

**Department of CSE [Data Science]**

Code:C101

Course Coordinator Name :

Course: Matrices and Calculus

Items	Course Outcomes
C101.1	Use the matrix representation of a set of linear equations and to analyse the solution of the system of equations.
C101.2	Find the Eigen values and Eigenvectors and reduce the quadratic form to canonical form using orthogonal transformation.
C101.3	Solve the applications on the mean value theorems and evaluate the improper integrals using Beta and Gamma functions.
C101.4	Apply the extreme values of functions of two variables with/ without constraints.
C101.5	Compute multiple integrals and apply the concept to find areas, volumes.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
5C101.1	3	2	-	-	2	-	-	-	-	-	-
C101.2	3	2	2	2	2	-	-	-	-	-	-
C101.3	3	3	2	2	-	-	-	-	-	-	-
C101.4	3	2	3	3	2	-	-	-	-	-	2
C101.5	3	-	2	2	2	-	-	-	-	-	-
Average	3	2.25	2.25	2.25	2	-	-	-	-	-	2

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**


CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C101.1	3		
C101.2	3		
C101.3	2	2	
C101.4	3		
C101.5	2	3	
Average			



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Code:C102 Course Coordinator Name : Course: Applied Physics

Items	Course Outcomes
C102.1	Understand physical world from fundamental point of view by the concepts of Quantum mechanics and visualize the difference between conductor, semiconductor, and an insulator by classification of solids.
C102.2	Identify the role of semiconductor devices in science and engineering Applications.
C102.3	Explore the fundamental properties of dielectric and magnetic materials for their applications.
C102.4	Interpret the features and applications of nanomaterials.
C102.5	Relate various aspects of Lasers and Optical fibres and their applications in diverse fields.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C102.1	2	2	2	2	-	-	-	-	-	-	-
C102.2	2	3	3	2	-	-	-	-	-	-	-
C102.3	3	2	3	2	-	-	-	-	-	-	-
C102.4	2	2	3	3	-	-	-	-	-	-	-
C102.5	2	3	3	3	2	-	-	-	-	-	-
Average	2.2	2.4	2.8	2.4	2.0	-	-	-	-	-	-

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C102.1	2	-	-
C102.2	2	-	-
C102.3	2	-	-
C102.4	2	-	-
C102.5	2	-	-
Average	2.0	-	-

  
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CMR Technical Campus  
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Hyderabad - 501401, Telangana - 501401.

**Department of CSE [Data Science]**

Code:C103

Coordinator Name :

Course: Programming for Problem Solving

Items	Course Outcomes
C103.1	Illustrate and explain the basic computer concepts, algorithms, flowcharts and programming principles of C Language.
C103.2	Develop C programs to solve simple mathematical and decision making problems.
C103.3	Understand, distinguish and implement arrays, strings and structures to write C programs.
C103.4	Understand the concepts of pointers and files using C programs.
C103.5	Decompose a problem into functions and to develop modular reusable code.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C103.1	3	2	3	3	3	-	-	-	-	-	2
C103.2	2	2	3	3	3	-	-	-	-	-	2
C103.3	2	2	2	3	2	-	-	-	-	-	2
C103.4	2	3	2	3	2	-	-	-	-	-	2
C103.5	2	2	3	2	2	-	-	-	-	-	2
Average	2.2	2.2	2.60	2.8	2.40	-	-	-	-	-	2

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C103.1	3	2	2
C103.2	3	2	-
C103.3	3	-	2
C103.4	3	-	2
C103.5	3	2	-
Average	3.0	2.0	2.0



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Code:C104

Coordinator Name :

Course: English for Skill Enhancement

Items	Course Outcomes
C104.1	Understand the importance of vocabulary and sentence structures.
C104.2	Demonstrate their understanding of the rules of functional grammar.
C104.3	Take an active part in drafting paragraphs, letters, essays, abstracts, précis and reports in various contexts.
C104.4	Develop comprehension skills from the known and unknown passages.
C104.5	Acquire basic proficiency in reading and writing modules of English..

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**


CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C104.1	2	-	2	-	-	-	-	2	3	-	3
C104.2	2	-	-	2	-	-	-	2	3	-	-
C104.3	2	-	-	-	-	-	-	2	2	-	-
C104.4	2	-	3	3	-	-	-	3	3	-	-
C104.5	2	-	-	-	-	-	-	3	3	2	3
Average	2	-	2.5	2.5	-	-	-	2.4	2.8	2	3.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C104.1	2	-	3
C104.2	2	-	3
C104.3	2	-	3
C104.4	2	-	3
C104.5	2	-	3
Average	2.0	-	3.0

  
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Code:C105

Coordinator Name :

Course: IT Workshop

Items	Course Outcomes
C105.1	Apply knowledge for PC hardware and computer parts.
C105.2	Apply knowledge for computer assembling and software installation.
C105.3	Ability how to solve the trouble shooting problems.
C105.4	Apply the tools for preparation of project certificate, Creating a Newsletter.
C105.5	Apply the tools for preparation of PPT, Documentation and budget sheet etc.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C105.1	2	-2	2	3	-	-	-	2	3	-	3
C105.2	2	2	2	2	-	-	-	2	3	-	-
C105.3	2	2	2	2	-	-	-	2	2	-	-
C105.4	2	2	3	3	-	-	-	3	3	-	-
C105.5	2	2	3	3	2	-	-	3	3	-	3
Average	2.0	2.0	2.4	2.6	2.0	-	-	2.4	2.8	-	3.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):


CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C105.1	2	-	3
C105.2	2	-	3
C105.3	2	-	3
C105.4	2	2	3
C105.5	2	2	3
Average	2.0	2.0	3.0



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Code:C106      Coordinator Name :      Course: Applied Physics Laboratory

Items	Course Outcomes
C106.1	Know the determination of the Planck's constant using Photoelectric effect.
C106.2	Appreciate quantum physics in semiconductor devices, optoelectronics and identify the material whether it is n-type or p-type by Hall experiment.
C106.3	Gain the knowledge of applications of dielectric constant and understand the variation of magnetic field and behaviour of hysteresis curve.
C106.4	Gain the knowledge of Characteristics of Laser and optical fibre measurements.
C106.5	Carried out data analysis.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C106.1	2	3	2	2	2	-	-	-	-	-	-
C106.2	2	2	2	2	3	-	-	-	-	-	-
C106.3	2	2	3	3	3	-	-	-	-	-	-
C106.4	2	2	3	3	3	-	-	2	2	-	-
C106.5	2	2	2	3	3	-	-	2	-	-	-
Average	2	2.2	2.4	2.6	2.8	-	-	2	2	-	-

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C106.1	2	-	-
C106.2	2	-	-
C106.3	-	-	-
C106.4	-	-	-
C106.5	2	-	-
Average	2.0	-	-

  
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Code:C107 Coordinator Name : Course: Programming for Problem Solving Laboratory

Items	Course Outcomes
C107.1	Develop C programs for simple numerical problems.
C107.2	Apply the knowledge of conditional statements and loops in programs.
C107.3	Implement the programs using the concepts of arrays, structures, pointers and files.
C107.4	Create the programs using functions and recursive functions.
C107.5	Implement searching and sorting algorithms.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C107.1	3	3	3	3	3	-	-	-	3	2	2
C107.2	2	2	3	3	3	-	-	3	3	-	3
C107.3	2	2	3	3	3	-	-	-	-	-	2
C107.4	2	2	2	2	3	-	-	-	-	-	2
C107.5	2	2	3	3	3	-	-	3	-	2	3
Average	3	3	3	3	3	-	-	-	3	2	2

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C107.1	3	2	-
C107.2	2	2	2
C107.3	2	2	-
C107.4	2	2	-
C107.5	2	3	-
Average	2.2	2.2	2.0

  
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Code:C108 Coordinator Name : Course: English Language and Communication Skills Lab

Items	Course Outcomes
C108.1	Pronounce English sounds according to standard pronunciation
C108.2	Understand the nuances of English language through audio- visual experience and practice
C108.3	Speak with clarity and confidence which in turn enhances their employability skills
C108.4	Neutralize their accent for intelligibility
C108.5	Participate in discussion and presentation effectively and confidently

Correlation between Course Outcomes (COs)and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C108.1	1	-	-	-	-	-	-	2	3	-	2
C108.2	2	-	-	-	-	-	-	2	3	-	2
C108.3	2	-	-	-	-	-	-	2	3	-	2
C108.4	2	-	-	-	-	-	-	2	3	-	3
C108.5	2	-	-	-	-	-	-	2	3	-	3
Average	1.8	-	-	-	-	-	-	2	3.0	-	2.4

Correlation between Outcomes (COs)and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C108.1	2	-	3
C108.2	2	-	3
C108.3	2	-	3
C108.4	-	-	3
C108.5	2	-	3
Average	2	-	3.0

  
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**Department of CSE [Data Science]**

Code:C109 Course Coordinator Name : Course: Basic Elements of Engineering Technology

Items	Course Outcomes
C109.1	Explore the principles of IOT and its architecture.
C109.2	Outline the components and working principles of robot.
C109.3	Illustrate 3D printing and its applications.
C109.4	Analyse Software and Post Processing
C109.5	Develop the solution for various Engineering applications.

Correlation between Course Outcomes (COs)and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C109.1	2	2	2	2	2	-	-	-	2	-	2
C109.2	2	2	2	2	3	-	-	-	3	2	2
C109.3	2	2	2	2	2	-	-	3	2	2	-
C109.4	2	2	3	3	3	-	-	-	2	2	-
C109.5	2	2	3	3	3	-	-	3	3	2	3
Average	2.0	2.0	2.4	2.4	2.6	-	-	3.0	2.4	2.0	2.33

Correlation between Outcomes (COs)and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C109.1	2	-	2
C109.2	2	-	-
C109.3	2	-	2
C109.4	-	3	-
C109.5	-	3	3
Average	2.0	3.0	2.3

  
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**Department of CSE [Data Science]**

Code:C110 Coordinator Name : Course: Ordinary Differential Equations and Vector Calculus

Items	Course Outcomes
C110.1	Identify whether the given differential equation of first order is exact or not.
C110.2	Solve higher order differential equations.
C110.3	Use Laplace transforms techniques to find the derivatives and integrals of given functions & inverse Laplace transforms techniques for solving ODE's
C110.4	Analyse vector and scalar point functions.
C110.5	Evaluate the line and surface integrals and converting them from one to another

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C110.1	3	2	2	2	-	-	-	-	-	-	-
C110.2	3	2	3	3	3	-	-	-	-	-	-
C110.3	3	2	3	3	-	-	-	-	-	-	-
C110.4	3	2	3	3	-	-	-	-	-	-	-
C110.5	2	3	3	2	-	-	-	-	-	-	-
Average	2.8	2.2	3.0	2.6	3.0	-	-	-	-	-	-

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C110.1	2	-	-
C110.2	2	-	-
C110.3	2	-	-
C110.4	2	-	-
C110.5	2	-	-
Average	2.0	-	-

  
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Code:C111 Coordinator Name :

Course: Engineering Chemistry

Items	Course Outcomes
C111.1	Identify the basic properties of water and its usage in domestic and industrial purposes.
C111.2	Learn the fundamentals and general properties of polymers and other engineering materials. Apply in day to day life.
C111.3	Make use of basic knowledge of electrochemical procedures related to corrosion and its control.
C111.4	Interpret the concepts of petroleum products and cement, Smart materials.
C111.5	Find potential applications of chemistry and practical utility in order to become good engineers and entrepreneurs.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C111.1	3	2	2	2	-	-	-	-	-	-	-
C111.2	2	3	2	2	2	-	-	-	-	-	-
C111.3	2	2	3	3	2	2	-	-	-	-	-
C111.4	2	2	2	3	2	-	-	-	-	-	-
C111.5	2	2	2	2	2	-	-	-	-	-	-
Average	2.2	2.2	2.2	2.4	2	2	-	-	-	-	-

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C111.1	2	-	-
C111.2	3	-	-
C111.3	2	-	-
C111.4	2	-	-
C111.5	2	-	-
Average	2.2	-	-

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**Department of CSE [Data Science]**

Code: C112    Coordinator Name :                      Course: Data Structures

Items	Course Outcomes
C112.1	Explain the basic concepts such as Abstract Data Types, Linear and Non-Linear Data structures.
C112.2	Discuss hashing and different collision resolve techniques.
C112.3	Design programs using a variety of data structures including binary search trees, heaps trees and AVL-trees.
C112.4	Design programs on sorting and graphs.
C112.5	Apply different searching techniques on Non linear data structure

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**


CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C112.1	3	2	2	2	2	-	-	-	-	-	2
C112.2	2	3	2	2	2	-	-	-	-	-	-
C112.3	2	2	3	3	3	-	-	-	-	-	-
C112.4	2	2	3	2	3	-	-	-	-	-	-
C112.5	2	3	2	2	3	-	-	-	-	-	-
Average	2.2	2.4	2.4	2.2	2.6	-	-	-	-	-	2.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C112.1	2	-	2
C112.2	2	-	-
C112.3	2	2	-
C112.4	2	2	-
C112.5	2	-	-
Average	2.0	2.0	2.0

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**Department of CSE [Data Science]**

Code: C113    Course Coordinator Name :    Course: Basic Electrical & Electronics Engineering

Items	Course Outcomes
C113.1	Identify the basic DC electrical circuits.
C113.2	Evaluate the basic single phase and three phase AC circuits.
C113.3	Analyse the working principles of Electrical Machines.
C113.4	Classify the concepts of diodes & Rectifiers.
C113.5	Compare the knowledge of various transistor configurations, characteristics and applications.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C113.1	2	3	2	2	-	-	-	-	-	-	-
C113.2	2	2	2	-	-	1	-	-	-	-	-
C113.3	2	2	2	-	-	-	-	-	-	-	-
C113.4	2	2	3	2	-	-	-	-	-	-	-
C113.5	2	2	2	2	-	-	-	-	-	-	-
Average	2	2.2	2.2	2	-	1	-	-	-	-	-

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C113.1	2	-	-
C113.2	2	-	-
C113.3	2	-	-
C113.4	-	-	-
C113.5	-	-	-
Average	2.0	-	-

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Code: C114    Coordinator Name :                      Course: Computer Aided Engineering Graphics

Items	Course Outcomes
C114.1	Apply computer aided drafting tools to sketch the conventions and the methods of drawings, engineering curves and scales
C114.2	Identify and draw the projections of points, lines and planes in different types of projections. manually and by using computer aided drafting tools
C114.3	Analyse the need of projections of solids (prisms, pyramids, cone and cylinder) manually and by using computer aided drafting tools.
C114.4	Evaluate and interpret engineering drawings for development of surfaces to Right Regular Solids-prism, manually and by using computer aided drafting tool.
C114.5	Change the conversion of orthographic projection into isometric view and vice versa manually and by using computer aided drafting tool.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C114.1	3	2	2	-	-	-	-	-	-	-	-
C114.2	2	2	3	3	3	-	-	-	-	-	-
C114.3	2	3	2	3	3	-	-	-	-	-	-
C114.4	2	2	3	3	3	-	-	-	-	-	2
C114.5	3	2	2	2	2	-	-	-	-	-	-
Average	2.4	2.2	2.4	2.75	2.75	-	-	-	-	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C114.1	3	-	-
C114.2	-	3	-
C114.3	3	-	-
C114.4	-	3	2
C114.5	-	3	-
Average	3.0	3.0	2.0

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Code:C115    Coordinator Name :            Course: Engineering Chemistry Laboratory

Items	Course Outcomes
C115.1	Determination of parameters like hardness of water and rate of corrosion of mild steel in various conditions.
C115.2	Perform methods such as conductometry and potentiometry in order to find out the concentrations or equivalence points of acids and bases.
C115.3	prepare polymers like Bakelite and nylon-6.6
C115.4	Estimations of saponification value, surface tension and viscosity of lubricant oils.
C115.5	Find the rate of corrosion of mild steel in various conditions.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C115.1	2	2	3	2	2	2	-	-	-	-	3
C115.2	2	2	2	2	2	-	-	-	-	-	-
C115.3	2	2	3	3	2	-	-	-	-	-	-
C115.4	2	2	3	3	2	-	-	-	2	-	-
C115.5	2	2	3	3	2	-	-	2	-	-	-
Average	2.0	2.0	2.8	2.6	2.0	2	-	2.0	2.0	-	3.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C115.1	2	-	3
C115.2	2	-	-
C115.3	2	-	-
C115.4	2	-	-
C115.5	2	-	-
Average	2.0	-	3.0

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Code: C116    Coordinator Name :    Course: Data Structure Laboratory

Items	Course Outcomes
C116.1	Implement various linear data structures.
C116.2	Implement various non linear data structures.
C116.3	Compare various searching and sorting algorithms.
C116.4	Compare various searching and sorting algorithms.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C116.1	2	2	2	2	2	-	-	2	3	-	3
C116.2	2	2	2	2	2	-	-	2	2	-	-
C116.3	2	2	3	3	3	-	-	2	3	-	-
C116.4	2	2	2	2	2	-	-		2	-	-
Average	2	2	2.4	2.4	2.4	-	2.0	2.0	2.6	-	3.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C116.1	2	-	-
C116.2	2	-	-
C116.3	2	2	2
C116.4	2	-	2
Average	2	2	2



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Code:C117    Coordinator Name :    Course: Basic Electrical & Electronics Engineering Lab

Items	Course Outcomes
C117.1	Verify the Ohms law, KCL, KVL with practical approach
C117.2	Estimate the performance calculations of single phase transformers.
C117.3	Analyse the Performance characteristics of DC and AC machines through various testing methods.
C117.4	Compare the characteristics of different types of diodes and transistors.
C117.5	Evaluate the performance of Rectifiers with and without filters.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C117.1	2	3	2	2	-	-	-	-	-	-	-
C117.2	2	2	2	3	-	-	-	3	3	-	2
C117.3	2	2	2	2	-	-	-	2	-	-	-
C117.4	2	2	2	2	-	-	-	-	3	-	2
C117.5	3	2	2	2	-	-	-	-	-	-	-
Average	2.2	2.2	2	2.2	-	-	-	2.5	3.0	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C117.1	2	-	2
C117.2	2	2	-
C117.3	-	-	-
C117.4	-	-	-
C117.5	2	-	-
Average	2.0	2.0	2.0

  
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**Department of CSE [Data Science]**

Code:C201 Coordinator Name : Course: DISCRETE MATHEMATICS

Items	Course Outcomes
C201.1	Construct precise mathematical proofs
C201.2	Use logic and set theory to formulate precise statements.
C201.3	Analyse and solve counting problems on finite and discrete structures.
C201.4	Solve counting problems and recurrence relation
C201.5	Apply graph theory in solving computing problems.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C201.1	3	3	2	2	-	-	-	-	-	-	-
C201.2	3	3	2	2	-	-	-	-	-	-	-
C201.3	3	3	2	2	-	-	-	-	-	-	-
C201.4	3	3	2	2	2	-	-	-	-	-	-
C201.5	3	3	2	2	2	-	-	-	-	-	-
Average	3.0	3.0	2.0	2.0	2.0	-	-	-	-	-	-

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C201.1	2	-	-
C201.2	2	-	-
C201.3	2	-	-
C201.4	2	-	-
C201.5	2	-	-
Average	2.0	-	-

  
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Course code: C202

Coordinator Name :

Course: Digital Electronics

Items	Course Outcomes
C202.1	Compare the numerical information in different forms and Boolean Algebra theorems.
C202.2	Apply the various simplification methods to simplify the given Boolean function
C202.3	Analyse and design various combinational logic circuits.
C202.4	Learn the concepts of sequential circuits.
C202.5	Illustrate various memories and logic families

Correlation between Course Outcomes (COs) and Program Outcomes (POs):


CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C202.1	3	2	2	2	-	-	-	-	-	-	-
C202.2	3	3	3	2	2	-	-	-	-	-	-
C202.3	3	3	3	2	-	-	-	-	-	-	-
C202.4	3	2	2	2	-	-	-	-	-	-	-
C202.5	3	2	3	2	2	-	-	-	-	-	-
Average	3.0	2.4	2.6	2.0	2.0	-	-	-	-	-	-

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C202.1	3	-	-
C202.2	3	-	-
C202.3	2	-	-
C202.4	3	-	-
C202.5	2	-	-
Average	2.6	-	-

  
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## Department of CSE [Data Science]

Course code: C203

Course Coordinator Name :  
with Python

Course: Programming

Items	Course Outcomes
C203.1	Examine Python syntax and semantics, flow control.
C203.2	Demonstrate proficiency in handling Strings and Arrays.
C203.3	Apply Python Programs using core data structures like Lists, Dictionaries
C203.4	Conduct experiments on file handling, exception handling, and modules.
C203.5	Interpret the concepts of Object-Oriented Programming as used in Python

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C203.1	3	3	2	2	2	-	-	-	-	-	2
C203.2	3	2	2	3	2	-	-	3	3	-	2
C203.3	3	3	3	2	3	-	-	-	-	-	2
C203.4	3	2	3	3	3	-	-	-	-	-	2
C203.5	3	2	3	3	3	-	-	-	-	-	2
Average	3.0	2.4	2.6	2.6	2.6	-	-	3.0	3.0	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C203.1	2	2	-
C203.2	2	2	3
C203.3	2	3	3
C203.4	2	3	3
C203.5	2	3	3
Average	2.0	2.6	3.0

  
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## Department of CSE [Data Science]

Code: C204 Coordinator Name : Course: Computer Organization And Architecture

Items	Course Outcomes
C204.1	Identity of computer organization architecture.
C204.2	Analyse the basics of instruction sets and their functionality.
C204.3	Evaluate arithmetical operations by using data.
C204.4	Demonstrate the functional units of the computer.
C204.5	Design a pipeline for consistent execution of instructions.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C204.1	3	3	3	2	-	-	-	-	-	-	-
C204.2	3	3	3	3	-	-	-	-	-	-	-
C204.3	3	2	2	3	2	-	-	-	-	-	-
C204.4	3	2	2	3	2	-	-	-	-	-	-
C204.5	3	2	3	3	2	-	-	-	-	-	-
Average	3.0	2.4	2.6	2.8	2.0	-	-	-	-	-	-

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C204.1	3		2
C204.2	2		
C204.3	2	3	1
C204.4	2		
C204.5	2	1	1
Average	2.2	2	1.33

  
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**Department of CSE [Data Science]**

Code:C205 Coordinator Name : Course: Object Oriented Programming Through Java

Items	Course Outcomes
C205.1	Solve real world problems using OOP techniques
C205.2	Apply the packages and interfaces, streams in I/O.
C205.3	Examine development of exceptions, multithreaded applications with synchronization.
C205.4	Analyse the usage of collection framework.
C205.5	Design GUI based applications using applets and swings.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C205.1	3	3	3	3	3	2	-	2	-	-	2
C205.2	3	3	3	2	3	-	-	-	-	-	2
C205.3	3	3	2	3	3	-	-	-	-	-	2
C205.4	3	3	2	3	3	-	-	-	-	-	2
C205.5	3	2	3	3	3	2	-	2	-	-	2
Average	3.0	2.8	2.6	2.8	3.0	2.0	-	2.0	-	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C205.1	3	3	3
C205.2	3	2	-
C205.3	2	3	2
C205.4	2	2	-
C205.5	2	3	2
Average	2.4	2.6	2.33

  
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Course Code: C206

Course Coordinator Name :

Course: Python Lab

Items	Course Outcomes
C206.1	Practice the basic concepts of python programming.
C206.2	Apply functions to design modular programming and perform string operations
C206.3	Analyse various data structures like lists, set, dictionaries and tuples in python.
C206.4	Implement object-oriented programming concepts using python.
C206.5	Build applications using file handling and error handling techniques.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C206.1	3	3	3	2	-	-	-	2	3	-	2
C206.2	3	2	3	2	3	-	-	2	-	-	-
C206.3	3	3	3	3	3	-	-	2	-	-	2
C206.4	3	2	3	3	3	2	-	2	-	-	2
C206.5	3	2	3	3	3	-	2	2	-	-	2
Average	3.0	2.4	3.0	2.6	3.0	2.0	2.0	2.0	3.0	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C206.1	2	-	-
C206.2	3	-	-
C206.3	3	3	-
C206.4	2	3	2
C206.5	2	3	2
Average	2.4	3.0	2.0

  
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Code: C207 Coordinator Name : Course: Object Oriented Programming Through Javalab

Items	Course Outcomes
C207.1	write programs for solving real-world problems using java collection framework.
C207.2	Write programs using abstract classes.
C207.3	Write Multi threaded Programmes
C207.4	Write GUI programs using swing controls in Java
C207.5	Impart hands-on experience with java programming

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C207.1	3	2	3	3	3	2	-	2	3	3	3
C207.2	3	2	3	3	3	2	-	-	-	-	-
C207.3	3	2	3	3	2	-	2	2	-	2	-
C207.4	3	2	3	3	3	-	-	2	3	-	-
C207.5	3	2	3	3	3	-	-	2	3	-	-
Average	3.0	2.0	3.0	3.0	2.8	2.0	2.0	2.0	3.0	2.5	3.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C207.1	2	3	3
C207.2	2	3	-
C207.3	3	2	-
C207.4	2	3	-
C207.5	2	3	-
Average	2.2	2.8	3.0

  
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Code:C208 Coordinator Name : Course: Data Visualization – R Programming/ Power Bi

Items	Course Outcomes
C208.1	Understand How to import data into Tableau.
C208.2	Understand Tableau concepts of Dimensions and Measures.
C208.3	Develop Programs and understand how to map Visual Layouts and Graphical Properties.
C208.4	Create a Dashboard that links multiple visualizations.
C208.5	Use graphical user interfaces to create Frames for providing solutions to real world problems.


Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C208.1	2	-	-	2	3	-	-	2	2	-	2
C208.2	2	2	-	-	3	-	-	-	-	-	-
C208.3	2	2	2	2	3	-	-	-	-	-	-
C208.4	2	2	3	-	3	-	-	-	-	-	-
C208.5	2	2	3	2	3	-	-	2	3	-	2
Average	2.0	2.0	2.66	2.0	3.0	-	-	2.0	2.5	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C208.1	2	2	2
C208.2	2	2	-
C208.3	-	3	-
C208.4	-	2	-
C208.5	-	3	2
Average	2.0	2.4	2.0

  
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Code209 Coordinator Name :                      Course: Computer Oriented Statistical Methods

Items	Course Outcomes
C209.1	Apply the concepts of probability and Random variables
C209.2	Analyse the concept of Probability distributions to some case studies
C209.3	Formulate and solve problems by apply statistical methods for analysing experimental data.
C209.4	Demonstrate the concept of estimation and distinguish regression analysis and compute and interpret the coefficient of correlation.
C209.5	Examine the given statistical hypothesis

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C209.1	3	2	2	2	2	-	-	-	-	-	-
C209.2	3	3	2	2	2	-	-	-	-	-	-
C209.3	3	3	3	3	2	-	-	-	-	-	-
C209.4	3	3	2	2	2	-	-	-	-	-	-
C209.5	3	3	2	2	2	-	-	-	-	-	-
Average	3.0	2.8	2.2	2.2	2.0	-	-	-	-	-	-

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C209.1	2	-	-
C209.2	2	-	-
C209.3	3	-	-
C209.4	2	-	-
C209.5	2	-	-
Average	2.2	-	-

  
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Code: C210      Coordinator Name :      COURSE: DATABASE MANAGEMENT SYSTEMS

Items	Course Outcomes
C210.1	Analyse the logical design concepts of the database.
C210.2	Design the physical model of a database and its operations.
C210.3	Apply the knowledge of SQL to construct the queries for efficient data access and manipulation
C210.4	Implement transaction processing and concurrency control.
C210.5	Examine different indexing mechanisms and database storage access.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C210.1	3	3	3	2	-	-	-	-	-	-	-
C210.2	3	2	-	2	-	-	-	-	-	-	-
C210.3	3	3	3	2	3	-	-	-	-	-	2
C210.4	3	3	2	2	-	-	-	-	-	-	2
C210.5	3	3	2	2	-	-	-	-	-	-	2
Average	3.0	2.8	2.5	2.0	3.0	-	-	-	-	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C210.1	3	-	-
C210.2	3	-	-
C210.3	3	3	-
C210.4	3	3	2
C210.5	3	-	-
Average	3.0	3.0	2.0

  
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CODE: C211

Coordinator Name :

COURSE: OPERATING SYSTEMS

Items	Course Outcomes
C211.1	Ddemonstrate the basic concepts of Operating Systems.
C211.2	Implement various process scheduling algorithms and deadlock techniques.
C211.3	Examine various and process management concepts
C211.4	Apply memory management strategies and page replacement algorithms.
C211.5	Analyse file management and disk management aspects of operating systems

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C211.1	3	2	2	2	2	-	-	-	2	-	-
C211.2	3	3	3	2	2	-	-	2	-	-	2
C211.3	3	3	2	2	2	-	-	-	-	-	2
C211.4	3	3	3	2	2	-	-	-	-	-	-
C211.5	3	3	2	2	2	-	-	-	-	-	-
Average	3.0	2.8	2.4	2.0	2.0	-	-	2.0	2.0	-	2.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**


CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C211.1	2	3	2
C211.2	3	2	-
C211.3	3	2	2
C211.4	3	2	-
C211.5	3	2	-
Average	2.4	2.2	2.0



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Code: C212      Coordinator Name :      COURSE: BEFA

Items	Course Outcomes
C212.1	Understand the various Forms of Business and the impact of economic variables on the Business.
C212.2	Comprehend the demand and supply analysis.
C212.3	Explore the usage of marketing and pricing of a product.
C212.4	Maintaining the financial accounts of a firm or company.
C212.5	Monitoring the accounts through ratios.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C212.1	2	-	-	-	-	2	-	-	-	-	2
C212.2	2	2	2	-	-	2	2	-	-	-	3
C212.3	2	2	2	-	-	2	-	-	-	-	2
C212.4	2	2	2	-	-	2	2	-	-	-	3
C212.5	2	2	2	-	-	2	-	-	-	2	3
<b>Average</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	-	-	<b>2.0</b>	<b>2.0</b>	-	-	<b>2.0</b>	<b>2.6</b>

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C212.1	2	-	-
C212.2	3	-	-
C212.3	2	-	-
C212.4	3	-	2
C212.5	3	-	2
<b>Average</b>	<b>2.6</b>	-	<b>2.0</b>

  
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**Code: C213 Coordinator Name :** **Course: Software Engineering**

Items	Course Outcomes
C213.1	Make use of the software development life cycle principles and process models.
C213.2	Construct the software requirements specifications with relevant use-cases.
C213.3	Analyse the project management strategies and various components to build the architecture using suitable design strategies.
C213.4	Estimate the best coding standards and testing strategies to develop high quality of software products.
C213.5	Design metrics for process and products with the help of risk and quality management.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C213.1	3	2	3	2	2	-	-	-	-	-	2
C213.2	3	3	3	3	2	-	-	2	2	-	2
C213.3	3	3	3	3	2	-	-	2	2	-	2
C213.4	3	2	3	3	2	2	2	-	-	-	2
C213.5	3	2	2	3	2	-	2	-	-	-	2
Average	3.0	2.4	2.8	2.8	2.0	2.0	2.0	2.0	2.0	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C213.1	2	2	2
C213.2	3	3	-
C213.3	3	3	-
C213.4	3	3	-
C213.5	3	3	2
Average	2.8	2.8	2.0

  
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Department of CSE (Data Science)

**Department of CSE [Data Science]**

Code:C214

Course Coordinator Name :

Course: DBMS Lab

Items	Course Outcomes
C214.1	Demonstrate the database design using ER Diagrams.
C214.2	Develop SQL Queries to manipulate the data in the database.
C214.3	Apply Procedural Language constructs to execute a block of SQL statements.
C214.4	Design various triggers for different data using SQL.
C214.5	Implement cursors using SQL.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C214.1	3	2	3	2	2	-	-	2	2	-	2
C214.2	3	2	3	2	3	-	-	-	-	-	-
C214.3	3	3	3	2	3	-	-	-	-	-	-
C214.4	3	2	3	2	3	-	-	-	-	-	-
C214.5	3	2	3	2	3	-	-	-	-	-	-
Average	3.0	2.2	3.0	2.0	2.8	-	-	2.0	2.0	-	2.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C214.1	2	2	2
C214.2	3	3	-
C214.3	3	2	-
C214.4	3	3	-
C214.5	3	3	-
Average	2.8	2.6	2.0



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**Department of CSE [Data Science]**

**Code:C215    Coordinator Name :                      Course: Operating Systems Lab**

Items	Course Outcomes
C215.1	Examine different operating system concepts.
C215.2	Develop C programs using Unix system call.
C215.3	Illustrate the following IPC mechanisms
C215.4	Simulate Page Replacement Algorithms.
C215.5	Demonstrate Deadlock management.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C215.1	3	3	2	3	3	-	-	3	-	-	-
C215.2	3	3	2	3	2	-	-	2	-	-	-
C215.3	3	3	3	2	3	-	2	2	-	2	3
C215.4	3	3	3	3	3	-	-	3	-	3	3
C215.5	3	3	2	3	3	-	-	3	-	3	3
<b>Average</b>	3.0	3.0	2.4	2.8	2.8	-	2.0	2.6	-	2.67	3

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C215.1	3	2	3
C215.2	3	3	
C215.3	3	3	2
C215.4	3	3	
C215.5	3	3	2
<b>Average</b>	3	2.8	2.333

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Course Code: C216      Coordinator Name :      Course: NODE JS/REACTJS/ DJANGO

Items	Course Outcomes
C216.1	Build a custom website with HTML, CSS, and Bootstrap and little JavaScript.
C216.2	Demonstrate Advanced features of JavaScript and learn about JDBC
C216.3	Develop Server – side implementation using Java technologies like
C216.4	Develop the server – side implementation using Node JS.
C216.5	Design a Single Page Application using React

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C216.1	3	2	3	3	3	2	-	-	-	-	3
C216.2	3	2	3	3	3	2	-	3	3	-	3
C216.3	3	2	3	3	3	-	-	-	-	-	3
C216.4	3	2	3	3	3	2	-	-	-	-	3
C216.5	3	2	3	3	3	-	-	-	-	-	3
Average	3.0	2.0	3.0	3.0	3.0	2.0	-	3.0	3.0	-	3.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C216.1	2	3	-
C216.2	2	3	3
C216.3	2	3	3
C216.4	2	3	3
C216.5	2	3	3
Average	2.0	3.0	3.0



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**Department of CSE [Data Science]**

Code:C217 Coordinator Name : Course: Real time Research Project/Societal Related Projects

Items	Course Outcomes
C217.1	Identify and analyse real-world or societal problems to develop effective solutions
C217.2	Apply suitable methods, tools, and technologies to design and implement practical solutions.
C217.3	Evaluate project results and suggest evidence-based improvements.
C217.4	Utilize project management principles to achieve project goals effectively
C217.5	Demonstrate professional communication, ethical behavior, and proper project documentation.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C217.1	3	3	2	2	2	2	-	-	2	-	2
C217.2	3	3	3	3	3	-	-	-	-	-	2
C217.3	3	3	2	3	3	2	-	-	-	2	2
C217.4	-	2	2	-	2	-	-	2	3	3	2
C217.5	-	-	-	-	2	2	2	2	3	2	2
Average	3.0	2.75	2.25	2.66	2.4	2.0	2.0	2.0	2.66	2.33	2.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C217.1	3	2	-
C217.2	3	3	-
C217.3	2	3	-
C217.4	-	2	-
C217.5	-	2	3
Average	2.66	2.6	3.0

  
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**Department of CSE [Data Science]**

Code:C301 Coordinator Name : Course: Introduction to Data Science

Items	Course Outcomes
C301.1	Discuss a flow process for data science problems.
C301.2	Identify types of data and basic Statistical Description.
C301.3	Create vectors, matrices and list using R
C301.4	Develop R codes using iterative programming
C301.5	Correlate results to the solution approach

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

COS	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C301.1	3	2	2	3	2	-	-	-	-	-	2
C301.2	3	3	2	3	2	-	-	-	-	1	-
C301.3	2	2	2	3	2	-	-	-	-	1	2
C301.4	3	3	2	3	3	-	-	-	-	2	2
C301.5	2	2	3	3	3	-	-	-	-	-	-
Average	2.5	2.5	2.2	3	2.4	-	-	-	-	1.33	2

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C301.1	3	3	1
C301.2	-	2	2
C301.3	3	3	-
C301.4	-	1	3
C301.5	3	3	2
Average	3	2.6	2

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**Department of CSE [Data Science]**

Code:C302 Coordinator Name : Course: Big Data Analytics

Items	Course Outcomes
C302.1	Learn the importance of big data analytics and its types
C302.2	Perform analytics on big data
C302.3	Proficiency in big data storage and processing in Hadoop
C302.4	Data analytics through MongoDB
C302.5	Explore various frameworks of Big Data.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):


COS	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C302.1	3	2	1	2					1		
C302.2	2	3	2	3					2	2	
C302.3	2	2	3	3					2	1	
C302.4	2	3	2	3					2	2	
C302.5	2	2	3	3					2	2	
Average	2.4	2.4	2.2	2.8					1.8	1.75	

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C302.1	2	2	2
C302.2	2	3	3
C302.3	3	2	3
C302.4	3	3	2
C302.5	3	2	3
Average	2.8	2.4	2.6

  
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**Department of CSE [Data Science]**

Code:C303

Coordinator Name :

Course: Computer Networks

Items	Course Outcomes
C303.1	Enumerate the basic concepts of reference models.
C303.2	Apply sliding window protocols and multiple access protocols
C303.3	Design the routing algorithms, congestion control techniques
C303.4	Analyse TCP and UDP protocols and services of the Transport Layer.
C303.5	Implement different protocols at the application layer

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C303.1	3	2	-	-	-	-	-	-	-	-	2
C303.2	3	2	2	-	2	-	-	-	-	-	-
C303.3	3	2	3	2	2	-	-	-	-	-	2
C303.4	3	2	2	2	2	-	-	-	-	-	2
C303.5	3	2	3	2	2	-	-	-	-	-	2
Average	3.0	2.0	2.5	2.0	2.0	-	-	-	-	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C303.1	2	-	-
C303.2	3	2	-
C303.3	2	3	-
C303.4	3	2	-
C303.5	2	3	-
Average	2.4	2.5	-

  
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**Department of CSE [Data Science]**

Code:C304

Coordinator Name :

Course: Artificial Intelligence

Items	Course Outcomes
C304.1	Formulate an efficient problem space for a problem expressed in natural language.
C304.2	Define search algorithm for a problem solving and estimate the performance analysis.
C304.3	Apply knowledge using the appropriate technique for a given problem.
C304.4	Build AI techniques to solve problems of game playing and machine learning.
C304.5	Formulate uncertain problem-solving using probability.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C304.1	3	3	3	1	3	1					
C304.2	2	3	3	3	3	1					1
C304.3	3	3	3	1	2	1					1
C304.4	3	2	3	3	2	1					3
C304.5	3	3	2	3	1	3					
Average	2.8	2.8	2.8	2.2	2.2	1.16					1.6

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C304.1	3	3	
C304.2	3	3	
C304.3	3	1	
C304.4	3	3	
C304.5	3	1	
Average	3	2.2	-

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**Department of CSE [Data Science]**

Code:C305

Course Coordinator Name :

Course: SPM

Items	Course Outcomes
C305.1	Understand the software economics to improve various phases of development.
C305.2	Examine the life cycle phases, artifacts, workflows and checkpoints of a process.
C305.3	Demonstrate the software project framework components.
C305.4	Analyse the need for various software management disciplines.
C305.5	Assess various software management metrics.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C305.1	3	2	1		1				1		
C305.2	3	3	3		2				2		
C305.3	3	2	3		2				3		
C305.4	3	3	2		2				2		
C305.5	3	3	2		2				2		
Average	3	2.8	2.2		1.8				2		

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C305.1	2	2	1
C305.2	3	3	2
C305.3	3	3	2
C305.4	2	3	2
C305.5	2	2	3
Average	2.4	2.6	-2

  
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**Department of CSE [Data Science]**

Code:C306

Course Coordinator Name :

Course: R PROGRAMMING LAB

Items	Course Outcomes
C306.1	Setup R programming environment.
C306.2	Understand and use R – Data types and R – Data Structures.
C306.3	Develop programming logic using R – Packages.
C306.4	Analyse data sets using R – programming capabilities

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C306.1	2	1	1		3				1	1	
C306.2	3	2	2		2				1	1	
C306.3	3	3	3		3				2	2	
C306.4	3	3	2		3				2	2	
Average	2.75	2.25	2		2.75				1.50	1.50	

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C306.1	3	1	1
C306.2	3	2	1
C306.3	3	3	2
C306.4	3	3	3
Average	3	2.25	1.75-

  
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**Department of CSE [Data Science]**

Code:C307

Course Coordinator Name :

Course: Big Data Analytics Lab

Items	Course Outcomes
C307.1	Use Excel as an Analytical tool and visualization tool.
C307.2	Ability to program using HADOOP and Map reduce
C307.3	Ability to perform data analytics using ML in R.
C307.4	Use MongoDB to perform data analytics.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C307.1	2	2	1		3				1	2	
C307.2	3	3	3		3				2	1	
C307.3	3	3	2		3				2	2	
C307.4	2	3	2		3				2	1	
C307.5											
Average	2.50	2.75	2		3				1.75	1.50	

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C307.1	2	2	2
C307.2	3	2	3
C307.3	2	3	2
C307.4	3	2	3
C307.5			
Average	2.50	2.25	2.50-

  
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**Department of CSE [Data Science]**

Code: C308 Coordinator Name : Course: COMPUTER NETWORKS LAB

Items	Course Outcomes
C308.1	Implement data link layer framing methods.
C308.2	Analyse error detection and error correction codes..
C308.3	Design and analyse routing and congestion issues in network design
C308.4	Develop Encoding and Decoding techniques used in presentation layer
C308.5	Work with different network tools

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C308.1	3	2	2	-	2	-	-		-	-	-
C308.2	3	3	2	2	-	-	-	-	-	-	-
C308.3	3	2	3	2	2	-		3	3	-	2
C308.4	3	2	2	2	-	-		3	-	-	2
C308.5	3	3	2	2	3	2	2		-	-	2
Average	3.0	2.4	2.2	2.0	2.33	2.0	2.0	3.0	3.0	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C308.1	3	2	-
C308.2	3	-	-
C308.3	3	3	-
C308.4	3	3	-
C308.5	3	2	2
Average	3.0	2.5	2.0

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**Department of CSE [Data Science]**

Code: C309 Coordinator Name :

Course: ETL-KAFKA/TALEND

Items	Course Outcomes
C309.1	Learn to design and deploy fault-tolerant Kafka clusters, ensuring data integrity and availability in real-world scenarios.
C309.2	Gain practical experience in cluster management, topic creation, and basic operations such as producing and consuming messages.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C309.1	3	3	3	2	3	2	1	1	2	2	1
C309.2	3	2	2	2	3	1	1	2	2	1	1
Average	3	2.5	2.5	2	3	1.5	1	1.5	2	1.5	1

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C309.1	3	2	
C309.2	3	2	
Average	3	2	

  
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**Department of CSE [Data Science]**

**Code: C310 Coordinator Name :**                      **Course: INTELLECTUAL PROPERTY RIGHTS**

Items	Course Outcomes
C310.1	Interpret intellectual property rights.
C310.2	Identify different types of trademarks and related laws.
C310.3	Examine copyrights and their laws.
C310.4	Differentiate the trade secrets and unfair competition.
C310.5	Enumerate the new developments of intellectual property.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C310.1	3	2	2	-	-	-	-	-	-	-	-
C310.2	3	2	2	2	-	-	-	-	-	-	-
C310.3	3	2	3	2	-	-	-	-	-	-	-
C310.4	3	2	3	2	-	-	-	-	-	-	2
C310.5	3	2	2	-	2	-	-	-	-	-	2
Average	3.0	2.0	2.4	2.0	2.0	-	-	-	-	-	2.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C310.1	3	-	-
C310.2	3	2	-
C310.3	3	3	-
C310.4	3	3	-
C310.5	3	2	2
Average	3.0	2.5	2.0

  
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**Department of CSE [Data Science]**

Code:C311

Coordinator Name :

Course: MACHINE LEARNING

Items	Course Outcomes
C311.1	Enumerate the basic concepts of machine learning.
C311.2	Build classifiers using multi-layer perceptron and support vector machine.
C311.3	Apply ensemble learning to increase the classification accuracy.
C311.4	Make use of dimensionality reduction and evolutionary computing algorithms.
C311.5	Apply Markov Chain Monte Carlo methods on real datasets.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C311.1	3	2	-	-		-	-	-	-	-	-
C311.2	3	3	3	3	2	-	-	-	-	-	2
C311.3	3	3	3	2	3	-	-	-	-	-	2
C311.4	3	3	3	2	3	2	2	-	2	-	2
C311.5	3	3	2	3	2	-	-	-	-	-	3
Average	3.0	2.8	2.75	2.5	2.5	2.0	2.0	-	2.0	-	2.25

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C311.1	2	-	-
C311.2	3	3	-
C311.3	3	3	-
C311.4	3	3	2
C311.5	3	2	2
Average	2.8	2.75	2.0



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HOD - CSE (DS)  
Department of CSE (Data Science)

**Department of CSE [Data Science]**

CODE:C312 Coordinator Name : COURSE: ALGORITHM DESIGN AND ANALYSIS

Items	Course Outcomes
C312.1	Analyse the performance of algorithms
C312.2	Design the algorithm using the divide and conquer greedy approach.
C312.3	Implement dynamic programming strategy.
C312.4	Apply the backtracking technique and branch and bound.
C312.5	Construct the algorithm using the non-deterministic algorithm

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C312.1	3	3	2	2	-	-	-	-	-	-	-
C312.2	3	2	3	2	-	-	-	-	-	-	2
C312.3	3	2	3	2	2	-	-	-	-	-	2
C312.4	3	2	3	2	-	-	-	-	-	-	2
C312.5	3	2	3	2	2	-	-	-	-	-	-
Average	3.0	2.2	2.8	2.0	2.0	-	-	-	-	-	2.0

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C312.1	2	-	-
C312.2	2	2	-
C312.3	2	2	-
C312.4	2	2	-
C312.5	2	2	-
Average	2.0	2.0	-

Course Coordinator

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HOD- CSE (DS)

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**Department of CSE [Data Science]**

Code: C313 Coordinator Name : Course: AUTOMATA THEORY AND COMPILER DESIGN

Items	Course Outcomes
C313.1	Able to employ finite state machines for modelling and solving computing problems
C313.2	Able to design context-free grammar for formal languages.
C313.3	Able to Distinguish between decidability and un-decidability
C313.4	Demonstrate the knowledge of patterns, tokens and regular expressions for lexical analysis.
C313.5	Acquire skills in using lex tool and design LR parsers

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C313.1	3	3	2	2	2				1	1	
C313.2	3	3	3	2	1				1	1	
C313.3	3	3	1	3	1				1	1	
C313.4	2	2	2	2	3				1	2	
C313.5	3	3	3	2	3				2	2	
Average	2.8	2.8	2.2	2.2	2				1.2	1.4	

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C313.1	3	2	2
C313.2	3	3	2
C313.3	3	1	2
C313.4	2	3	2
C313.5	2	3	3
Average	2.6	2.4	2.2

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Department of CSE (Data Science)

CMR Technical Campus

Kandlakoya (V), Medchal Road, Hyderabad, Telangana - 501 401

Ph.No: 9247033440/41; www.cmrtc.ac.in; info@cmrtc.ac.in

Kandlakoya (V), Medchal Road,  
Hyderabad, Telangana - 501 401.

**Department of CSE [Data Science]**

Code:C314 Coordinator Name :

Course: SOFTWARE TESTING METHODOLOGIES

Items	Course Outcomes
C314.1	Compare and contrast the various testing strategies.
C314.2	Impart skills to perform dataflow testing and domain testing strategies.
C314.3	Detect anomalies and build decision tables and KV charts.
C314.4	Apply the graph-based testing metrics to its application.
C314.5	. Implement test cases using any automated testing tools (Jmeter or WinRunner).

Correlation between Course Outcomes (COs)and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C314.1	3	3	2	2	2	-	-	-	-	-	-
C314.2	3	3	3	2	3	-	-	-	-	-	2
C314.3	3	2	3	2	2	-	-	-	-	-	-
C314.4	2	3	2	2	3	-	-	-	-	-	2
C314.5	2	2	3	2	3	-	-	-	-	-	2
Average	2.6	2.6	2.6	2.0	2.6	-	-	-	-	-	2.0

Correlation between Outcomes (COs)and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C314.1	3	-	-
C314.2	3	3	2
C314.3	3	3	-
C314.4	2	2	-
C314.5	2	3	2
Average	2.6	2.75	2.0

  
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Code:C315 Coordinator Name :

Course: Machine Learning Lab

Items	Course Outcomes
C315.1	Develop program for computing central tendency measures.
C315.2	Make use of SciPy, pandas, matplotlib libraries to machine learning applications.
C315.3	Develop simple and multiple linear regression algorithms
C315.4	Build machine learning model using decision tree, KNN algorithms.
C315.5	Apply logistic regression, K-Means algorithms for a problem.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C315.1	3	2	2	2	2	2	2	-	2	-	-
C315.2	3	3	3	3	3	-	-	-	2	-	-
C315.3	3	2	3	3	3	-	-	2	2	-	-
C315.4	3	2	3	3	3	2	2	2	3	2	-
C315.5	3	3	2	3	3	-	-	2	3	3	-
Average	3.0	2.4	2.6	2.8	2.8	2.0	2.0	2.0	2.4	2.5	-

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C315.1	3	-	-
C315.2	3	-	-
C315.3	3	3	2
C315.4	3	3	2
C315.5	3	3	2
Average	3.0	3.0	2.0

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**Department of CSE [Data Science]**

Code:C316 Coordinator Name : Course: Advanced English Communication Skills Lab


Items	Course Outcomes
C316.1	Interpret the vocabulary to improve the fluency in English.
C316.2	Comprehend effectively in different contexts.
C316.3	Develop proficiency in academic reading and writing
C316.4	Identify possibilities of job prospects
C316.5	Communicate effectively in formal and informal contexts.

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C316.1	2	-	-	-	-	-	-	-	-	3	2
C316.2	2	-	-	-	-	-	-	-	2	3	2
C316.3	2	-	-	-	-	-	-	-	-	3	3
C316.4	2	-	-	-	-	2	-	-	-	2	3
C316.5	2	-	-	-	-	-	-	-	3	3	2
Average	2.0	-	-	-	-	2.0	-	-	2.5	2.8	2.4

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C316.1	-	-	3
C316.2	-	-	3
C316.3	-	-	3
C316.4	2	-	3
C316.5	-	-	3
Average	2.0	-	3.0

  
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**Department of CSE [Data Science]**

Code:C317 Coordinator Name : :

Course: SOFTWARE TESTING METHODOLOGIES LAB

Items	Course Outcomes
C317.1	Work with WinRunner user interface and describe the benefits of automated testing.
C317.2	Design and develop the best test strategies in accordance with the development model.
C317.3	Record the test in analog and context sensitive modes.
C317.4	Create various checkpoints like GUI, Bitmap and Database for an application.
C317.5	Perform the batch testing with and without parameter passing.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**


	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C317.1	3	3	2	2	2	-	-	-	-	-	-
C317.2	2	2	3	3	3	-	-	-	-	-	2
C317.3	2	3	3	3	3	-	-	-	-	-	-
C317.4	2	2	2	2	2	-	-	-	-	-	2
C317.5	2	2	3	3	3	-	-	-	-	-	2
Average	2.2	2.4	2.6	2.6	2.6	-	-	-	-	-	2.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C317.1	3	2	-
C317.2	2	3	2
C317.3	2	2	-
C317.4	2	3	-
C317.5	2	3	2
Average	2.2	2.6	2.0

  
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**Department of CSE [Data Science]**

Code :C318 Coordinator Name : Course: Industrial Oriented Mini Project

Items	Course Outcomes
C318.1	Identify and explain the problem clearly, generate creative ideas to solve it, and analyse the problem critically to develop effective solutions.
C318.2	Apply appropriate methods, tools, and technologies to design and implement practical and functional solutions
C318.3	Analyse project results, interpret findings, and evaluate outcomes to suggest evidence-based improvements
C318.4	Evaluate contributions to achieve project goals through project management principles
C318.5	Demonstrate professional communication and ethical behaviour through proper project documentation and presentation

Correlation between Course Outcomes (COs) and Program Outcomes (POs):

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C318.1	3	3	2	2	2	2	-	-	-	2	-
C318.2	3	3	3	3	3	-	-	-	-	-	-
C318.3	3	3	2	3	3	-	-	2	-	-	2
C318.4	2	2	2	-	2	-	2	-	2	3	3
C318.5	-	-	-	-	2	2	2	2	2	3	2
Average	2.75	2.75	2.25	2.66	2.4	2.0	2.0	2.0	2.0	2.66	2.33

Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C318.1	3	2	-
C318.2	3	3	-
C318.3	3	3	3
C318.4	-	3	3
C318.5	-	2	3
Average	3.0	2.6	3.0

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Kandlakoya (V), Medchal Road,  
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**Department of CSE [Data Science]**

Code :C401 Coordinator Name : Course: PREDICTIVE ANALYTICS

Items	Course Outcomes
C401.1	Understand the processing steps for predictive analytics.
C401.2	Construct and deploy prediction models with integrity.
C401.3	Explore various machine learning techniques for predictive analytics.
C401.4	Examine various ensemble approaches for enhancing predictive analytics.
C401.5	Apply predictive analytics to real world examples.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C401.1	3	2	1		2				1		
C401.2	3	3	3		3				2		
C401.3	3	3	2		3				2		
C401.4	2	3	3		3				1		
C401.5	3	3	3		2				3		
<b>Average</b>	<b>2.8</b>	<b>2.8</b>	<b>2.4</b>		<b>2.6</b>				<b>1.8</b>		

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C401.1	2	2	2
C401.2	2	3	3
C401.3	2	3	2
C401.4	2	3	2
C401.5	3	3	3
<b>Average</b>	<b>2.2</b>	<b>2.8</b>	<b>2.4</b>

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**Department of CSE [Data Science]**

Code:C402 Coordinator Name :

Course: WEB AND SOCIAL MEDIA ANALYTICS

Items	Course Outcomes
C 402.1	Understand decision support systems.
C 402.2	Examine natural language processing concepts on text analytics.
C 402.3	Analyse sentiment analysis techniques
C 402.4	Explore search engine optimizations and web analytics.
C 402.5	Apply various social analytics on social media data.

**Correlation between Course Outcomes (COs)and Program Outcomes (POs):**


CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C 402.1	3	2	2	2	2				2	2	
C 402.2	3	3	2	2	3				1	2	
C 402.3	2	3	2	3	3	1			1	2	
C 402.4	2	2	2	2	3				2	2	
C 402.5	2	3	3	2	3				3	1	
<b>Average</b>	<b>2.4</b>	<b>2.6</b>	<b>2.2</b>	<b>2.2</b>	<b>2.8</b>				<b>1.8</b>	<b>2.23</b>	

**Correlation between Outcomes (COs)and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C 402.1	3	2	2
C 402.2	2	3	2
C 402.3	2	3	2
C 402.4	2	1	1
C 402.5	3	2	3
<b>Average</b>	<b>2.4</b>	<b>2.4</b>	<b>2.2</b>

  
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**Department of CSE [Data Science]**

Code: C403 Coordinator Name : Course: NATURAL LANGUAGE PROCESSING

Items	Course Outcomes
C 403.1	Show sensitivity to linguistic phenomena and an ability to model them with formal grammars.
C 403.2	Understand and carry out proper experimental methodology for training and evaluating empirical NLP systems
C 403.3	Able to manipulate probabilities, construct statistical models over strings and trees, and estimate parameters using supervised and unsupervised training methods.
C 403.4	Develop a comprehensive understanding of Recognizing Textual Entailment (RTE) using various analytical and case-based approaches.
C 403.5	Apply techniques in multilingual sentiment and subjectivity analysis, along with entity detection and tracking.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C 403.1	3	2	2	-	-	-	-	-	-	-	-
C 403.2	3	3	2	2	2	-	-	-	-	-	2
C 403.3	3	3	3	2	2	-	-	-	-	-	2
C 403.4	3	2	3	-	2	-	-	-	-	-	2
C 403.5	3	3	3	2	-	-	-	-	-	-	2
<b>Average</b>	<b>3.0</b>	<b>2.6</b>	<b>2.6</b>	<b>2.0</b>	<b>2.0</b>	-	-	-	-	-	<b>3.0</b>

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C 403.1	3	-	-
C 403.2	3	2	-
C 403.3	3	3	-
C 403.4	3	3	-
C 403.5	3	2	-
<b>Average</b>	<b>3</b>	<b>2.5</b>	

  
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**Department of CSE [Data Science]**

Code: C404 Coordinator Name : \_\_\_\_\_ Course **CLOUD COMPUTING**

Items	Course Outcomes
C 404.1	Understand different computing paradigms and potential of the paradigms and specifically cloud computing
C 404.2	Understand cloud service types, cloud deployment models and technologies supporting and driving the cloud
C 404.3	Acquire the knowledge of programming models for cloud and development of software application that runs the cloud and various services available from major cloud providers
C 404.4	Understand the security concerns and issues in cloud computing
C 404.5	Acquire the knowledge of advances in cloud computing.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C 404.1	3	2	1	1	2	1			1		1
C 404.2	3	2	1	1	2	1			1		1
C 404.3	3	2	3	2	3	1			2		2
C 404.4	3	2	1	2	1	3			1		1
C 404.5	2	2	1	3	2	1			1		1
<b>Average</b>	<b>2.8</b>	<b>2</b>	<b>1.5</b>								

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C 404.1	3	2	1
C 404.2	3	2	1
C 404.3	3	3	1
C 404.4	2	2	1
C 404.5	2	2	3
<b>Average</b>			

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CMR Technical Campus

Kandlakoya (V), Medchal Road, Hyderabad, Telangana - 501 401

Ph.No: 9247033440/41: www.cmrtc.ac.in: info@cmrtc.ac.in

Kandlakoya (V), Medchal Road,  
Hyderabad, Telangana - 501 401

**Department of CSE [Data Science]**

Code405 Coordinator Name :

Course: ELECTRONIC SENSORS (OE - II)

Items	Course Outcomes
C405.1	Describe sensor Principle, Classification and Characterization.
C405.2	Explore the working of Electro mechanical, Thermal Sensors
C405.3	Design a Magnetic sensors
C405.4	Use a system with sensors.
C405.5	Analyse the basic concepts of Smart Sensors.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Programme Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C405.1	3	2	-	-	-	-	-	-	-	-	-
C405.2	3	2	-	-	-	-	-	-	-	-	2
C405.3	3	3	3	2	2	-	-	-	-	-	2
C405.4	3	3	2	2	3	-	2	-	-	-	2
C405.5	2	3	2	2	2	-	2	-	-	-	2
Average	2.8	2.6	2.33	2.0	2.33	-	2.0	-	-	-	2.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C405.1	3	-	-
C405.2	3	-	-
C405.3	3	3	-
C405.4	3	3	-
C405.5	2	2	2
Average	2.8	2.66	2.0

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**Department of CSE [Data Science]**

Code: C406 Coordinator Name :

Course: PREDICTIVE ANALYTICS LAB

Items	Course Outcomes
C 406.1	Understand the processing steps for predictive analytics
C 406.2	Construct and deploy prediction models with integrity
C 406.3	Explore various techniques (machine learning/data mining, ensemble) for predictive analytics.
C 406.4	Apply predictive analytics to real world examples.

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Programme Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C 406.1	3	2	1	2	2	1	0	0	1	0	0
C 406.2	3	3	3	3	3	3	0	0	2	0	3
C 406.3	3	3	2	3	3	2	0	0	1	0	1
C 406.4	3	2	3	2	3	2	0	0	2	0	2
Average											

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C 406.1	3	2	1
C 406.2	3	3	1
C 406.3	3	2	2
C 406.4	3	2	1
Average	3		

  
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**Department of CSE [Data Science]**

Code:C407 Coordinator Name : Course : WEB AND SOCIAL MEDIA ANALYTICS LAB

Items	Course Outcomes
C 407.1	Knowledge on decision support systems.
C 407.2	Apply natural language processing concepts on text analytics.
C 407.3	Understand sentiment analysis.
C 407.4	Knowledge on search engine optimization and web analytics.

**Correlation between Course Outcomes (COs)and Program Outcomes (POs):**

CO'S	Programme Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C 407.1	3	3	2	2	2	1	0	0	1	0	1
C 407.2	3	3	3	2	3	1	0	0	2	0	2
C 407.3	3	3	2	3	3	1	0	0	2	0	1
C 407.4	3	2	2	2	3	1	0	0	2	0	1
<b>Average</b>											

**Correlation between Outcomes (COs)and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C 407.1	2	2	1
C 407.2	3	2	1
C 407.3	3	1	2
C 407.4	2	2	1
<b>Average</b>			

  
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**Department of CSE [Data Science]**

Code:C408

Course Coordinator Name :

COURSE: PROJECT STAGE - I

Items	Course Outcomes
C408.1	Identify a real-time problem and its objectives.
C408.2	Analyze relevant literature for identify research gaps
C408.3	Apply appropriate design and modeling techniques for problem-solving.
C408.4	Demonstrate effective presentation skills and meaningful contribution to the project work.
C408.5	Justify and defend the project effectively in viva.

**Correlation between Course Outcomes (COs)and Program Outcomes (POs):**

CO'S	Programme Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C408.1	3	3	2	2	2	2	2		-	-	2
C408.2	3	3	2	3		-	-		-	-	2
C408.3	3	2	3	2	3	2	2	2	-	2	2
C408.4	2	2	-	-		-	2	3	3	2	2
C408.5	2	2	-	-	-	-	2	3	3	2	2
Average	2.6	2.4	2.33	2.33	2.5	2.0	2.0	2.66	3.0	2.0	2.0

**Correlation between Outcomes (COs)and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C408.1	3	2	2
C408.2	3	2	2
C408.3	3	3	2
C408.4	2	2	3
C408.5	2	2	3
Average	2.6	2.2	2.4

  
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Department of CSE (Data Science)  
CMR Technical Campus  
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**Department of CSE [Data Science]**

Code:C409      Coordinator Name :      Course: ORGANIZATIONAL BEHAVIOUR

Items	Course Outcomes
C 409.1	Understand their personality, perception and attitudes for overall development and further learn the importance of group behaviour in the organizations.
C 409.2	Analyse and apply key concepts of organizational behaviours, including personality
C 409.3	Understand leadership qualities and group formation.
C 409.4	Understand Behaviour performance management
C 409.5	Learn how to manage the stress in work environment

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C 409.1	3	2	2	2	-	3	-	-	-	-	2
C 409.2	2	2	3	2	-	3	-	-	-	-	2
C 409.3	2	2	2	3	-	3	2	3	2	3	-
C 409.4	2	2	3	2	-	3	2	3	2	-	-
C 409.5	2	3	2	2	-	3	-	2	2	2	2
Average	2.2	2.2	2.4	2.2	-	3.0	2.0	2.66	2.0	2.5	2

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C 409.1	3	-	-
C 409.2	-	2	3
C 409.3	2	-	-
C 409.4	-	2	3
C 409.5	-	-	-
Average	2.5	2	3.0

  
Course Coordinator

  
Module Coordinator

  
HOD CSE (DS)  
Department of CSE (Data Science)  
CMR Technical Campus

**Department of CSE [Data Science]**

**Code: C410    Coordinator Name :                      Course: DATA STREAM MINING**

Items	Course Outcomes
C 410.1	Understand how to formulate a knowledge extraction problem from data streams.
C 410.2	Apply methods / algorithms to new data stream analysis problems.
C 410.3	Evaluate the results and understand the functioning of the methods studied.
C 410.4	Understand Anomaly Detection in network stream
C 410.5	Understand Time Series in Anomaly Detection

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C 410.1	1	3	2	2	1						
C 410.2	1	2	3	2	1						
C 410.3	1	2	3	2	1						
C 410.4	2	2	2	1							
C 410.5	1	2	3	2	1						
<b>Average</b>											

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C 410.1	3	2	2
C 410.2	2	3	2
C 410.3	2	2	2
C 410.4	2	2	1
C 410.5	2	3	2
<b>Average</b>			

  
**Course Coordinator**

  
**Module Coordinator**

  
**Head of Department (HOD CSE (DS))**  
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CMR Technical Campus

**Department of CSE [Data Science]**

Code:C411

Course Coordinator Name :

Course: DEVOPS

Items	Course Outcomes
C411.1	Explore various components of Devops environment.
C411.2	Identify Software development models and architectures of DevOps
C411.3	Apply different project management models
C411.4	Investigate DevOps integration models and adopt collaborative practices in real-time projects..
C411.5	Assess various Devops practices, testing and code deployment tools

**Correlation between Course Outcomes (COs)and Program Outcomes (POs):**

CO'S	Program Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C411.1	3	2	-	-	2	-	-	-	-	-	-
C411.2	3	3	2	-	2	-	-	-	-	-	-
C411.3	2	2	3	-	2	-	-	-	-	3	-
C411.4	2	3	3	2	3	-	-	3	2	2	2
C411.5	2	2	2	2	3	-	-	-	-	-	2
Average	2.4	2.4	2.5	2.0	2.4	-	-	3.0	2.0	2.5	2.0

**Correlation between Outcomes (COs)and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C411.1	3	2	-
C411.2	3	2	-
C411.3	2	2	-
C411.4	2	3	2
C411.5	2	3	2
Average	2.4	2.4	2.0

  
Course Coordinator

  
Module Coordinator

  
HOD CSE (DS)  
Head

Department of CSE (Data Science)  
CMR Technical Campus  
Kandlakoya (V), Medchal Road,  
Hyderabad, Telangana - 501 401.

**Department of CSE [Data Science]**

Code:C412

Coordinator Name :

Course: Project Stage – II including Seminar

Items	Course Outcomes
C412.1	Apply analytical and numerical techniques to model and solve engineering problems.
C412.2	Design experimental setups and execute the project using tools and methods.
C412.3	Interpret results, extract key findings, and demonstrate technical depth and contribution.
C412.4	Compile and structure a comprehensive project report
C412.5	Demonstrate and defend the project effectively .

**Correlation between Course Outcomes (COs) and Program Outcomes (POs):**


CO'S	Programme Outcome (POs)										
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C412.1	3	3	2	2	2	-	-	2	-	-	2
C412.2	3	3	3	2	3	2	2	2	3	3	2
C412.3	3	3	3	3	2	2	2	3	-	3	2
C412.4	-	-	-	-	-	-	-	3	-	-	-
C412.5			-	-	-	-	2	3	2	-	2
Average	3.0	3.0	2.66	2.33	2.33	2.0	2.0	2.6	2.5	3.0	2.0

**Correlation between Outcomes (COs) and Program Specific Outcomes (PSOs):**

CO'S	Program Specific Outcomes		
	PSO1	PSO2	PSO3
C412.1	3	2	2
C412.2	3	3	2
C412.3	3	3	2
C412.4	2	2	3
C412.5	2	2	3
Average	2.6	2.4	2.4

  
Course Coordinator

  
Module Coordinator

  
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