GNANAMANI COLLEGE OF TECHNOLOGY

Department of Computer Science and Engineering

Course Outcomes (COs)

(Document included course outcomes of all courses from each semester of study)

Regulation: ***2021***

Year/ SEM	Course	Course Outcomes	
I / I	C101 - PROFESSIONAL ENGLISH - I	C101.1	To **listen** and **comprehend** complex academic texts
		C101.2	To **read** and **infer** the denotative and connotative meanings of technical texts
		C101.3	To **write** definitions, descriptions, narrations and essays on various topics
		C101.4	To **speak** fluently and accurately in formal and informal communicative contexts
		C101.5	To **express** their opinions effectively in both oral and written medium of communication
I / I	C102 - MATRICES AND CALCULUS	C102.1	**Apply** the matrix algebra techniques for engineers
		C102.2	**Summaries** the basic explanation of limit functions
		C102.3	**Apply** the differentiation rules in Euler's theorem
		C102.4	**Apply** the Definite and Infinite integrals in Rational functions
		C102.5	**Examine** in the change of order of integration in Cartesian
I / I	C103 - ENGINEERING PHYSICS	C103.1	**Understand** the motion of object in different frame of references
		C103.2	**Analyze** the electromagnetic waves
		C103.3	**Identify** the applications of oscillations, optics and lasers.
		C103.4	**Apply** quantum mechanics to basic physical problems
		C103.5	**Apply** the concept of quantum theory and mechanics in real time applications

Year/ SEM	Course	Course Outcomes	
I / I	C104 - ENGINEERING CHEMISTRY	C104.1	**Identify** the hardness of water and suitable methods to soften.
		C104.2	**Explain** the concepts of nano technology, preparation, properties of various nano particles and its applications.
		C104.3	**Illustrate** the phase transitions of various components systems and composites.
		C104.4	**Analyze** the combustion mechanisms of various fuels.
		C104.5	**Explain** some of different energy sources and storage devices.
I / I	C105 -PROBLEM SOLVING AND PYTHON PROGRAMMING	C105.1	**Develop** algorithmic solutions to simple computational problems.
		C105.2	**Demonstrate** programs using simple Python statements and expressions.
		C105.3	**Develop** the control flow and functions concept in Python for solving problems.
		C105.4	**Implement** the Python data structures – lists, tuples & dictionaries for representing compound data.
		C105.5	**Construct** the files, exception, modules and packages in Python for solving problems.
I / I	C106- PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY	C106.1	**Test** and debug the simple python programs
		C106.2	**Develop** the python programs with conditionals and looping
		C106.3	**Develop** the python programs step-wise by defining functions and calling them
		C106.4	**Build** Python list, tuples, dictionaries for representing compound data
		C106.5	**Build** the data from/to files in python.

Year/ SEM	Course	Course Outcomes	
I / I	C107 - PHYSICS AND CHEMISTRY LABORATORY	C107.1	**Examine** the rigidity and young's modulus of the materials.
		C107.2	**Determine** the thickness of a thin sheet using air wedge
		C107.3	**Determine** the compressibility of liquid and wavelength of a laser.
		C107.4	**Analyze** the water quality parameters
		C107.5	**Measure** the pH and conductance of a given sample
I / II	C108 - PROFESSIONAL ENGLISH - II	C108.1	To **compare** and **contrast** products and ideas in technical texts.
		C108.2	To **identify** cause and effects in events, industrial processes through technical texts
		C108.3	To **analyze** problems in order to arrive at feasible solutions and communicate them orally and in the written format.
		C108.4	To **report** events and the processes of technical and industrial nature.
		C108.5	To **present** their opinions in a planned and logical manner, and draft effective resumes in context of job search
I / II	C109 - STATISTICS AND NUMERICAL METHODS	C109.1	**Identify** small, large samples and apply testing of hypothesis.
		C109.2	**Apply** ANOVA test to design of experiments.
		C109.3	**Determine** the solution of algebraic and transcendental system of linear Equations.
		C109.4	To **interpolate** the values of unknown functions using Newton's Formula.
		C109.5	**Estimate** the numerical values of the derivatives and integrals of unknown function difference Equations.

Year/SEM	Course	Course Outcomes	
I / II	C110 - PHYSICS FOR INFORMATION SCIENCE	C110.1	**Classify** the materials based on classical and quantum electron theory
		C110.2	**Explain** the basics of semiconductor Physics and its applications.
		C110.3	**List** out the various magnetic and dielectric properties of materials.
		C110.4	**Explain** the function of optical materials for optoelectronics.
		C110.5	**Identify** the fundamental concepts of quantum structures and their applications
I / II	C111- BASIC CIVIL AND MECHANICAL ENGINEERING	C111.1	**Compare** the scope and overview of the mechanical and civil engineering.
		C111.2	**Discuss** the various surveying for various construction areas and various construction materials.
		C111.3	**Build** a various civil engineering structures and foundations.
		C111.4	**Design** and classify the internal combustion engine, power plant and pumps.
		C111.5	**Design** and compare the working principle of refrigeration and air-conditioning system.
I / II	C112 - ENGINEERING GRAPHICS	C112.1	**Construct** the conic curves, involutes and cycloid.
		C112.2	**Develop** projection of Points, lines, plane surfaces
		C112.3	**Construct** the projection of solids with various conditions and Free hand sketching.
		C112.4	**Draw** the Section of solids and development of surfaces
		C112.5	**Draw** the isometric and perspective projections of simple solids.

Year/ SEM	Course	Course Outcomes	
I / II	C113 – PROGRAMMING IN C	C113.1	**Demonstrate** knowledge on C Programming constructs
		C113.2	**Develop** simple applications in C using basic constructs
		C113.3	**Design** and implement applications using arrays and strings
		C113.4	**Develop** and implement modular applications in C using functions
		C113.5	**Develop** applications in C using structures and pointers.
I / II	C114 -ENGINEERING PRACTICES LABORATORY	C114.1	**Analyze** and construct the electrical wiring
		C114.2	**Analyze** the different Electrical quantities with measuring equipment's
		C114.3	**Apply** the concept of electronic components and design logic circuits under study state.
		C114.4	**Design** and generate the clock signal.
		C114.5	**Apply** the concept of soldering and design the rectifiers.
I / II	C115 –PROGRAMMING IN C LABORATORY	C115.1	**Demonstrate** knowledge on C programming constructs.
		C115.2	**Develop** programs in C using basic constructs.
		C115.3	**Develop** programs in C using arrays.
		C115.4	**Develop** applications in C using strings, pointers, functions.
		C115.5	**Develop** applications in C using structures.

Year/ SEM	Course	Course Outcomes	
I / II	C116 – COMMUNICATION LABORATORY	C116.1	**Apply** the Listen and Respond to everyday topics with reasonable accuracy
		C116.2	**Outline** to Introduce themselves and their friends and **Take part** effectively in informal conversations in English.
		C116.3	**Develop** conversations and short talks in English.
		C116.4	**Make** use of effective presentations and **Participate** in GD.
		C116.5	**Develop** confidently and appropriately in conversations both formal and informal.
II / III	C201- DISCRETE MATHEMATICS	C201.1	Have knowledge of the concepts needed to test the logic of a program.
		C201.2	Have an **understanding** in identifying structures on many levels.
		C201.3	Be aware of a class of functions which transform a finite set into another finite set which relates to input and output functions in computer science.
		C201.4	Be aware of the counting principles.
		C201.5	Be exposed to concepts and properties of algebraic structures such as groups, rings and fields.
II / III	C202 - DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION	C202.1	**Design** various combinational digital circuits using logic gates
		C202.2	**Design** sequential circuits and analyze the design procedures
		C202.3	**State** the fundamentals of computer systems and analyze the execution of an instruction
		C202.4	**Analyze** different types of control design and identify hazards
		C202.5	**Identify** the characteristics of various memory systems and I/O communication

Year/SEM	Course	Course Outcomes	
II / III	C203- FOUNDATIONS OF DATA SCIENCE	C203.1	**Define** the data science process
		C203.2	**Understand** different types of data description for data science process
		C203.3	Gain **knowledge** on relationships between data
		C203.4	**Use** the Python Libraries for Data Wrangling
		C203.5	**Apply** visualization Libraries in Python to interpret and explore data
II / III	C204 - DATA STRUCTURES	C204.1	**Define** linear and non-linear data structures.
		C204.2	**Implement** linear and non–linear data structure operations.
		C204.3	**Use** appropriate linear/non–linear data structure operations for solving a given problem.
		C204.4	**Apply** appropriate graph algorithms for graph applications.
		C204.5	**Analyze** the various searching and sorting algorithms.
II / III	C205- OBJECT ORIENTED PROGRAMMING	C205.1	**Apply** the concepts of classes and objects to solve simple problems
		C205.2	**Develop** programs using inheritance, packages and interfaces
		C205.3	Make **use** of exception handling mechanisms and multithreaded model to solve real world problems
		C205.4	**Build** Java applications with I/O packages, string classes, Collections and generics concepts
		C205.5	Integrate the **concepts** of event handling and JavaFX components and controls for developing GUI based applications

Year/SEM	Course	Course Outcomes	
II / III	C206- DATA STRUCTURES LABORATORY	C206.1	**Implement** Linear data structure algorithms.
		C206.2	**Implement** applications using Stacks and Linked lists
		C206.3	**Implement** Binary Search tree and AVL tree operations.
		C206.4	**Implement** graph algorithms.
		C206.5	**Analyze** the various searching and sorting algorithms.
II / III	C207- OBJECT ORIENTED PROGRAMMING LABORATORY	C207.1	**Design** and develop java programs using object oriented programming concepts
		C207.2	**Develop** simple applications using object oriented concepts such as package, exceptions
		C207.3	**Implement** multithreading, and generics concepts
		C207.4	**Create** GUIs and event driven programming applications for real world problems
		C207.5	**Implement** and deploy web applications using Java
II / III	C208- DATA SCIENCE LABORATORY	C208.1	Make use of the python libraries for data science
		C208.2	Make use of the basic Statistical and Probability measures for data science.
		C208.3	Perform descriptive analytics on the benchmark data sets.
		C208.4	Perform correlation and regression analytics on standard data sets
		C208.5	Present and interpret data using visualization packages in Python.

Year/SEM	Course	Course Outcomes	
II / III	C209- PROFESSIONAL DEVELOPMENT	C209.1	**Use** MS Word to create quality documents, by structuring and organizing content for their day to day technical and academic requirements
		C209.2	**Use** MS EXCEL to perform data operations and analytics, record, retrieve data as per requirements and visualize data for ease of understanding
		C209.3	**Use** MS PowerPoint to create high quality academic presentations by including common tables, charts, graphs, interlinking other elements, and using media objects.
		C209.4	Cultivate intercultural communication skills, to guide students in making appropriate and responsible decisions, to develop leadership traits and soft skills and to create a desire to fulfill individual goals and team goals.
		C209.5	Help the learners acquire listening and speaking skills through lab based activities, and enable them to introduce themselves and make effective presentations.

GNANAMANI COLLEGE OF TECHNOLOGY

Department of Computer Science and Engineering

CO-PO matrices (Semester from 1st to 8th semester) (05)

Regulation: ***2021***

Gnanamani College of Technology

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Year/SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I / I	C101 - PROFESSIONAL ENGLISH - I	C101.1	-	-	-	-	-	-	-	-	-	3	-	3	-	-
		C101.2	-	-	-	-	-	-	-	-	3	3	-	3	-	-
		C101.3	-	-	-	-	-	-	-	-	-	3	-	2	-	-
		C101.4	-	-	-	-	-	-	-	-	-	3	-	3	-	-
		C101.5	-	-	-	-	-	-	-	-	-	3	-	3	-	-
		C101	-	-	-	-	-	-	-	-	3	3	-	3	-	-
I / I	C102 - MATRICES AND CALCULUS	C102.1	3	3	3	-	-	-	-	-	-	-	-	3	3	3
		C102.2	3	3	-	-	-	-	-	-	-	-	-	3	3	3
		C102.3	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C102.4	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C102.5	3	3	1	2	-	-	-	-	-	-	-	3	3	3
		C102	**3**	**3**	**2**	**1**	-	-	-	-	-	-	-	**3**	**3**	**3**
I / I	C103 – ENGINEERING PHYSICS	C103.1	3	3	-	-	-	-	-	-	-	-	-	2	3	2
		C103.2	3	3	-	-	-	-	-	-	-	-	-	2	3	2
		C103.3	3	3	2	-	-	-	-	-	-	-	-	3	3	2
		C103.4	3	3	2	-	-	-	-	-	-	-	-	3	3	2
		C103.5	3	3	2	-	-	-	-	-	-	-	-	2	3	2
		C103	**3**	**3**	**2**	-	-	-	-	-	-	-	-	**2**	**3**	**2**

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Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I / I	C104 - ENGINEERING CHEMISTRY	C104.1	3	3	1	-	-	1	1	1	-	-	-	2	1	-
		C104.2	3	3	0	-	1	1	1	-	-	-	-	2	-	-
		C104.3	3	3	0	-	-	-	-	-	-	-	-	2	-	-
		C104.4	3	3	0	-	-	1	1	-	-	-	-	2	-	-
		C104.5	3	3	0	-	-	1	1	-	-	-	-	2	-	-
		C104	**3**	**3**	**0.2**	**-**	**0.2**	**0.8**	**0.8**	**0.2**	**-**	**-**	**-**	**2**	**0.2**	**-**
I / I	C105- PROBLEM SOLVING AND PYTHON PROGRAMMING	C105.1	3	3	3	-	0	1	-	-	-	-	-	2	-	2
		C105.2	3	3	3	-	2	1	-	-	-	-	-	2	-	2
		C105.3	3	3	2	-	2	2	-	-	-	-	-	3	-	-
		C105.4	3	3	3	-	2	2	-	-	-	-	-	3	-	-
		C105.5	3	3	3	-	2	2	-	-	-	-	-	3	-	-
		C105	**3**	**3**	**2.8**	**-**	**2**	**1.6**	**-**	**-**	**-**	**-**	**-**	**2.6**	**-**	**2**
I / I	C106 – PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY	C106.1	3	3	3	-	3	1	-	3	3	3	-	1	-	2
		C106.2	3	3	3	-	3	1	-	2	2	3	-	2	-	2
		C106.3	3	3	3	-	3	1	-	2	3	1	-	3	-	2
		C106.4	3	2	3	-	2	1	-	3	3	2	-	3	-	-
		C106.5	3	2	2	1	2	1	-	3	2	3	-	2	-	-
		C106	**3**	**2.6**	**2.8**	**1**	**2.6**	**1**	**-**	**2.6**	**2.6**	**2.4**	**-**	**2.2**	**-**	**2**

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Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I / I	C107 - PHYSICS AND CHEMISTRY LABORATORY	C107.1	3	3	-	-	-	-	-	2	3	-	-	2	-	-
		C107.2	3	3	-	-	-	-	-	2	3	-	-	2	-	-
		C107.3	3	3	-	-	-	-	-	2	3	-	-	2	-	-
		C107.4	3	3	-	-	-	2	-	2	3	-	-	2	-	-
		C107.5	3	3	-	-	-	2	-	2	3	-	-	2	-	-
		C107	**3**	**3**	**-**	**-**	**-**	**2**	**-**	**2**	**3**	**-**	**-**	**2**	**-**	**-**
I / I	C108 – PROFESSIONAL ENGLISH - II	C108.1	-	-	-	-	-	-	-	-	2	3	-	2	-	-
		C108.2	-	-	-	-	-	-	-	-	2	3	-	2	-	-
		C108.3	-	-	-	-	-	-	-	-	2	3	-	2	-	-
		C108.4	-	-	-	-	-	-	-	-	2	3	-	2	-	-
		C108.5	-	-	-	-	-	-	-	-	2	3	-	2	-	-
		C108	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**3**	**-**	**2**	**-**	**-**
I / II	C109 - STATISTICS AND NUMERICAL METHODS	C109.1	3	3	2	2	-	2	-	-	-	2	3	2	3	3
		C109.2	3	3	3	-	2	-	-	-	-	2	2	2	3	3
		C109.3	3	2	-	-	-	-	2	-	-	-	2	-	3	3
		C109.4	3	3	-	-	-	-	-	-	-	-	-	-	3	3
		C109.5	2	3	-	2	2	-	-	-	2	-	3	1	2	2
		C109	**3**	**3**	**3**	**2**	**2**	**2**	**2**	**-**	**2**	**2**	**3**	**2**	**3**	**3**

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Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I / I	C110 - PHYSICS FOR INFORMATION SCIENCE	C110.1	3	3	-	-	-	-	-	-	-	-	-	3	2	2
		C110.2	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C110.3	3	2	2	3	-	-	-	-	-	-	-	3	2	2
		C110.4	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		C110.5	3	3	-	2	-	-	-	-	-	-	-	3	2	2
		C110	**3.00**	**2.80**	**2.33**	**2.33**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**3.00**	**2.00**	**2.00**
I / I	C111- BASIC CIVIL AND MECHANICAL ENGINEERING	C111.1	3	3	3	-	3	3	-	2	-	3	-	-	-	-
		C111.2	3	3	3	-	3	3	3	-	-	-	-	3	-	-
		C111.3	3	3	3	2	3	3	3	2	-	-	-	-	-	-
		C111.4	3	3	3	2	3	3	3	2	-	3	-	-	-	-
		C111.5	3	3	3	-	3	3	-	-	-	-	-	-	-	-
		C111	**3**	**3**	**3**	**2**	**3**	**3**	**3**	**2**	**-**	**3**	**-**	**3**	**-**	**-**
I / II	C112 - ENGINEERING GRAPHICS	C112.1	3	-	-	-	2	-	-	-	-	3	-	3	-	2
		C112.2	3	-	-	-	2	-	-	-	-	3	-	3	-	2
		C112.3	3	-	-	-	2	-	-	-	-	3	-	3	-	2
		C112.4	3	-	-	-	2	-	-	-	-	3	-	3	-	2
		C112.5	3	-	-	-	2	-	-	-	-	3	-	3	-	2
		C112	**3**	**-**	**-**	**-**	**2**	**-**	**-**	**-**	**-**	**3**	**-**	**3**	**-**	**2**

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Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I / I	C113 – PROGRAMMING IN C	C113.1	3	3	3	-	-	-	-	3	2	3	-	2	3	3
		C113.2	3	3	3	-	-	-	-	2	2	2	-	3	3	3
		C113.3	3	3	3	-	-	-	-	2	2	2	-	3	3	3
		C113.4	3	3	3	-	-	-	-	2	2	3	-	3	3	3
		C113.5	3	3	3	-	-	-	-	2	2	3	-	3	3	3
		C113	**3.00**	**3.00**	**3.00**	**-**	**-**	**-**	**-**	**2.20**	**2.00**	**2.60**	**-**	**2.80**	**3.00**	**3.00**
I / I	C114 – ENGINEERING PRACTICES LABORATORY	C114.1	3	3	-	-	-	-	3	-	-	-	3	3	3	2
		C114.2	3	3	2	-	-	-	3	-	-	-	3	3	3	1
		C114.3	-	-	2	-	-	-	3	-	-	-	3	3	3	1
		C114.4	3	2	3	2	2	-	-	-	-	2	3	3	3	1
		C114.5	3	3	3	-	-	3	3	-	3	-	3	3	3	2
		C114	**3.00**	**2.75**	**2.50**	**2.00**	**2.00**	**3.00**	**3.00**	**-**	**3.00**	**2.00**	**3.00**	**3.00**	**3.00**	**1.40**
I / II	C115 – PROGRAMMING IN C LABORATORY	C115.1	3	3	3	-	-	-	-	3	2	3	-	2	3	3
		C115.2	3	3	3	-	-	-	-	3	2	3	-	3	2	3
		C115.3	3	3	3	-	-	-	-	3	2	3	-	3	2	3
		C115.4	3	3	2	-	-	-	-	2	2	2	-	3	3	2
		C115.5	3	3	3	-	-	-	-	3	2	3	-	3	3	3
		C115	**3.00**	**3.00**	**2.80**	**-**	**-**	**-**	**-**	**2.80**	**2.00**	**2.80**	**-**	**2.80**	**2.60**	**2.80**

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Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I / II	C116 – COMMUNICATION LABORATORY	C116.1	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C116.2	-	-	-	-	-	-	-	-	2	3	-	2	2	3
		C116.3	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C116.4	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C116.5	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C116	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2.00**	**3.00**	**-**	**2.00**	**2.80**	**3.00**
II / III	C201- DISCRETE MATHEMATICS	**C201.1**	3	3	-	-	-	-	-	-	-	-	-	3	2	2
		C201.2	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C201.3	3	2	2	3	-	-	-	-	-	-	-	3	2	2
		C201.4	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		C201.5	3	3	-	2	-	-	-	-	-	-	-	3	2	2
		C201	**3.00**	**2.80**	**2.33**	**2.33**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**3.00**	**2.00**	**2.00**
II / III	C202 - DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION	**C202.1**	3	2	1	1	2	-	-	-	1	1	2	1	2	2
		C202.2	2	2	1	2	2	-	-	-	1	1	1	2	2	2
		C202.3	2	1	-	1	1	-	-	-	2	1	1	2	2	3
		C202.4	2	2	-	2	2	1	1	-	1	2	1	3	2	2
		C202.5	3	2	-	1	2	-	-	-	1	1	2	2	3	3
		C202	**2**	**2**	**1**	**1**	**2**	**1**	**1**	**-**	**1**	**1**	**1**	**2**	**2**	**2**

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Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
II / III	C203- FOUNDATIONS OF DATA SCIENCE	C203.1	2	2	1	2	2	-	-	-	1	1	1	2	2	2
		C203.2	2	1	-	1	1	-	-	-	2	1	1	2	2	3
		C203.3	2	2	1	2	2	1	1	-	1	2	1	3	2	2
		C203.4	3	2	2	1	2	-	-	-	1	1	2	2	3	3
		C203.5	2	2	1	2	2	-	-	-	1	1	1	2	2	2
		C203	**2**	**2**	**1**	**2**	**2**	**1**	**1**	**-**	**1**	**1**	**1**	**2**	**2**	**2**
II / III	C204 - DATA STRUCTURES	C204.1	2	3	1	2	2	1	1	-	1	2	1	3	2	1
		C204.2	1	2	1	2	2	-	-	-	1	1	1	2	2	2
		C204.3	2	3	1	2	3	-	-	-	1	1	1	2	2	1
		C204.4	2	1	-	1	1	-	-	-	2	1	1	2	2	3
		C204.5	1	2	1	2	2	1	1	-	1	2	1	3	2	2
		C204	**2**	**2**	**1**	**2**	**2**	**1**	**1**	**-**	**1**	**1**	**1**	**2**	**2**	**2**
II / III	C205- OBJECT ORIENTED PROGRAMMING	C205.1	1	1	3	1	3	-	-	-	3	2	2	2	3	1
		C205.2	2	1	3	2	1	-	-	-	2	1	1	3	3	3
		C205.3	3	3	1	2	2	-	-	-	3	2	1	2	3	3
		C205.4	3	1	2	2	2	-	-	-	1	2	1	3	3	1
		C205.5	1	1	2	3	2	-	-	-	3	2	1	2	3	3
		C205	**2**	**1**	**2**	**2**	**2**	**-**	**-**	**-**	**2**	**2**	**1**	**2**	**3**	**2**
II / III	C206- DATA STRUCTURES LABORATORY	C206.1	1	2	2	1	-	-	-	-	2	1	2	2	2	2
		C206.2	3	3	1	1	-	-	-	-	1	1	1	3	1	2
		C206.3	2	1	3	1	-	-	-	-	1	1	2	3	3	3
		C206.4	3	1	3	3	-	-	-	-	1	2	3	3	2	1
		C206.5	3	2	1	1	2	-	-	-	3	3	3	1	3	1
		C206	**2**	**2**	**2**	**1**	**2**	**-**	**-**	**-**	**2**	**2**	**2**	**2**	**2**	**2**

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Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
II / III	C207- OBJECT ORIENTED PROGRAMMING LABORATORY	C207.1	2	1	2	1	-	-	-	-	1	2	2	2	1	2
		C207.2	2	1	3	1	-	-	-	-	2	3	3	2	1	3
		C207.3	2	2	1	2	1	-	-	-	1	2	1	3	2	3
		C207.4	2	2	1	3	-	-	-	-	3	1	1	1	2	1
		C207.5	1	3	3	1	3	-	-	-	1	1	1	1	2	1
		C207	**2**	**2**	**2**	**2**	**2**	**-**	**-**	**-**	**2**	**2**	**2**	**2**	**2**	**2**
II / III	C208- DATA SCIENCE LABORATORY	C208.1	3	2	1	1	-	-	-	-	1	3	3	3	1	3
		C208.2	3	2	2	3	1	-	-	-	3	1	3	2	1	3
		C208.3	3	2	1	3	1	-	-	-	2	1	1	1	3	2
		C208.4	2	3	1	3	-	-	-	-	2	3	2	3	3	3
		C208.5	1	2	3	1	1	-	-	-	2	1	3	1	1	3
		C208	**2**	**2**	**2**	**2**	**1**	**-**	**-**	**-**	**2**	**2**	**2**	**2**	**2**	**3**
II / III	C209- PROFESSIONAL DEVELOPMENT	C209.1	-	-	1	1	1	2	-	2	2	2	1	-	2	2
		C209.2	-	-	1	1	1	2	-	2	2	2	1	-	2	2
		C209.3	-	-	1	1	1	2	-	2	2	2	1	-	2	2
		C209.4	-	-	1	1	1	2	-	2	2	2	1	-	2	2
		C209.5	-	-	1	1	1	2	-	2	2	2	1	-	2	2
		C209	**-**	**-**	**1.00**	**1.00**	**1.00**	**2.00**	**-**	**2.00**	**2.00**	**2.00**	**1.00**	**-**	**2.00**	**2.00**