		
22EE205 Environment Markania		CO Average Percentage	80.64	78.86	82.07	76.44	65.74	
22EE205 Engineering Mechanics	II	CO Score (Out of 3)	2.42	2.37	2.46	2.29	1.97	
22EE200 Lab: Engineering Mechanics		CO Attainment Level (1 / 2 /3)	3	3	3	3	2	
		CO Average Percentage	69.24	69.24	59.67	60.11		
22EE207 Basic Electrical and Electronics Engineering	II	CO Score (Out of 3)	2.08	2.08	1.79	1.80		
		CO Attainment Level (1 / 2 /3)	2	2	1	2		
22EE209 Drogromming for Problem Solution		CO Average Percentage	74.00	65.00	60.00	65.00		
22EE208 Programming for Problem Solving	II	CO Score (Out of 3)	2.22	1.95	1.80	1.95		
22EE209 Lab.: Programming for Problem Solving		CO Attainment Level (1 / 2 /3)	2	2	1	2		

Attainment of Program Outcomes from first year courses

PO At	ttainment Process	
1	Assessment tools:	 Direct Assessment Process: (80%) 1. Student performance of theory courses in MSE-I/MSE-II/TA/ESE 2. Student performance of practical courses in MSPA/ESE-PR Indirect Assessment Process: (20%)
		1. Student Survey, Parent Survey
2	Process of Assessment:	 Develop Course outcome of the respective course. Mapping of Course outcome with Program Outcomes on three correlation level (1: Low 2: Moderate 3: Substantial) Calculate Average mapping level of each Program Outcome with Course Outcome of respective course on the basis of three correlation levels (1: Low 2: Moderate 3: Substantial) Calculate Average mapping level of each Program Outcome with Course Outcome of all first-year courses on the basis of three correlation levels (1: Low 2: Moderate 3: Substantial) Calculate Average mapping level of each Program Outcome with Course Outcome of all first-year courses on the basis of three correlation levels (1: Low 2: Moderate 3: Substantial) The results of evaluation of each course with PO is tabulated in CO-PO attainment matrix. Indirect attainment to be calculated from the analysis of Students Survey. Calculate final average attainment level of each PO using following equation: Final Attainment Level = 0.8*Direct Attainment +0.2* Indirect Attainment The estimated average PO attainment level is to be compared with the set target levels given in articulation matrix. If PO attainment is less than the set target level then necessary actions to be incorporated based on the evaluation of relevant POs.
3	Frequency of Assessment of data collected:	At the end of each Semester

PO Targets: 2022-23

COURSE CODE: COURSE NAME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
22AML101 Calculus, Sequence and Series	2.00	2.00	2.00							1.00		1.00
22AML102 Technical Communication 22AML103 Lab: Technical Communication									2.00	2.00		2.00
22AML104 Lab: Computer Workshop	1.33		1.00		2.00				1.33	1.00		2.00
22AML105 Programming for Problem Solving 22AML106 Lab: Programming for Problem Solving	2.50	2.00										2.00
22AML107 Engineering Chemistry 22AML108 Lab.: Engineering Chemistry	1.75	1.50					1.00			1.00		1.00
22AML201 Probability and Statistics	2.00	2.00	2.00							1.00		1.00
22AML202 Engineering Physics 22AML203 Lab: Engineering Physics	2.20	2.20										1.00
22AML204 Digital Electronics 22AML205 Lab: Digital Electronics	2.00	2.00	1.00		1.33							2.00
22AML206 Object Oriented Programming22AML207 Object Oriented Programming	2.00	2.00										
22AML208 Web Technology Lab	1.75	1.67	2.00		1.67			1.00	1.00	1.00		1.67
22AML209 Social Science						2.00					2.00	2.00
22ADS101 Calculus, Sequence and Series	2.00	2.00	2.00							1.00		1.00

22ADS102 Engineering Chemistry 22ADS103 Lab.: Engineering Chemistry	1.75	1.50					1.00			1.00		1.00
22ADS104 Technical Communications 22ADS105 Lab.: Technical Communications									2.00	2.00		2.00
22ADS106 Foundations of Data Science 22ADS107 Lab.: Foundations of Data Science	2.50	3.00		2.00			1.00					1.00
22ADS108 Computer Programing 22ADS109 Lab.: Computer Programing	2.33	2.67	2.33		2.00			2.00		2.00		2.00
22ADS201 Probability and Statistics	2.00	2.00	2.00							1.00		1.00
22ADS202 Engineering Physics 22ADS203 Lab: Engineering Physics	2.20	2.20										1.00
22ADS204 Social Science						2.00					2.00	2.00
22ADS205 Computer Architecture and Organization	3.00	2.00			3.00				3.00	2.00	3.00	3.00
22ADS206 Object Oriented Programming 22ADS207 Object Oriented Programming	2.50	3.00	3.00		3.00	2.00		2.00	2.00	2.00		2.00
22ADS208 Data Structures 22ADS209 Lab: Data Structures	2.75	2.50	1.75	2.00								3.00
22ADS210 Software Lab	3.00	2.00	2.00		2.00							
22ET101 Differential and Integral Calculus	2.00	2.00	2.00							1.00		1.00
22ET102 Engineering Chemistry 22ET103 Lab: Engineering Chemistry	1.75	1.50					1.00			1.00		1.00
22ET104 Professional Communication								2.00	2.00		2.00	
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22ET105 Engineering Mechanics 22ET106 Lab: Engineering Mechanics	3.00	3.00					2.00	2.00	2.00	2.00		
22ET107 Basic Electrical and Electronics Engineering	2.00	2.00	2.67									
22ET108 Programming for Problem Solving 22ET109 Lab: Programming for Problem Solving	2.67	1.50	2.00									
22ET201 Differential Equation, Complex Variables & Matrices	2.00	2.00	2.00						1.00		1.00	
22ET202 Engineering Physics 22ET203 Lab: Engineering Physics	2.40	2.40									1.00	
22ET204 Social Science					2.00					2.00	2.00	
22ET205 Engineering Graphics 22ET206 Lab: Engineering Graphics	3.00	2.00		3.00				2.00	3.00		3.00	
22ET207 Elements of AIML	2.20			3.00	3.00		1.00	2.00			3.00	
22ET208 Electrical workshop	3.00	1.00	1.00						1.00		2.33	
22ET209 Digital Logic Design 22ET210 Lab: Digital Logic Design	2.40	2.40	3.00					2.00	2.00	2.00	2.00	
22CV101 Calculus and Vector	2.00	2.00	2.00						1.00		1.00	
22CV102 Engineering Chemistry 22CV103 Lab: Engineering Chemistry	1.67	1.67				1.00			1.00		1.00	

22CV104 Professional Communication									2.00	2.00		2.00
22CV105 Engineering Mechanics 22CV106 Lab: Engineering Mechanics	3.00	3.00						2.00	2.00	2.00	2.00	
22CV107 Basic Electrical and Electronics Engineering	2.00	2.00	2.67									
22CV108 Programming for Problem Solving 22CV109 Lab: Programming for Problem Solving	2.67	1.50	2.00									
22CV201 Differential Equation, Matrices & Statistics	2.00	2.00	2.00							1.00		1.00
22CV202 Engineering Physics 22CV203 Lab: Engineering Physics	2.40	2.40										1.00
22CV204 Social Science						2.00					2.00	2.00
22CV205 Engineering Graphics 22CV206 Lab: Engineering Graphics	3.00	2.00			3.00				2.00	3.00		3.00
22CV207 Elements of AIML	2.20				3.00	3.00		1.00	2.00			3.00
22CV208 FAB Shop						3.00			3.00			3.00
22CV209 Strength of Materials 22CV210 Lab: Strength of Materials	3.00	2.00	2.50	3.00					1.00	1.00		
22IT101 Calculus Sequences and Series	2.00	2.00	2.00							1.00		1.00
22IT102 Engineering Chemistry 22IT103 Lab: Engineering Chemistry	1.75	1.67					1.00			1.00		1.00

22IT104 Professional Communication									2.00	2.00		2.00
22IT105 Engineering Mechanics 22IT106 Lab: Engineering Mechanics	3.00	3.00						2.00	2.00	2.00	2.00	
22IT107 Basic Electrical and Electronics Engineering	2.00	2.00	2.67									
22IT108 Programming for Problem Solving 22IT109 Lab: Programming for Problem Solving	2.67	1.50	2.00									
22IT201 Differential Equation & Complex Analysis	2.00	2.00	2.00							1.00		1.00
22IT202 Engineering Physics 22IT203 Lab: Engineering Physics	2.20	2.20										1.00
22IT204 Social Science						2.00					2.00	2.00
22IT205 Engineering Graphics 22IT206 Lab: Engineering Graphics	3.00	2.00			3.00				2.00	3.00		3.00
22IT207 Elements of AIML	2.20				3.00	3.00		1.00	2.00			3.00
22IT208 Computer workshop	2.50				3.00							3.00
22IT209 Basics of Python Programming 22IT210 Lab: Basics of Python Programming	3.00		3.00	1.00	2.00				1.00	1.00		2.00
22CT101 Calculus Sequences and Series	2.00	2.00	2.00							1.00		1.00
22CT102 Engineering Chemistry 22CT103 Lab: Engineering Chemistry	1.75	1.67					1.00			1.00		1.00

22CT104 Professional Communication								2.00	2.00		2.00
22CT105 Engineering Mechanics 22CT106 Lab: Engineering Mechanics	3.00	3.00					2.00	2.00	2.00	2.00	
22CT107 Basic Electrical and Electronics Engineering	2.00	2.00	2.67								
22CT108 Programming for Problem Solving 22CT109 Lab: Programming for Problem Solving	2.67	1.50	2.00								
22CT201 Differential Equation and Complex Analysis	2.00	2.00	2.00						1.00		1.00
22CT202 Engineering Physics 22CT203 Lab: Engineering Physics	2.20	2.20									1.00
22CT204 Social Science						2.00				2.00	2.00
22CT205 Engineering Graphics 22CT206 Lab: Engineering Graphics	3.00	2.00			3.00			2.00	3.00		3.00
22CT207 Elements of AIML	2.20				3.00	3.00	1.00	2.00			3.00
22CT208 Computer workshop	2.50				3.00						3.00
22CT209 Data Structures 22CT210 Lab: Data Structures	2.25	2.75	2.75	2.00				1.00			3.00
22CSD101 Probability and Statistics	2.00	2.00	2.00						1.00		1.00
22CSD102 Engineering Physics 22CSD103 Lab.: Engineering Physics	2.20	2.20									1.00

22CSD104 Social Science						2.00					2.00	2.00
22CSD105 Engineering Mechanics 22CSD106 Lab.: Engineering Mechanics	3.00	3.00						2.00	2.00	2.00	2.00	
22CSD107 Introduction to Computer Programming 22CSD108 Lab.: Introduction to Computer Programming	2.50	1.67	2.00									
22CSD201 Calculus, Sequences and Series	2.00	2.00	2.00							1.00		1.00
22CSD202Engineering Chemistry 22CSD203 Lab: Engineering Chemistry	1.75	1.67					1.00			1.00		1.00
22CSD204 Technical Communication 22CSD205 Lab: Technical Communication									2.00	2.00		2.00
22CSD206 Digital Circuit Design 22CSD207 Lab: Digital Circuit Design	2.00	2.00	1.00		1.33							2.00
22CSD208 Basic Electrical Machines 22CSD209 Lab: Basic Electrical Machines	3.00	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00
22CSD210 Lab.: Engineering Design	3.00	2.00			3.00				2.00	3.00		3.00
22IOT101 Calculus	2.00	2.00								1.00		1.00
22IOT102 Semiconductor Physics 22IOT103 Lab.: Semiconductor Physics	2.20	2.20										1.00
22IOT104 Social Science						2.00					2.00	2.00
22IOT105 Basic Electronics Engineering	2.00	2.00	2.67									_

22IOT106 Basic Electrical Engineering 22IOT107 Lab.: Basic Electrical Engineering	3.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00
22IOT108 Programming for problem solving 22IOT109 Lab.: Programming for problem solving	2.00	1.50	1.75			1.00			2.00			
22IOT201 Linear Algebra	2.00	2.00								1.00		1.00
22IOT202Engineering Chemistry 22IOT203 Lab: Engineering Chemistry	1.75	1.67					1.00			1.00		1.00
22IOT204 Professional Communication									2.00	2.00		2.00
22IOT205 Engineering Graphics 22IOT206 Lab: Engineering Graphics	3.00	2.00			3.00				2.00	3.00		3.00
22IOT207 Fundamentals of Manufacturing Process 22IOT208 Fundamentals of Manufacturing Process	2.25				2.00			2.00		1.00		3.00
22IOT209 Lab.: Python Programming	3.00	2.00			3.00				2.00	3.00		3.00
22EL101 Differential Equation, Complex Variables and Matrices	2.00	2.00	2.00							1.00		1.00
22EL102 Engineering Physics 22EL103 Lab: Engineering Physics	2.40	2.40										1.00
22EL104 Social Science						2.00					2.00	2.00
22EL105 Engineering Graphics 22EL106 Lab: Engineering Graphics	3.00	2.00			3.00				2.00	3.00		3.00
22EL107 Elements of AIML	2.20				3.00	3.00		1.00	2.00			3.00

22EL108 Electrical workshop	2.00	1.00	1.00							1.00		2.33
22EL109 Fundamentals of Electrical Engineering 22EL110 Lab: Fundamentals of Electrical Engineering	3.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00
22EL201 Differential and Integral Calculus	2.00	2.00	2.00							1.00		1.00
22EL202Engineering Chemistry 22EL203 Lab: Engineering Chemistry	1.75	1.50					1.00			1.00		1.00
22EL204 Professional Communication									2.00	2.00		2.00
22EL205 Engineering Mechanics 22EL206 Lab: Engineering Mechanics	3.00	3.00						2.00	2.00	2.00	2.00	
22EL207 Basic Electrical and Electronics Engineering	2.00	2.00	2.67									
22EL208 Programming for Problem Solving 22EL209 Lab.: Programming for Problem Solving	2.67	1.50	2.00									
22CSE101 Differential Equation and Complex Analysis	2.00	2.00	2.00							1.00		1.00
22CSE102 Engineering Physics 22CSE103 Lab: Engineering Physics	2.20	2.20										1.00
22CSE104 Social Science						2.00					2.00	2.00
22CSE105 Engineering Graphics 22CSE106 Lab: Engineering Graphics	3.00	2.00			3.00				2.00	3.00		3.00
22CSE107 Elements of AIML	2.20				3.00	3.00		1.00	2.00			3.00

22CSE108 Computer workshop	2.50			3.00							3.00
22CSE109 Introduction to Computing with Python 22CSE110 Lab: Introduction to Computing with Python	3.00	2.00	2.00								
22CSE201 Calculus Sequences and Series	2.00	2.00	2.00						1.00		1.00
22CSE202Engineering Chemistry 22CSE203 Lab: Engineering Chemistry	1.75	1.67				1.00			1.00		1.00
22CSE204 Professional Communication								2.00	2.00		2.00
22CSE205 Engineering Mechanics 22CSE206 Lab: Engineering Mechanics	3.00	3.00					2.00	2.00	2.00	2.00	
22CSE207 Basic Electrical and Electronics Engineering	2.00	2.00	2.67								
22CSE208 Programming for Problem Solving 22CSE209 Lab.: Programming for Problem Solving	2.67	1.50	2.00								
22ME101 Differential Equation, matrices and Statistics	2.00	2.00	2.00						1.00		1.00
22ME102 Engineering Physics 22ME103 Lab: Engineering Physics	2.40	2.40									1.00
22ME104 Social Science					2.00					2.00	2.00
22ME105 Engineering Graphics 22ME106 Lab: Engineering Graphics	3.00	2.00		3.00				2.00	3.00		3.00
22ME107 Elements of AIML	2.20			3.00	3.00		1.00	2.00			3.00

22ME108 FAB Shop						3.00			3.00			3.00
22ME109 Machining Process 22ME110 Lab: Machining Process	2.60	1.80	2.00	2.00		1.20	1.00	1.00		1.00	1.00	1.80
22ME201 Calculus and Vector	2.00	2.00	2.00							1.00		1.00
22ME202Engineering Chemistry 22ME203 Lab: Engineering Chemistry	1.67	1.67					1.00			1.00		1.00
22ME204 Professional Communication									2.00	2.00		2.00
22ME205 Engineering Mechanics 22ME206 Lab: Engineering Mechanics	3.00	3.00						2.00	2.00	2.00	2.00	
22ME207 Basic Electrical and Electronics Engineering	2.00	2.00	2.67									
22ME208 Programming for Problem Solving 22ME209 Lab.: Programming for Problem Solving	2.67	1.50	2.00									
22EE101: Differential Equation, Complex Variables & Matrices	2.00	2.00	2.00							1.00		1.00
22EE102: Engineering Physics 22EE103: Lab: Engineering Physics	2.40	2.40										1.00
22EE104: Social Science						2.00					2.00	2.00
22EE105: Engineering Graphics 22EE106: Lab: Engineering Graphics	3.00	2.00			3.00				2.00	3.00		3.00
22EE107: Elements of AIML	2.20				3.00	3.00		1.00	2.00			3.00
22EE108: Electrical workshop	2.00	1.00	1.00							1.00		2.33

22EE109: Digital Logic Design 22EE110: Lab: Digital Logic Design	2.00	2.00	1.00		1.33							2.00
22EE201 Differential & Integral Calculus	2.00	2.00	2.00							1.00		1.00
22EE202Engineering Chemistry 22EE203 Lab: Engineering Chemistry	1.75	1.50					1.00			1.00		1.00
22EE204 Professional Communication									2.00	2.00		2.00
22EE205 Engineering Mechanics 22EE206 Lab: Engineering Mechanics	3.00	3.00						2.00	2.00	2.00	2.00	
22EE207 Basic Electrical and Electronics Engineering	2.00	2.00	2.67									
22EE208 Programming for Problem Solving 22EE209 Lab.: Programming for Problem Solving	2.67	1.50	2.00									
FY PO TARGETS ALL	2.33	2.00	2.00	1.67	2.56	2.33	1.00	1.48	1.91	1.56	1.89	1.80

Direct Attainment:

PO Attainment for All First-Year Courses: 2022-23

SEM	COURSE CODE: COURSE NAME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Sem-I	22AML101 Calculus, Sequence and Series	0.83	0.83	0.84							0.42		0.42
Sem-I	22AML102 Technical Communication 22AML103 Lab: Technical Communication									1.37	1.63		1.63
Sem-I	22AML104 Lab: Computer Workshop	1.31		0.98		1.95				1.31	0.98		2.00
Sem-I	22AML105 Programming for Problem Solving 22AML106 Lab: Programming for Problem Solving	2.15	1.77										1.80
Sem-I	22AML107 Engineering Chemistry 22AML108 Lab.: Engineering Chemistry	1.64	1.42					0.94			0.94		0.94
Sem-II	22AML201 Probability and Statistics	0.83	0.83	0.65							0.42		0.42
Sem-II	22AML202 Engineering Physics 22AML103 Lab: Engineering Physics	1.98	1.98										0.89
Sem-II	22AML204 Digital Electronics 22AML205 Lab: Digital Electronics	1.58	1.61	0.52		1.16							1.64
Sem-II	22AML206 Object Oriented Programming 22AML207 Object Oriented Programming	2.00	2.00										
Sem-II	22AML208 Web Technology Lab	1.75	1.67	2.00		1.67			1.00	1.00	1.00		1.67
Sem-II	22AML209 Social Science						1.80					2.00	2.00
Sem-I	22ADS101 Calculus, Sequence and Series	1.15	1.15	1.12							0.57		0.57
Sem-I	22ADS102 Engineering Chemistry 22ADS103 Lab.: Engineering Chemistry	1.60	1.39					0.92			0.92		0.92

Sem-I	22ADS104 Technical Communications 22ADS105 Lab.: Technical Communications									1.37	1.42		1.42
Sem-I	22ADS106 Foundations of Data Science 22ADS107 Lab.: Foundations of Data Science	1.16	0.84		1.64			0.48					0.43
Sem-I	22ADS108 Computer Programing 22ADS109 Lab.: Computer Programing	1.36	1.69	1.36		1.19			1.41		1.15		1.18
Sem-II	22ADS201 Probability and Statistics	1.15	1.15	1.06							0.57		0.57
Sem-II	22ADS202 Engineering Physics 22ADS103 Lab: Engineering Physics	1.68	1.68										0.75
Sem-II	22ADS204 Social Science						2.00					2.00	2.00
Sem-II	22ADS205 Computer Architecture and Organization	1.21	0.77			1.88				0.79	0.53	1.21	1.21
Sem-II	22ADS206 Object Oriented Programming 22ADS207 Object Oriented Programming	1.61	2.10	2.10		2.10	1.40		1.39	1.23	1.23		1.40
Sem-II	22ADS208 Data Structures 22ADS209 Lab: Data Structures	2.28	2.03	1.46	1.71								2.45
Sem-II	22ADS210 Software Lab	2.25	1.50	1.50		1.50							
Sem-I	22ET101 Differential and Integral Calculus	1.05	1.05	1.24							0.52		0.56
Sem-I	22ET102 Engineering Chemistry 22ET103 Lab: Engineering Chemistry	1.25	1.09					0.71			0.71		0.71
Sem-I	22ET104 Professional Communication									0.40	0.51		0.51
Sem-I	22ET105 Engineering Mechanics 22ET106 Lab: Engineering Mechanics	2.21	2.21						1.47	1.47	1.47	1.47	
Sem-I	22ET107 Basic Electrical and Electronics Engineering	0.62	0.62	0.68									
Sem-I	22ET108 Programming for Problem Solving 22ET109 Lab: Programming for Problem Solving	1.70	0.92	1.30									

Sem-II	22ET201 Differential Equation, Complex Variables & Matrices	0.50	0.50	0.53						0.25		0.25
Sem-II	22ET202 Engineering Physics 22ET103 Lab: Engineering Physics	1.44	1.44									0.60
Sem-II	22ET204 Social Science					1.90					2.00	2.00
Sem-II	22ET205 Engineering Graphics 22ET206 Lab: Engineering Graphics	2.79	1.86		2.79				1.86	2.79		2.79
Sem-II	22ET207 Elements of AIML	0.86			1.12	1.15		0.63	0.78			1.17
Sem-II	22ET208 Electrical workshop	2.75	1.00	1.00						0.92		2.33
Sem-II	22ET209 Digital Logic Design 22ET210 Lab: Digital Logic Design	1.61	1.61	1.92					1.28	1.28	1.28	1.28
Sem-I	22CV101 Calculus and Vector	0.50	0.50	0.47						0.25		0.25
Sem-I	22CV102 Engineering Chemistry 22CV103 Lab: Engineering Chemistry	1.13	1.13				0.67			0.67		0.67
Sem-I	22CV104 Professional Communication								0.40	0.43		0.43
Sem-I	222CV105 Engineering Mechanics 22CV106 Lab: Engineering Mechanics	1.89	1.89					1.26	1.26	1.26	1.26	
Sem-I	22CV107 Basic Electrical and Electronics Engineering	0.40	0.40	0.53								
Sem-I	22CV108 Programming for Problem Solving 22CV109 Lab: Programming for Problem Solving	1.41	0.79	1.18								
Sem-II	22CV201 Differential Equation, Matrices & Statistics	0.82	0.82	1.18						0.41		0.41
Sem-II	22CV202 Engineering Physics 22CV203 Lab: Engineering Physics	1.61	1.61									0.67
Sem-II	22CV204 Social Science					1.51					1.80	1.61

Sem-II	22CV205 Engineering Graphics 22CV206 Lab: Engineering Graphics	2.74	1.83			2.74				1.83	2.74		2.74
Sem-II	22CV207 Elements of AIML	0.71				1.02	1.18		0.24	0.62			0.93
Sem-II	22CV208 FAB Shop						3.00			3.00			3.00
Sem-II	22CV209 Strength of Materials 22CV210 Lab: Strength of Materials	1.98	1.32	1.56	2.04					0.66	0.63		
Sem-I	22IT101 Calculus Sequences and Series	1.46	1.46	1.43							0.73		0.73
Sem-I	22IT102 Engineering Chemistry 22IT103 Lab: Engineering Chemistry	1.56	1.42					0.91			0.91		0.91
Sem-I	22IT104 Professional Communication									0.50	0.70		0.70
Sem-I	22IT105 Engineering Mechanics 22IT106 Lab: Engineering Mechanics	2.33	2.33						1.55	1.55	1.55	1.55	
Sem-I	22IT107 Basic Electrical and Electronics Engineering	1.35	1.35	1.57									
Sem-I	22IT108 Programming for Problem Solving 22IT109 Lab: Programming for Problem Solving	2.02	0.92	1.30									
Sem-II	22IT201 Differential Equation & Complex Analysis	1.03	1.03	1.41							0.51		0.51
Sem-II	22IT202 Engineering Physics 22IT203 Lab: Engineering Physics	1.79	1.79										0.82
Sem-II	22IT204 Social Science						1.80					2.00	2.00
Sem-II	22IT205 Engineering Graphics 22IT206 Lab: Engineering Graphics	2.71	1.80			2.71				1.80	2.71		2.71
Sem-II	22IT207 Elements of AIML	0.69				0.82	0.88		0.29	0.64			0.96
Sem-II	22IT208 Computer workshop	2.50				3.00							3.00

Sem-II	22IT209 Basics of Python Programming 22IT210 Lab: Basics of Python Programming	2.25		2.25	0.75	1.50				0.75	0.75		1.50
Sem-I	22CT101 Calculus Sequences and Series	1.75	1.75	1.75							0.87		0.87
Sem-I	22CT102 Engineering Chemistry 22CT103 Lab: Engineering Chemistry	1.48	1.36					0.86			0.86		0.86
Sem-I	22CT104 Professional Communication									1.27	1.67		1.67
Sem-I	22CT105 Engineering Mechanics 22CT106 Lab: Engineering Mechanics	2.59	2.59						1.73	1.73	1.73	1.73	
Sem-I	22CT107 Basic Electrical and Electronics Engineering	1.07	1.07	1.22									
Sem-I	22CT108 Programming for Problem Solving 22CT109 Lab: Programming for Problem Solving	1.99	0.92	1.30									
Sem-II	22CT201 Differential Equation and Complex Analysis	0.94	0.94	1.35							0.47		0.47
Sem-II	22CT202 Engineering Physics 22CT203 Lab: Engineering Physics	1.54	1.54										0.70
Sem-II	22CT204 Social Science						1.71					2.00	2.00
Sem-II	22CT205 Engineering Graphics 22CT206 Lab: Engineering Graphics	2.79	1.86			2.79				1.86	2.79		2.79
Sem-II	22CT207 Elements of AIML	1.12				1.00	1.15		0.75	1.05			1.58
Sem-II	22CT208 Computer workshop	2.17				2.50							2.50
Sem-II	22CT209 Data Structures 22CT210 Lab: Data Structures	1.63	1.95	1.96	1.67					0.71			2.13
Sem-I	22CSD101 Probability and Statistics	1.01	1.01	0.98							0.50		0.50
Sem-I	22CSD102 Engineering Physics 22CSD103 Lab.: Engineering Physics	1.79	1.79										0.79

Sem-I	22CSD104 Social Science						2.00					2.00	2.00
Sem-I	22CSD105 Engineering Mechanics 22CSD106 Lab.: Engineering Mechanics	3.00	3.00						2.00	2.00	2.00	2.00	
Sem-I	22CSD107 Introduction to Computer Programming 22CSD108 Lab.: Introduction to Computer Programming	1.93	1.10	1.35									
Sem-II	22CSD201 Calculus, Sequences and Series	1.59	1.59	1.49							0.79		0.79
Sem-II	22CSD202 Engineering Chemistry 22CSD203 Lab: Engineering Chemistry	1.74	1.65					1.00			0.99		0.99
Sem-II	22CSD204 Technical Communication 22CSD205 Lab: Technical Communication									1.68	1.80		1.80
Sem-II	22CSD206 Digital Circuit Design 22CSD207 Lab: Digital Circuit Design	1.89	1.86	0.83		1.26							1.86
Sem-II	22CSD208 Basic Electrical Machines 22CSD209 Lab: Basic Electrical Machines	2.48	0.83	0.83	0.83				0.83	0.83	0.83	0.83	0.83
Sem-II	22CSD210 Lab.: Engineering Design	3.00	2.00			3.00				2.00	3.00		3.00
Sem-I	22IOT101 Calculus	0.98	0.98								0.49		0.49
Sem-I	22IOT102 Semiconductor Physics 22IOT103 Lab.: Semiconductor Physics	1.71	1.71										0.77
Sem-I	22IOT104 Social Science						1.82					1.83	2.00
Sem-I	22IOT105 Basic Electronics Engineering	0.87	0.87	1.02									
Sem-I	22IOT106 Basic Electrical Engineering 22IOT107 Lab.: Basic Electrical Engineering	2.21	0.74	0.74	0.74	0.74			0.74	0.74	0.74	0.74	0.74
Sem-I	22IOT108 Programming for problem solving 22IOT109 Lab.: Programming for problem solving	1.90	1.42	1.66			0.94			1.89			
Sem-II	22IOT201 Linear Algebra	1.66	1.66								0.83		0.83

Sem-II	22IOT202 Engineering Chemistry 22IOT203 Lab: Engineering Chemistry	1.71	1.63					0.98			0.98		0.98
Sem-II	22IOT204 Professional Communication									0.50	0.63		0.63
Sem-II	22IOT205 Engineering Graphics 22IOT206 Lab: Engineering Graphics	2.79	1.86			2.79				1.86	2.79		2.79
Sem-II	22IOT207 Fundamentals of Manufacturing Process 22IOT208 Fundamentals of Manufacturing Process	2.18				1.97			1.93		0.95		2.90
Sem-II	22IOT209 Lab.: Python Programming	3.00	2.00			3.00				2.00	3.00		3.00
Sem-I	22EL101 Differential Equation, Complex Variables and Matrices	0.67	0.67	0.67							0.33		0.33
Sem-I	22EL102 Engineering Physics 22EL103 Lab: Engineering Physics	1.38	1.38										0.56
Sem-I	22EL104 Social Science						1.76					1.71	1.69
Sem-I	22EL105 Engineering Graphics 22EL106 Lab: Engineering Graphics	2.54	1.69			2.54				1.69	2.54		2.56
Sem-I	22EL107 Elements of AIML	0.91				0.94	1.06		0.43	0.85			1.27
Sem-I	22EL108 Electrical workshop	2.00	1.00	1.00							1.00		2.33
Sem-I	22EL109 Fundamentals of Electrical Engineering 22EL110 Lab: Fundamentals of Electrical Engineering	2.05	0.68	0.68	0.68	0.68			0.68	0.68	0.68	0.68	0.68
Sem-II	22EL201 Differential and Integral Calculus	0.47	0.47	0.47							0.24		0.24
Sem-II	22EL202Engineering Chemistry 22EL203 Lab: Engineering Chemistry	1.45	1.22					0.82			0.82		0.82
Sem-II	22EL204 Professional Communication									0.40	0.43		0.43
Sem-II	22EL205 Engineering Mechanics 22EL206 Lab: Engineering Mechanics	2.28	2.28						1.52	1.52	1.52	1.52	

Sem-II	22EL207 Basic Electrical and Electronics Engineering	0.95	0.95	1.19								
Sem-II	22EL208 Programming for Problem Solving 22EL209 Lab.: Programming for Problem Solving	1.70	0.92	1.30								
Sem-I	22CSE101 Differential Equation and Complex Analysis	1.59	1.59	1.94						0.79		0.79
Sem-I	22CSE102 Engineering Physics 22CSE103 Lab: Engineering Physics	1.57	1.57									0.71
Sem-I	22CSE104 Social Science					1.85					1.71	1.69
Sem-I	22CSE105 Engineering Graphics 22CSE106 Lab: Engineering Graphics	3.00	2.00		3.00				2.00	3.00		3.00
Sem-I	22CSE107 Elements of AIML	1.12			0.88	0.97		0.80	1.07			1.61
Sem-I	22CSE108 Computer workshop	1.67			2.00							2.00
Sem-I	22CSE109 Introduction to Computing with Python 22CSE110 Lab: Introduction to Computing with Python	1.80	0.63	0.53								
Sem-II	22CSE201 Calculus Sequences and Series	1.97	1.97	1.94						0.99		0.99
Sem-II	22CSE202Engineering Chemistry 22CSE203 Lab: Engineering Chemistry	1.65	1.53				0.95			0.95		0.95
Sem-II	22CSE204 Professional Communication								1.70	1.75		1.75
Sem-II	22CSE205 Engineering Mechanics 22CSE206 Lab: Engineering Mechanics	2.36	2.36					1.57	1.57	1.57	1.57	
Sem-II	22CSE207 Basic Electrical and Electronics Engineering	1.25	1.25	1.59								
Sem-II	22CSE208 Programming for Problem Solving 22CSE209 Lab.: Programming for Problem Solving	2.59	1.33	1.77								
Sem-I	22ME101 Differential Equation, matrices and Statistics	0.78	0.78	0.98						0.39		0.39

Sem-I	22ME102 Engineering Physics 22ME103 Lab: Engineering Physics	1.64	1.64										0.68
Sem-I	22ME104 Social Science						1.60					1.66	1.69
Sem-I	22ME105 Engineering Graphics 22ME106 Lab: Engineering Graphics	2.54	1.69			2.54				1.69	2.54		2.54
Sem-I	22ME107 Elements of AIML	1.13				1.14	1.35		0.63	1.04			1.55
Sem-I	22ME108 FAB Shop						3.00			3.00			3.00
Sem-I	22ME109 Machining Process 22ME110 Lab: Machining Process	1.74	1.19	1.36	1.30		0.81	0.65	0.65		0.69	0.65	1.20
Sem-II	22ME201 Calculus and Vector	0.94	0.94	0.96							0.47		0.47
Sem-II	22ME202Engineering Chemistry 22ME203 Lab: Engineering Chemistry	1.13	1.13					0.67			0.67		0.67
Sem-II	22ME204 Professional Communication									0.40	0.48		0.48
Sem-II	22ME205 Engineering Mechanics 22ME206 Lab: Engineering Mechanics	2.20	2.20						1.47	1.47	1.47	1.47	
Sem-II	22ME207 Basic Electrical and Electronics Engineering	0.74	0.74	1.15									
Sem-II	22ME208 Programming for Problem Solving 22ME209 Lab.: Programming for Problem Solving	1.70	0.92	1.30									
Sem-I	22EE101: Differential Equation, Complex Variables & Matrices	0.79	0.79	0.67							0.40		0.40
Sem-I	22EE102: Engineering Physics 22EE103 : Engineering Physics Lab	1.36	1.36										0.56
Sem-I	22EE104: Social Science						1.85					1.71	1.69
Sem-I	22EE105: Engineering Graphics 22EE106: Lab: Engineering Graphics	2.92	1.95			2.92				1.95	2.92		2.92

Sem-I	22EE107: Elements of AIML	1.06				0.82	0.88		0.88	1.01			1.52
Sem-I	22EE108: Electrical workshop	2.00	1.00	1.00							1.00		2.33
Sem-I	22EE109: Digital Logic Design 22EE110: Lab: Digital Logic Design	1.44	1.45	0.65		1.11							1.55
Sem-II	22EE201 Differential & Integral Calculus	0.53	0.53	0.47							0.26		0.26
Sem-II	22EE202Engineering Chemistry 22EE203 Lab: Engineering Chemistry	1.31	1.11					0.74			0.74		0.74
Sem-II	22EE204 Professional Communication									0.50	0.60		0.60
Sem-II	22EE205 Engineering Mechanics 22EE206 Lab: Engineering Mechanics	2.55	2.55						1.70	1.70	1.70	1.70	
Sem-II	22EE207 Basic Electrical and Electronics Engineering	0.75	0.75	0.88									
Sem-II	22EE208 Programming for Problem Solving 22EE209 Lab.: Programming for Problem Solving	1.79	0.92	1.30									
	FY OVERALL DIRECT ATTAINMENT	1.64	1.38	1.18	1.26	1.85	1.58	0.81	1.10	1.30	1.12	1.56	1.32

Indirect Attainment: 2022-23

РО	Surveys	Weight	Total No. of Feedbacks received	No. of Feedbacks Satisfying PO's	% Attainment Through Individual Surveys	% Weighted Attainment	Over	all Attainmen	ıt (%)
	Students Feedback	33.33%	921	917	1.00	0.33		3	
PO -1	Parents feedback	33.33%	358	353	0.99	0.33	0.99	2.97	2.99
	Senior Student Feedback	33.33%	51	51	1.00	0.33		3	
	Students Feedback	33.33%	921	898	0.98	0.33		2.94	
PO -2	Parents feedback	33.33%	358	353	0.99	0.33	0.99	2.97	2.97
	Senior Student Feedback	33.33%	51	51	1.00	0.33		3	
	Students Feedback	33.33%	921	897	0.97	0.32		2.91	
PO -3	Parents feedback	33.33%	358	351	0.98	0.33	0.98	2.94	2.93
	Senior Student Feedback	33.33%	51	50	0.98	0.33		2.94	
	Students Feedback	33.33%	921	910	0.99	0.33		2.97	
PO -4	Parents feedback	33.33%	358	353	0.99	0.33	0.98	2.97	2.96
	Senior Student Feedback	33.33%	51	50	0.98	0.33		2.94	
	Students Feedback	33.33%	921	894	0.97	0.32		2.91	
PO -5	Parents feedback	33.33%	358	349	0.97	0.32	0.98	2.91	2.92
	Senior Student Feedback	33.33%	51	50	0.98	0.33		2.94	
	Students Feedback	33.33%	921	900	0.98	0.33		2.94	
PO -6	Parents feedback	33.33%	358	352	0.98	0.33	0.98	2.94	2.94
	Senior Student Feedback	33.33%	51	50	0.98	0.33		2.94	
DO 7	Students Feedback	33.33%	921	900	0.98	0.33	0.09	2.94	2.04
PU -/	Parents feedback	33.33%	358	352	0.98	0.33	0.98	2.94	2.94

	Senior Student Feedback	33.33%	51	50	0.98	0.33		2.94	
	Students Feedback	33.33%	921	894	0.97	0.32		2.91	
PO -8	Parents feedback	33.33%	358	352	0.98	0.33	0.98	2.94	2.93
	Senior Student Feedback	33.33%	51	50	0.98	0.33		2.94	
	Students Feedback	33.33%	921	894	0.97	0.32		2.91	
PO -9	Parents feedback	33.33%	358	352	0.98	0.33	0.98	2.94	2.95
	Senior Student Feedback	33.33%	51	51	1.00	0.33		3	
	Students Feedback	33.33%	921	894	0.97	0.32		2.91	
PO -10	Parents feedback	33.33%	358	352	0.98	0.33	0.97	2.94	2.91
	Senior Student Feedback	33.33%	51	49	0.96	0.32		2.88	
	Students Feedback	33.33%	921	894	0.97	0.32		2.91	
PO -11	Parents feedback	33.33%	358	349	0.97	0.32	0.97	2.91	2.9
	Senior Student Feedback	33.33%	51	49	0.96	0.32		2.88	
	Students Feedback	33.33%	921	894	0.97	0.32		2.91	
PO -12	Parents feedback	33.33%	358	352	0.98	0.33	0.98	2.94	2.93
	Senior Student Feedback	33.33%	51	50	0.98	0.33		2.94	

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Student Feedback	3	2.94	2.91	2.97	2.91	2.94	2.94	2.91	2.91	2.91	2.91	2.91
Parents feedback	2.97	2.97	2.94	2.97	2.91	2.94	2.94	2.94	2.94	2.94	2.91	2.94
Senior Student Feedback	3	3	2.94	2.94	2.94	2.94	2.94	2.94	3	2.88	2.88	2.94
In Direct Attainment	2.99	2.97	2.93	2.96	2.92	2.94	2.94	2.93	2.95	2.91	2.90	2.93

FY Attainment Summary: 2022-23

Weightage	Attainment	P	01	P	02	P	03	Р	04	P	05	P	06	P	07	P	08	PO)9	PC	010	PO	011	PC	012
weightage	Parameters	Т	А	Т	Α	Т	А	Т	А	Т	А	Т	Α	Т	Α	Т	Α	Т	Α	Т	Α	Т	Α	Т	А
800/		2.33	1.64	2.00	1.38	2.00	1.18	1.67	1.26	2.56	1.85	2.33	1.58	1.00	0.81	1.48	1.10	1.91	1.30	1.56	1.12	1.89	1.56	1.80	1.32
80%	І П+РК	70.2	29%	68.8	84%	58.9	96%	75.0	50%	72.2	21%	67.8	87%	81.()0%	74.3	32%	67.9	94%	71.8	32%	82.5	59%	73.3	31%
2007	Indirect	3.00	2.99	3.00	2.97	3.00	2.93	3.00	2.96	3.00	2.92	3.00	2.94	3.00	2.94	3.00	2.93	3.00	2.95	3.00	2.91	3.00	2.90	3.00	2.93
20%	(Surveys)	99.	67%	99.(0%	97.6	67%	98.0	67%	97.3	33%	98.0	00%	98.()0%	97.0	67%	98.3	33%	97.0	0%	96.0	67%	97.0	67%
Total Quara	11 Attainmont	2.47	1.91	2.20	1.70	2.20	1.53	1.93	1.60	2.65	2.06	2.46	1.85	1.40	1.24	1.78	1.47	2.13	1.63	1.85	1.48	2.11	1.83	2.04	1.64
Total Overa	in Auannient	77.4	43%	77.0)5%	69.5	51%	82.7	76%	77.9	90%	75.2	21%	88.2	29%	82.1	17%	76.4	9%	79.9	9%	86.5	59%	80.4	47%

8.4.1 Actions taken based on the results of evaluation of relevant POs and PSOs (10)

POs Attainment Levels of 2022-23 and Actions taken for improvement in 2023-24

PO1 1.91 Attainment is 77.43% so it is achieved. Attainment of PO1 is above 75% hence for continuous improvement the following actions were taken: Action 1: Additional learning materials has been provided on topic Partial Differential Equations. (Differential Equations and Complex Analysis) Action 1: Additional Assignment has been given on successive differential Equations. (Differential Equations. (Engineering Physics) Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 10: Assignment was given on the topic Resultant and friction. (Engineering Mechanics) Action 1: Andrew were solved based on measures of central tendency. Problem Solving) Action 2: Assignment was given on the topic Resultant and friction. (Engineering Mechanics) Action 1: Assignment was given on the topic Resultant and friction. (Engineering Mechanics) Action 1: Assignment was given on the topic Resultant and friction. (Engineering Mechanics) Action 1: Assignment was given on the topic Resultant and friction. (Engineering roblems.) Action 1: Assignment was given on the topic Resultant and friction. (Engineering roblems astalken.) Action 1: Assignment was given on the topic Resultant and friction. Action 1: Assignment was given on the topic Resultant and friction. Action 12: More proble	POs	Target Level	Attainment Level	Observations				
PO1 2.47 1.91 Attainment is 77.43% so it is achieved. Attainment of PO1 is above 75% hence for continuous inprovement the following actions were taken: Action 1: Additional Assignment may been given on topic Partial Differential Equations. (Differential Equations and Complex Analysis) Action 3: Additional Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 5: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 6: Assignment given on mechanism of corrosion. (Engineering Chemistry) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 10: Assignment was given on the bopic Resultant and friction. (Engineering Mechanics) Action 12: More problems were solved based on necursters of central tendency, Probability distribution and approximations (FDS) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programming) PO2: Problem Analysis: Identify, formulate, review research literature and analysis of network was taken. (Basic Electrical & Electronics Engineering) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis	PO1: Engineering knowledge: Apply the knowledge of mathematics, Science, Engineering fundamentals and an Engineering specialization to the solution of complex Engineering problems.							
Attainment of PO1 is above 75% hence for continuous improvement the following actions were taken: Action 1: Additional learning materials has been provided on topic Partial Differential Equations. (Differential Equations and Complex Analysis) Action 2: Extra classes conducted on topics complex variable. (Differential Equations and Complex Analysis) Action 4: Assignment given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 5: Assignment given on the topic band theory of solids. (Applied Physics) Action 7: Assignment given on the topic band theory of solids. (Applied Physics) Action 7: Assignment given on the topic band theory of solids. (Applied Physics) Action 6: Assignment given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 9: K-map solving practice was taken. (Digital Logic Design) Action 11: More problems were solved based on measures of central tendency, Probability distribution and approximations (FDS) Action 12: More practice of numerical on circuit elements and analysis of network was taken. (Basic Electrical & Electrical & Electronics Engineering) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programming) PO2: Problem Analysis: Identify, formulate, review research literature and analyse comple	PO1	2.47	1.91	Attainment is 77.43% so it is achieved.				
Action 1: Additional learning materials has been provided on topic Partial Differential Equations. (Differential Equations and Complex Analysis) Action 2: Extra classes conducted on topics complex variable. (Differential Equations and Complex Analysis) Action 3: Additional Assignment has been given on successive differentiation. (Calculus and Vector) Action 4: Assignments given on the topic band theory of solids. (Applied Physics) Action 6: Assignment given on mechanism of corrosion. (Engineering Chemistry) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 9: K-map solving practice was taken. (Digital Logic Design) Action 10: Assignment was given on the topic Resultant and friction. (Engineering Mechanics) Action 10: Assignment was given on Boolean algebra. (Digital Logic Design) Action 10: Assignment was given on Boolean algebra. (Digital Logic Design) Action 11: More problems were solved based on measures of central tendency, Probability distribution and approximations (FDS) Action 12: More problems were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programming) P02: Problem Analysis: Identify, formulate, review research literature and analyse complex Engineering problems reaching substantiate conclusions using first principle of mathematics, natural sciences and Engineering sciences. P02 2.20 1.70 Attainment is 77.05% soi it is achieved. Attainment of PO2 is above 75% hence for continuous improvement the following actions were taken: Action 1: Practice problems have been given on topic Partial Differential Equations. (Differential Equations and Complex Analysis) Action 3: Additional assignment was given on the topic successive differentiation. (Calculus and Vector) Action 4: Assignments given on the topic complex numbers. (Differential Equations and Complex Analysis) Action 3: Additional material has been given on the topic successive differentiatio	Attainmen	t of PO1 is	above 75% hence fo	or continuous improvement the following actions were taken:				
Action 1: Additional learning materials has been provided on topic Partial Differential Equations. (Differential Equations and Complex Analysis) Action 2: Extra classes conducted on topics complex variable. (Differential Equations and Complex Analysis) Action 3: Additional Assignment has been given on successive differentiation. (Calculus and Vector) Action 6: Assignments given on the topic band theory of solids. (Applied Physics) Action 6: Assignment given on the topic band theory of solids. (Applied Physics) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 10: Assignment was given on the topic Resultant and friction. (Engineering Mechanics) Action 10: Assignment was given on Boolean algebra. (Digital Logic Design) Action 11: More problems were solved based on measures of central tendency, Probability distribution and approximations (FDS) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programming) PO2 2.0 1.70 Attainment of PO2 is above 75% hence for continuous improvement the following actions and given on topic Cartial Differential Equations. (Differential Equations and Complex Analysis) Action 1: Practice problems have been given on topic Partial Differential Equations. (Differential Equations (Differential Equations) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programmi								
Action 2: Extra classes conducted on topics complex variable. (Differential Equations and Complex Analysis) Action 3: Additional Assignment has been given on successive differentiation. (Calculus and Vector) Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 5: Assignment given on the topic band theory of solids. (Applied Physics) Action 6: Assignment given on the topic band theory of solids. (Applied Physics) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 8: Assignment was given on the topic Resultant and friction. (Engineering Mechanics) Action 9: K-map solving practice was taken. (Digital Logic Design) Action 10: Assignment was given on Boolean algebra. (Digital Logic Design) Action 11: More problems were solved based on measures of central tendency, Probability distribution and approximations (FDS) Action 12: More practice of numerical on circuit elements and analysis of network was taken. (Basic Electrical & Electronics Engineering) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programming) PO2: Problem Analysis: Identify, formulate, review research literature and analyse complex Engineering problems reaching substantiate conclusions using first principle of mathematics, natural sciences and Engineering science. PO2 1: 2:20 1:170 Attainment is 77.05% so it is achieved. Attainment of PO2 is above 75% hence for continuous improvement the following actions were taken: Action 3: Additional assignment was given on topic complex numbers. (Differential Equations and Complex Analysis) Action 3: Additional material has been given on the topic successive differentiation. (Calculus and Vector) Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics)	Action 1: A	Additional le	arning materials has	been provided on topic Partial Differential Equations. (Differential Equations and Complex Analysis)				
Action 3: Additional Assignment has been given on successive differentiation. (Calculus and Vector) Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 5: Assignments given on the topic band theory of solids. (Applied Physics) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 8: Assignments was given on the topic Resultant and friction. (Engineering Mechanics) Action 9: K-map solving practice was taken. (Digital Logic Design) Action 10: Assignment was given on Boolean algebra. (Digital Logic Design) Action 11: Assignment was given on Boolean algebra. (Digital Logic Design) Action 12: More problems were solved based on measures of central tendency, Probability distribution and approximations (FDS) Action 12: More problems were solved based on measures of central tendency, Probability distribution and approximations (FDS) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programming) P02: Problem Analysis: Identify, formulate, review research literature and analyse complex Engineering problems reaching substantiate conclusions using first principle of mathematics, natural sciences and Engineering sciences. P02 2.20 1.70 Attainment is 77.05% so it is achieved. Attainment of P02 is above 75% hence for continuous improvement the following actions were taken: Action 1: Practice problems have been given on topic Partial Differential Equations, (Differential Equations and Complex Analysis) Action 3: Additional assignment was given on the topic successive differentiation. (Calculus and Vector) Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and supercond	Action 2: E	extra classes	conducted on topics	complex variable. (Differential Equations and Complex Analysis)				
Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics) Action 5: Assignment given on the topic band theory of solids. (Applied Physics) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 8: Assignment given on mechanism of corrosion. (Engineering Chemistry) Action 9: K-map solving practice was taken. (Digital Logic Design) Action 11: More problems were solved based on measures of central tendency, Probability distribution and approximations (FDS) Action 12: More practice of numerical on circuit elements and analysis of network was taken. (Basic Electroical & Electronics Engineering) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programming) PO2 Problem Analysis: Identify, formulate, review research literature and analyse complex Engineering problems reaching substantiate conclusions using first principle of mathematics, natural sciences and Engineering sciences. PO2 2.20 1.70 Attainment of PO2 is above 75% hence for continuous improvement the following actions were taken: Action 1: Practice problems have been given on topic Complex numbers. (Differential Equations and Complex Analysis) Action 1: Practice problems have been given on topic complex numbers. (Differential Equations and Complex Analysis) Action 2: Additional assignment was given on the topic successiv	Action 3: A	Additional A	ssignment has been g	iven on successive differentiation. (Calculus and Vector)				
Action 5: Assignments given on the topic band theory of solids. (Applied Physics) Action 6: Assignment given on mechanism of corrosion. (Engineering Chemistry) Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving) Action 8: Assignments was given on the topic Resultant and friction. (Engineering Mechanics) Action 9: K-map solving practice was taken. (Digital Logic Design) Action 10: Assignment was given on Boolean algebra. (Digital Logic Design) Action 11: More problems were solved based on measures of central tendency, Probability distribution and approximations (FDS) Action 12: More practice of numerical on circuit elements and analysis of network was taken. (Basic Electrical & Electronics Engineering) Action 13: Students were advised and completed also, the online certification course on C-Programming offered by Infosis springboard (C-Programming) PO2 2.20 1.70 Attainment is 77.05% so it is achieved. Attainment of PO2 is above 75% hence for continuous improvement the following actions were taken: Action 1: Practice problems have been given on topic Partial Differential Equations. (Differential Equations and Complex Analysis) Action 2: Additional assignment was given on topic complex numbers. (Differential Equations and Complex Analysis) Action 2: Additional assignment was given on the topic successive differentiation. (Calculus and Vector) Action 4: Assignments given on the topic semiconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics)	Action 4: A	Assignments	given on the topic se	miconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics)				
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Action 5. Assignments given on the tonic hand theory of solids (Applied Physics)	Action 4: A	Assignments	given on the topic se	miconductor physics, geometrical optic, magnetic materials and superconductors. (Engineering Physics)				
rection 5. Absignments given on the topic bund theory of solids. (Applied 1 hystes)	Action 5: A							

Action 6: Assignment given on nanomaterials. (Engineering Chemistry)							
Action 7: Program on algorithm and Flowchart has been given as assignment. (Programming for Problem Solving)							
Action 8: Assignments given on the topic planer force system. (Engineering Mechanics)							
Action 9: K-map solving practice was taken. (Digital Logic Design)							
Action 10: Assignment was given on Boolean algebra. (Digital Logic Design)							
Action 11: Case study of healthcare, transportation, retail domain taken for explaining data science concepts (FDS)							
Action 12: Game based learning was incorporated on the topic Electrical wiring. (Basic Electrical & Electronics Engineering)							
PO3: Design/development of solutions: Design solution for complex Engineering problems and design system components or process that meet the specified needs with appropriate							
consideration for the public health and safety and the cultural, societal and environmental considerations.							
PO32.201.53Attainment is 69.51% which is below the set target level hence needs improvement.							
Attainment of PO3 is below 75% hence for improvement the following actions were taken:							
Action 1: More problems discussed on topic Partial Differential Equations. (Differential Equations and Complex Analysis)							
Action 2: Practice Program on Loop, function and array has been given as assignment. (Programming for Problem Solving)							
Action 3: More problems were solved based on Boolean algebra. (Digital Logic Design)							
Action 4: K-map solving practice was taken. (Digital Logic Design)							
Action 5: Project based learning was incorporated on the topic Solar, wind, DC generator, electronic circuit and devices. (Basic Electrical & Electronics Engineering)							
PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of							
the information to provide valid conclusions.							
PO41.931.60Attainment is 82.76% so it is achieved.							
Attainment of PO4 is above 75% hence for continuous improvement the following actions were taken:							
Action 1: Assignment given on mechanism of corrosion. (Engineering Chemistry)							
Action 2: Assignment given on three phase AC circuits. (FOEE)							
Action 3: More problems were solved based on approximations (FDS)							
PO5: Modern tool usage: Create, select and apply appropriate techniques, resources and modern Engineering and IT tools including prediction and modelling to complex Engineering activities							
with an understanding of the limitations.							
PO52.652.06Attainment is 77.90% so it is achieved.							

Attainmen	t of PO5 is	above 75% henc	e for continuous improvement the following actions were taken:						
Action 1: A	Action 1: Assignment was given on DC circuit and three phase AC circuit. (FOEE) Action 2: K-map solving practice was taken. (Digital Logic Design)								
Action 2: k									
Action 3: A	Action 3: Assignment was given on Combinational circuits and sequential circuit. (Digital Logic Design)								
PO6: The Er	igineer and s	ociety: Apply reaso	oning informed by the contextual knowledge to assess, societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to						
the professi	onal enginee	ring practice.							
PO6	2.46	1.85	Attainment is 75.21% so it is achieved.						
PO7: Enviro	nment and s	ustainability: Unde	erstand the impact of the professional Engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for						
sustainable	development	Ι.							
PO7	1.40	1.24	Attainment is 88.29% so it is achieved.						
Attainmen	t of PO7 is	above 75% henc	e for continuous improvement the following actions were taken:						
			r · · · · · · · · · · · · · · · · · · ·						
Action 1: A	ssignment g	given on mechanis	sm of corrosion. (Engineering Chemistry)						
Action 2: N	Iore probler	ns were solved ba	used on measures of central tendency, Probability distribution and approximations (FDS)						
PO8: Ethics	Apply ethica	I principles and co	mmit to professional ethics and responsibilities and norms of the Engineering practice.						
PO8	1.78	1.47	Attainment is 82.17% so it is achieved.						
Attainmen	t of PO8 is	above 75% henc	e for continuous improvement the following actions were taken:						
Action 1: Assignment was given on the topic truss. (Engineering Mechanics) Action 2: Assignment given on AC fundamentals. (FOEE)									
PO9: Individ	lual and tear	n work: Function e	ffectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.						
PO9	2.13	1.63	Attainment is 76.49% so it is achieved.						
Attainmen	t of PO9 is	above 75% henc	e for continuous improvement the following actions are planned:						
Action 1: F	lole play wa	s conducted to un	derstand communication barrier. (Professional Communication)						
Action 2: A	Action 2: Assignment on enhancing nuances of vocal skills and presentation was given. (Professional Communication)								
Action 3: A	ssignment v	was given on the t	copic AC fundamentals. (FOEE)						
Action 4: N	Iore probler	ns were solved ba	used on Boolean algebra. (Digital Logic Design)						

PO10. Com	munication	Communicate effect	ively on complex Engineering activities with the Engineering community and with society at large such as being able to comprehend and write
offoctivo ron	orts and dos	ign documentation	make offective precentations and give and receive clear instructions
enective rep	onts and des	ign documentation, r	have effective presentations and give and receive clear instructions.
PO10	1.85	1.48	Attainment is 79.99% so it is achieved.
Attainmen	t of PO10 is	s above 75% hence	e, for continuous improvement the following actions were taken:
Action 1: R	ole play wa	s conducted to unde	erstand communication barrier. (Professional Communication)
Action 2: A	ssignment o	on enhancing nuanc	es of vocal skills and presentation was given. (Professional Communication)
Action 3: A	ssignment g	given on liquid crys	tal polymers. (Engineering Chemistry)
Action 4: A	ssignment v	was given on the top	pic truss. (Engineering Mechanics)
Action 5: A	dditional lea	arning materials has	s been provided on topic Partial Differential Equations. (Differential Equations and Complex Analysis)
Action 6: A	dditional A	ssignment has been	given on successive differentiation. (Calculus and Vector)
PO11: Proje	ct managem	ent and finance: Der	nonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work as a member and
leader in a te	eam to mana	ge projects and in m	ultidisciplinary environments.
PO11	2.11	1.83	Attainment is 86.59% so it is achieved.
Attainmen	t of PO11 is	s above 75%, henc	e for continuous improvement the following actions were taken:
Astion 1. A		was sime on the te	ania contraid and moment of inertia. (Engineering Machanica)
Action 1: A	ssignments	was given on the to	result on d three above AC singuit. (EQEE)
Action 2: A	ssignment	was given on DC ch	cuit and three phase AC circuit. (FOEE)
PO12: Life-l	ong learning	: Recognize the need	for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.
PO12	2.04	1.64	Attainment is 80.47% so it is achieved.
Attainmen	t of PO12 is	s above 75% ,henc	e for continuous improvement the following actions were taken:
Action 1 · R	ole plav wa	s conducted to unde	erstand communication barrier (Professional Communication)
Action 2° A	ssignment o	n enhancing nuanc	es of vocal skills and presentation was given (Professional Communication)
Action 3: M	lindman act	ivity was conducted	t for Engineering & Applied Physics
Action 4: V	ideo based l	learning on the toni	cs such as desalination of water corrosion batteries polymers spectroscopic techniques fuels and cements (Engineering Chemistry)
Action 5. C	ase study of	f healthcare transpo	ortation retail domain was taken for explaining data science concepts (FDS)
Action 6: E	xamples on	real life problems s	such as Newton's law of cooling and electrical circuits were discussed in class. (Differential Equations and Complex Analysis)