

## **GNANAMANI COLLEGE OF TECHNOLOGY**

Department of Computer Science and Engineering

### **3.1.1. Course Outcomes (COs)**

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

*Batch: 2017-2021*

*Regulation: 2017*

<b>Year/ SEM</b>	<b>Course</b>	<b>Course Outcomes</b>	
<b>I/I</b>	<b>C101 - COMMUNICATIVE ENGLISH</b>	C101.1	<b>Understand</b> articles of a general kind in magazines and newspapers.
		C101.2	<b>Take part in</b> effectively in informal conversations; introduce themselves and their friends and <b>express</b> opinions in English.
		C101.3	<b>Develop</b> conversations and short talks delivered in English.
		C101.4	<b>Create</b> short essays of a general kind, personal letters and emails in English.
		C101.5	<b>Classify</b> the tense forms for better understanding.
<b>I/I</b>	<b>C102 - ENGINEERING MATHEMATICS</b>	C102.1	<b>Summarize</b> the basic explanation of limit function , continuity and derivatives.
		C102.2	<b>Apply</b> the differentiation rules in Euler's theorem, Total derivatives and Jacobian.
		C102.3	<b>Solve</b> integration of rational functions and irrational functions using the definite and indefinite integrals
		C102.4	<b>Examine</b> the change of order of integration and double integrals in polar co-ordinates.
		C102.5	<b>Solve</b> the higher order linear differential equation with constant co-efficients.
<b>I/I</b>	<b>C103 - ENGINEERING PHYSICS</b>	C103.1	<b>Outline</b> the properties of materials and its applications
		C103.2	<b>Develop</b> knowledge on concept of waves and optical devices
		C103.3	<b>Explain</b> the thermal conductivity of a materials to apply in industry
		C103.4	<b>Utilize</b> the basic concepts of quantum theory in electron microscopes.
		C103.5	<b>Compare</b> the structures of crystals and different crystal growth techniques

<b>Year/S EM</b>	<b>Course</b>	<b>Course Outcomes</b>	
<b>I/I</b>	<b>C104 - ENGINEERING CHEMISTRY</b>	<b>C104.1</b>	<b>Identify</b> the hardness of water and suitable methods to soften.
		<b>C104.2</b>	<b>Explain</b> the concepts of adsorption, catalysis of various substances and its applications.
		<b>C104.3</b>	<b>Illustrate</b> the phase transitions of various components systems and alloys.
		<b>C104.4</b>	<b>Analyze</b> the combustion mechanisms of various fuels.
		<b>C104.5</b>	<b>Explain</b> different energy sources and storage devices.
<b>I/I</b>	<b>C105 - PROBLEM SOLVING AND PYTHON PROGRAMMING</b>	<b>C105.1</b>	<b>Develop</b> algorithmic solutions to simple computational problems.
		<b>C105.2</b>	<b>Demonstrate</b> programs using simple Python statements and expressions.
		<b>C105.3</b>	<b>Develop</b> the control flow and functions concept in Python for solving problems.
		<b>C105.4</b>	<b>Apply</b> the Python data structures in lists, tuples & dictionaries for representing compound data.
		<b>C105.5</b>	<b>Construct</b> the files, exception, modules and packages in Python for solving problems.
<b>I/I</b>	<b>C106 - ENGINEERING GRAPHICS</b>	<b>C106.1</b>	<b>Construct</b> free hand sketching of basic geometrical constructions and multiple views of objects.
		<b>C106.2</b>	<b>Compare</b> projection of points, lines and plane surfaces.
		<b>C106.3</b>	<b>Analyze</b> the projection of solids with various methods.
		<b>C106.4</b>	<b>Examine</b> the solids by cutting plane.
		<b>C106.5</b>	<b>Apply</b> isometric view of a solids and frustum objects and develop perspective views of simple solids.

<b>Year/ SEM</b>	<b>Course</b>	<b>Course Outcomes</b>	
<b>I/I</b>	<b>C107 - PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY</b>	C107.1	<b>Test</b> and debug the simple python programs
		C107.2	<b>Develop</b> the python programs with conditionals and loopings
		C107.3	<b>Develop</b> the python programs step-wise by defining functions and calling them
		C107.4	<b>Build</b> Python list, tuples, dictionaries for representing compound data
		C107.5	<b>Build</b> the data from/ to files in python
<b>I/I</b>	<b>C108 - PHYSICS AND CHEMISTRY LABORATORY</b>	C108.1	<b>Examine</b> the rigidity and young's modulus of the materials
		C108.2	<b>Experiment with</b> thermal conductivity of material
		C108.3	<b>Determine</b> the compressibility of liquid and wavelength of a spectrum
		C108.4	<b>Analyze</b> the water quality parameters
		C108.5	<b>Measure</b> the pH and conductance of a given sample
<b>I/II</b>	<b>C109 - TECHNICAL ENGLISH</b>	C109.1	<b>Explain</b> technical texts and illustrate area-specific texts effortlessly.
		C109.2	<b>Illustrate</b> charts in their area of specialization successfully.
		C109.3	<b>Explain</b> and <b>describe</b> process in varied formal and informal contexts.
		C109.4	<b>Develop</b> reports, winning job applications and analytical essays.
		C109.5	<b>Build</b> technical presentations and prepare a report effectively.

Year/SEM	Course	Course Outcomes	
I / II	<b>C110 - ENGINEERING MATHEMATICS - II</b>	C110.1	<b>Apply</b> the matrix algebra techniques for engineers.
		C110.2	<b>Explain</b> the Gradient , divergence and curl of a vector point function and related identities
		C110.3	<b>Apply</b> the line , surface and volume integrals using in Gauss , Stokes and Greens theorems
		C110.4	<b>Analyze</b> the function and conformal mapping in complex integration
		C110.5	<b>Solve</b> the Laplace transform in differential equation with constant coefficient
I / II	<b>C111 - PHYSICS FOR INFORMATION SCIENCE</b>	C111.1	<b>Classify</b> the materials based on classical and quantum electron theory
		C111.2	<b>Explain</b> the basics of semiconductor Physics and its applications.
		C111.3	<b>List</b> out the various magnetic and dielectric properties of materials.
		C111.4	<b>Explain</b> the function of optical materials for optoelectronics.
		C111.5	<b>Identify</b> the fundamental concepts of quantum structures and their applications
I / II	<b>C112 - BASIC ELECTRICAL, ELECTRONICS AND MEASUREMENT ENGINEERING</b>	C112.1	<b>Analyze</b> the essentials of electric circuits and analysis
		C112.2	<b>Classify</b> the basic operation of electric machines and transformers
		C112.3	<b>Apply</b> the renewable sources and common domestic loads using electrical power
		C112.4	<b>Apply</b> the diode , transistors and amplifiers using ADC and DAC
		C112.5	<b>Construct</b> the measurement and metering for electric circuits

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I / II	C113 - ENVIRONMENTAL SCIENCE AND ENGINEERING	C113.1	<b>Explain</b> the various ecosystem and biodiversity.
		C113.2	<b>Classify</b> the environmental pollution, problems and its control methods.
		C113.3	<b>Identify</b> the natural resources and the effects of its over-exploitation.
		C113.4	<b>List out</b> the fundamental social issues and sustainable development of public
		C113.5	<b>Illustrate</b> the population, environmental health issues and its awareness.
I / II	C114 - PROGRAMMING IN C	C114.1	<b>Develop</b> simple applications in c using basic construct
		C114.2	<b>Develop</b> the applications using arrays and strings
		C114.3	<b>Develop</b> and implement applications in C using functions and pointers
		C114.4	<b>Develop</b> applications in c using structures
		C114.5	<b>Develop</b> applications using sequential and random access file processing
I / II	C116 - ENGINEERING PRACTICES LABORATORY	C116.1	<b>Analyze</b> and construct the electrical wiring
		C116.2	<b>Analyze</b> the different Electrical quantities with measuring equipments
		C116.3	<b>Apply</b> the concept of electronic components and design logic circuits under study state.
		C116.4	<b>Design</b> and generate the clock signal.
		C116.5	<b>Apply</b> the concept of soldering and design the rectifiers.

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I / II	<b>C116 - PROGRAMMING IN CLABORATORY</b>	C116.1	<b>Develop</b> the program in C using basic constructs
		C116.2	<b>Develop</b> applications in C using strings, pointers, functions and structures
		C116.3	<b>Develop</b> the C Program for Paragraph perform using Built-in functions
		C116.4	<b>Develop</b> the applications in C using File Processing
		C116.5	<b>Design</b> the application using sequential , Recusion and Random access in C
II / III	<b>MA8351 - DISCRETE MATHEMATICS</b>	C201.1	<b>Identify</b> the propositional logic and predicates, quantifiers with rules of inference
		C201.2	<b>Solve</b> the recurrence relation by applying generating function
		C201.3	<b>Classify</b> the special types of graphs
		C201.4	<b>Analyze</b> the algebraic properties of groups, rings and fields.
		C201.5	<b>List</b> the different types of lattices and its property.
II / III	<b>CS8351 - DIGITAL PRINCIPLES AND SYSTEM DESIGN</b>	C202.1	<b>Analyze</b> the different methods used for simplification of Boolean expressions.
		C202.2	<b>Develop</b> the various types of combinational circuits and apply the HDL codes for the combinational circuits.
		C202.3	<b>Design</b> and implement the synchronous sequential circuits and apply the HDL codes for the sequential circuits.
		C202.4	<b>Design</b> and implement the asynchronous sequential circuits.
		C202.5	<b>Classify</b> the various types of memory devices.



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II / III	CS8391 - DATA STRUCTURES	C203.1	<b>Understand</b> the concepts of ADTs and applications of list in it
		C203.2	<b>Apply</b> the different linear data structures to problem solutions like stacks and queues
		C203.3	<b>Apply</b> the different non-linear data structures to problem solutions like trees and heaps
		C203.4	<b>Apply</b> the data structure concepts to represents the graph and its applications
		C203.5	<b>Analyze</b> the various algorithms like sorting , searching and hashing.
II / III	CS8392 - OBJECT ORIENTED PROGRAMMING	C204.1	<b>Develop</b> the java programs using OOPs principles
		C204.2	<b>Develop</b> java programs with the concepts of inheritance and interferences
		C204.3	<b>Build</b> java applications using exceptions and I/O streams
		C204.4	<b>Develop</b> java applications with threads , multithreads and generic classes
		C204.5	<b>Develop</b> interactive java programs using swings with event driven programming
II / III	EC8395 - COMMUNICATION ENGINEERING	C205.1	<b>Explain</b> articles of a general kind in magazines and newspapers.
		C205.2	<b>Take part</b> effectively in informal conversations; <b>introduce</b> themselves and their friends and express opinions in English.
		C205.3	<b>Develop</b> conversations and short talks in English.
		C205.4	<b>Create</b> short essays of a general kind, personal letters and emails in English.
		C205.5	<b>Classify</b> the tense forms for better understanding.

Year/SE M	Course	Course Outcomes	
II / III	<b>CS8381 - DATA STRUCTURES LABORATORY</b>	<b>C206.1</b>	<b>Develop</b> the data structures programs in linear and non-linear array like stack , queue and list ADTs
		<b>C206.2</b>	<b>Develop</b> program in data structures using linked list and its applications
		<b>C206.3</b>	<b>Create</b> the data structure programs in binary search trees and AVL trees
		<b>C206.4</b>	<b>Design</b> and implement the heaps using priority and graph traversal algorithms
		<b>C206.5</b>	<b>Design</b> and implement the searching and sorting algorithm with hashing techniques
II / III	<b>CS8383 - OBJECT ORIENTED PROGRAMMING LABORATORY</b>	<b>C207.1</b>	<b>Build</b> the software development skills using java programming for real-world applications
		<b>C207.2</b>	<b>Develop</b> and implement java programs for simple applications that's make use of classes , packages and interferences
		<b>C207.3</b>	<b>Develop</b> and implement java programs with aarraylist , exception handling and multithreading
		<b>C207.4</b>	<b>Design</b> the applications using file processing , generic programming and event handling
		<b>C207.5</b>	<b>Develop</b> a mini project for any applications using java concepts
II / III	<b>CS8382 - DIGITAL SYSTEMS LABORATORY</b>	<b>C208.1</b>	<b>Apply</b> Boolean simplification techniques to design combinational circuits.
		<b>C208.2</b>	<b>Analyze</b> , design and implement combinational logic circuits.
		<b>C208.3</b>	<b>Analyze</b> , design and implement sequential logic circuits.
		<b>C208.4</b>	<b>Design</b> and implement combinational and sequential circuits using HDL systems.
		<b>C208.5</b>	<b>Design</b> simple digital system.

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II / III	<b>HS8381 - INTERPERSONAL SKILLS/LISTENING AND SPEAKING</b>	<b>C209.1</b>	<b>Apply</b> the Listen and Respond to everyday topics with reasonable accuracy
		<b>C209.2</b>	<b>Outline</b> to Introduce themselves and their friends and <b>Take part</b> effectively in informal conversations in English.
		<b>C209.3</b>	<b>Develop</b> conversations and short talks in English.
		<b>C209.4</b>	<b>Make</b> use of effective presentations and <b>Participate</b> in GD.
		<b>C209.5</b>	<b>Develop</b> confidently and appropriately in conversations both formal and informal.
II / IV	<b>MA8402 - PROBABILITY AND QUEUING THEORY</b>	<b>C210.1</b>	<b>Develop</b> the skills in handling situation involving more than one Random variables and function of Random variables.
		<b>C210.2</b>	<b>Explain</b> and state the two dimensional Random variables distributions theorems.
		<b>C210.3</b>	<b>Find</b> and classify the real life problems with Markov process and Markov chains.
		<b>C210.4</b>	<b>Apply</b> queuing theory application in engineering technology.
		<b>C210.5</b>	<b>Apply</b> Non Markov an queues in open and closed queue network.
II / IV	<b>CS849 - COMPUTER ARCHITECTURE</b>	<b>C211.1</b>	<b>Explain</b> the basics structure of computer , operations and instructions
		<b>C211.2</b>	<b>Design</b> arithmetic and logic unit
		<b>C211.3</b>	<b>Explain</b> pipelined execution and design control unit
		<b>C211.4</b>	<b>Develop</b> the parallel processing architecture
		<b>C211.5</b>	<b>Classify</b> the various memory systems and I/O Cmmunications

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<b>II / IV</b>	<b>CS8492- DATA BASE MANAGEMENT SYSTEMS</b>	<b>C212.1</b>	<b>Classify</b> the modern and futuristic database applications based on size and complexity			
		<b>C212.2</b>	<b>Build</b> the ER model to relational model to perform database design effectively			
		<b>C212.3</b>	<b>Develop</b> the queries using normalization criteria and optimize queries			
		<b>C212.4</b>	<b>Compare</b> and contrast various indexing strategies in different database systems			
		<b>C212.5</b>	<b>Appraise</b> how advanced database differ from traditional database			
<b>II / IV</b>	<b>CS8451 - DESIGN AND ANALYSIS OF ALGORITHMS</b>	<b>C213.1</b>	<b>Design</b> algorithms for various computing problems			
		<b>C213.2</b>	<b>Analyze</b> the time and space complexity of algorithms			
		<b>C213.3</b>	<b>Analyze</b> Critically the different algorithm design techniques for a given problem			
		<b>C213.4</b>	<b>Compare</b> existing algorithms to improve efficiency			
		<b>C213.5</b>	<b>Design</b> the limitations of algorithmic power			
<b>II / IV</b>	<b>CS8493 - OPERATING SYSTEMS</b>	<b>C214.1</b>	<b>Classify</b> the basic concepts and functions of operating systems and its structures			
		<b>C214.2</b>	<b>Analyze</b> the various scheduling algorithms , processes and threads and also understand the deadlock, prevention and avoidance algorithms			
		<b>C214.3</b>	<b>Compare</b> and contrast the various memory management schemes with paging and segmentation along with virtual memory			
		<b>C214.4</b>	<b>Analyze</b> the I/O management, file systems structures and Directory structures			
		<b>C214.5</b>	<b>Build</b> the iOS and android operating systems with the administrative task on Linux servers			

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II / IV	<b>CS8494 - SOFTWARE ENGINEERING</b>	<b>C215.1</b>	<b>Identify</b> the key activities in managing a software projects and compare the different process and agile development
		<b>C215.2</b>	<b>Analyze</b> the concepts of requirements of Engineering and analysis modeling
		<b>C215.3</b>	<b>Apply</b> systematic procedure for software design and deployment
		<b>C215.4</b>	<b>Compare</b> and contrast the various testing and maintenance
		<b>C215.5</b>	<b>Determine</b> the project schedule, estimate project cost and effort required
II / IV	<b>CS8481 - DATABASE MANAGEMENT SYSTEMS LABORATORY</b>	<b>C216.1</b>	<b>Apply</b> the typical data definitions and manipulations commands
		<b>C216.2</b>	<b>Design</b> applications to test nested, join queues, functions , Procedures and procedural extension of database
		<b>C216.3</b>	<b>Design</b> and implement simple applications that use views, implicit and explicit cursors
		<b>C216.4</b>	<b>Design</b> and implement applications that's requires a front-end tool
		<b>C216.5</b>	<b>Analyze</b> the use of tables , views and ER modeling for any applications
II / IV	<b>CS8461 - OPERATING SYSTEMS LABORATORY</b>	<b>C216.1</b>	<b>Demonstrate</b> the UNIX commands and shell programming
		<b>C216.2</b>	<b>Design</b> and implement various CPU scheduling algorithms
		<b>C216.3</b>	<b>Design</b> and implement the process creation and interprocess communications
		<b>C216.4</b>	<b>Build</b> the deadlock avoidance and deadlock detection algorithms and page replacement algorithms
		<b>C216.5</b>	<b>Design</b> and implement file organization and file allocation strategies

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<b>II / IV</b>	<b>HS8467 - ADVANCED READING AND WRITING</b>	<b>C216.1</b>	<b>Develop</b> writing skills in different type of essays and project proposals.
		<b>C216.2</b>	<b>Explain</b> their writing skills with specific reference to technical writing
		<b>C216.3</b>	<b>Develop</b> students critical thinking skills
		<b>C216.4</b>	<b>Develop</b> the more opportunities to produce their project and proposal writing skills
		<b>C216.5</b>	<b>Organize</b> Read and evaluate texts critically in various professional context
<b>III / V</b>	<b>MA8551 - ALGEBRA AND NUMBER THEORY</b>	<b>C301.1</b>	<b>Apply</b> the basic notation of groups, space, ring, fields which will then be used to solve related problems
		<b>C301.2</b>	<b>Explain</b> the fundamental concepts of the advanced algebra and their role in modern mathematics and applied contexts
		<b>C301.3</b>	<b>Demonstrate</b> accurate and efficient use of advanced techniques
		<b>C301.4</b>	<b>Demonstrate</b> their mastery by solving non trivial problems related to concepts and by proving simple theorems about the statements proven by the text
		<b>C301.5</b>	<b>Apply</b> integrated approaches to number theory and abstract algebra, and firm basic further reading and studying the subject
<b>III / V</b>	<b>CS8591 - COMPUTER NETWORKS</b>	<b>C302.1</b>	<b>Explain</b> the basic layers and its functions in computer networks
		<b>C302.2</b>	<b>Evaluate</b> the performance of a network in data link layer and media access
		<b>C302.3</b>	<b>Analyze</b> the various components required to build different networks.
		<b>C302.4</b>	<b>Design</b> protocols for various functions in the network for transport layer.
		<b>C302.5</b>	<b>Analyze</b> the working of various application layer protocols.

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III / V	<b>EC8691 - MICROPROCESSORS AND MICROCONTROLLERS</b>	<b>C303.1</b> <b>Explain</b> the architecture and addressing modes of 8086.	
		<b>C303.2</b> <b>Explain</b> the concept of system bus structure and different modes of 8086 processor.	
		<b>C303.3</b> <b>Analyze</b> the various I/O interfacing techniques of 8086 microprocessor.	
		<b>C303.4</b> <b>Explain</b> the architecture and addressing modes of 8051.	
		<b>C303.5</b> <b>Analyze</b> the various interfacing techniques and applications of 8051 microprocessor.	
III / V	<b>CS8501 - THEORY OF COMPUTATION</b>	<b>C304.1</b> <b>Apply</b> the concept of Finite Automata and Regular Expression	
		<b>C304.2</b> <b>Organize</b> the Context Free Grammar for any language set	
		<b>C304.3</b> <b>Solve</b> the push down automaton model for the given language	
		<b>C304.4</b> <b>Make use of</b> Turing machine concept to solve the various problems	
		<b>C304.5</b> <b>Examine</b> the decidability or undesirability of various problems	
III / V	<b>CS8592 - OBJECT ORIENTED ANALYSIS AND DESIGN</b>	<b>C305.1</b> <b>Apply</b> the basic UML diagram using OO concepts	
		<b>C305.2</b> <b>Make Use of</b> UML analysis and design diagrams	
		<b>C305.3</b> <b>Analyze</b> the domain models and conceptual classes	
		<b>C305.4</b> <b>Build</b> the code form design system and apply design patents	
		<b>C305.5</b> <b>Compare</b> and contrast various testing techniques.	

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III / V	<b>OCH551 - INDUSTRIAL NANOTECHNOLOGY</b>	<b>C306.1</b>	<b>Understand</b> the advantages of Nano electrical and electronic devices
		<b>C306.2</b>	<b>Apply</b> the Industrial applications of nanotechnology using Bionanotechnology
		<b>C306.3</b>	<b>Develop</b> the application using Nanotechnology in chemical industry
		<b>C306.4</b>	<b>Develop</b> the application using Nanotechnology in Agriculture and food technology
		<b>C306.5</b>	<b>Build</b> the application using nanotechnology in textiles and cosmetics
III / V	<b>EC8681 - MICROPROCESSORS AND MICROCONTROLLERS LABORATORY</b>	<b>C307.1</b>	<b>Demonstrate</b> the ALP programs in 8086.
		<b>C307.2</b>	<b>Apply</b> the Arithmetic & logical operations in 8086 microprocessor.
		<b>C307.3</b>	<b>Experiment with</b> A/D & D/A, stepper motor, traffic light Interfacing with 8086 Microprocessor.
		<b>C307.4</b>	<b>Demonstrate</b> the ALP Programs in 8051.
		<b>C307.5</b>	<b>Compile</b> the programs using MASM Software.
III / V	<b>CS8582 - OBJECT ORIENTED ANALYSIS AND DESIGN LABORATORY</b>	<b>C308.1</b>	<b>Choose</b> key principles and modeling techniques in object oriented analysis, design and development.
		<b>C308.2</b>	<b>Identify</b> and map basic software requirements in UML mapping.
		<b>C308.3</b>	<b>Design</b> the sequence, state and activity diagram using UML
		<b>C308.4</b>	<b>Explain</b> the rationale behind applying specific design patterns
		<b>C308.5</b>	<b>Compare</b> and contrast various testing techniques.

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<b>III / V</b>	<b>CS8581 - NETWORKS LABORATORY</b>	<b>C309.1</b>	<b>Design</b> and Implement various protocols using TCP and UDP.
		<b>C309.2</b>	<b>Compare</b> the performance of different transport layer protocols.
		<b>C309.3</b>	<b>Make Use of</b> simulation tools to analyze the performance of various network protocols.
		<b>C309.4</b>	<b>Analyze</b> various routing algorithms.
		<b>C309.5</b>	<b>Design</b> and Implement error correction codes.
<b>III / VI</b>	<b>CS865 - INTERNET PROGRAMMING</b>	<b>C309.1</b>	<b>Construct</b> a basic website using HTML and Cascading Style Sheets.
		<b>C309.2</b>	<b>Build</b> dynamic web page with validation using Javascript objects and by applying different event handling mechanisms.
		<b>C309.3</b>	<b>Develop</b> server side programs using Servlets and JSP.
		<b>C309.4</b>	<b>Construct</b> simple web pages in PHP and to represent data in XML format.
		<b>C309.5</b>	<b>Use</b> AJAX and web services to develop interactive web applications
<b>III / VI</b>	<b>CS8691 - ARTIFICIAL INTELLIGENCE</b>	<b>C310.1</b>	<b>Use</b> appropriate search algorithms for any AI problem
		<b>C310.2</b>	<b>Represent</b> a problem using first order and predicate logic
		<b>C310.3</b>	<b>Provide</b> the apt agent strategy to solve a given problem
		<b>C310.4</b>	<b>Design</b> software agents to solve a problem
		<b>C310.5</b>	<b>Design</b> applications for NLP that use Artificial Intelligence.

Year/SEM	Course	Course Outcomes	
III / VI	<b>C310 - MOBILE COMPUTING</b>	<b>C311.1</b>	<b>Explain</b> the basics of mobile telecommunication systems
		<b>C311.2</b>	<b>Illustrate</b> the generations of telecommunication systems in wireless networks
		<b>C311.3</b>	<b>Determine</b> the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network
		<b>C311.4</b>	<b>Explain</b> the functionality of Transport and Application layers
		<b>C311.5</b>	<b>Develop</b> a mobile application using android/blackberry/ios/Windows SDK
III / VI	<b>C311 - COMPILER DESIGN</b>	<b>C312.1</b>	<b>Understand</b> the different phases of the compiler.
		<b>C312.2</b>	<b>Design</b> a lexical analyzer for a sample language.
		<b>C312.3</b>	<b>Apply</b> different parsing algorithms to develop the parsers for a given grammar.
		<b>C312.4</b>	<b>Understand</b> syntax-directed translation and run-time environment.
		<b>C312.5</b>	<b>Learn</b> to implement code optimization techniques and a simple code generator.
III / VI	<b>CS8603 - DISTRIBUTED SYSTEMS</b>	<b>C313.1</b>	<b>Elucidate</b> the foundations and issues of distributed systems
		<b>C313.2</b>	<b>Understand</b> the various synchronization issues and global state for distributed systems.
		<b>C313.3</b>	<b>Understand</b> the Mutual Exclusion and Deadlock detection algorithms in distributed systems
		<b>C313.4</b>	<b>Describe</b> the agreement protocols and fault tolerance mechanisms in distributed systems.
		<b>C313.5</b>	<b>Describe</b> the features of peer-to-peer and distributed shared memory systems

Year/SEM	Course	Course Outcomes	
<b>III / VI</b>	<b>CS8075 - DATA WAREHOUSING AND DATA MINING</b>	<b>C314.1</b> <b>Design</b> a Data warehouse system and perform business analysis with OLAP tools.	
		<b>C314.2</b> <b>Apply</b> suitable pre-processing and visualization techniques for data analysis	
		<b>C314.3</b> <b>Apply</b> frequent pattern and association rule mining techniques for data analysis	
		<b>C314.4</b> <b>Apply</b> appropriate classification and clustering techniques for data analysis	
		<b>C314.5</b> <b>Develop</b> skill in selecting the appropriate data mining algorithm for solving practical problems.	
<b>III / VI</b>	<b>CS8661 - INTERNET PROGRAMMING LABORATORY</b>	<b>C315.1</b> <b>Construct</b> Web pages using HTML/XML and style sheets.	
		<b>C315.2</b> <b>Build</b> dynamic web pages with validation using Java Script objects and by applying different event handling mechanisms.	
		<b>C315.3</b> <b>Develop</b> dynamic web pages using server side scripting	
		<b>C315.4</b> <b>Use</b> PHP programming to develop web applications.	
		<b>C315.5</b> <b>Construct</b> web applications using AJAX and web services.	
<b>III / VI</b>	<b>C315- MOBILE APPLICATION DEVELOPMENT LAB</b>	<b>C316.1</b> <b>Develop</b> mobile applications using GUI and Layouts.	
		<b>C316.2</b> <b>Develop</b> mobile applications using Event Listener.	
		<b>C316.3</b> <b>Develop</b> mobile applications using Databases	
		<b>C316.4</b> <b>Develop</b> mobile applications using RSS Feed, Internal/External Storage, SMS, Multi- threading and GPS.	
		<b>C317.5</b> <b>Analyze</b> and discover own mobile app for simple needs.	

Year/SEM	Course	Course Outcomes	
<b>III / VI</b>	<b>CS8611 - MINI PROJECT</b>	<b>C318.1</b>	Comprehend and <b>identify</b> an industrial or real life problem with a solution.
		<b>C318.2</b>	<b>Execute</b> a proper methodology in problem solving.
		<b>C318.3</b>	<b>Review</b> the literature and design a setup of equipment and complete the analysis.
		<b>C318.4</b>	<b>Write</b> a project report based on the findings.
		<b>C318.5</b>	<b>Demonstrate</b> an ability to present and defend their work to a panel of experts
<b>III / VI</b>	<b>HS8581- PROFESSIONAL COMMUNICATION</b>	<b>C319.1</b>	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.
		<b>C319.2</b>	Help the learners acquire listening and speaking skills through lab based activities, and enable them to introduce themselves and make effective presentations.
		<b>C319.3</b>	Guide learners to evaluate their thinking skills, acquire listening and speaking skills and enable them to involve in group participation.
		<b>C319.4</b>	Teach various formats of interview, answering techniques, body language and paralinguistic skills.
		<b>C319.5</b>	Clarify and prioritize learners' objectives and goals, to contribute and work as a team by creating more leadership opportunities

<b>Year/SEM</b>	<b>Course</b>	<b>Course Outcomes</b>	
<b>IV / VII</b>	<b>MG8591- PRINCIPLES OF MANAGEMENT</b>	<b>C401.1</b>	Upon completion of the course, students will be able to have clear understanding of managerial functions like planning, organizing, staffing, leading & controlling and have same basic knowledge on international aspect of management
		<b>C401.2</b>	To <b>understand</b> the planning process in the organization
		<b>C401.3</b>	To <b>understand</b> the concept of organization
		<b>C401.4</b>	<b>Demonstrate</b> the ability to direct, leadership and communicate effectively
		<b>C401.5</b>	To <b>Analysis</b> isolate issues and formulate best control methods
<b>IV / VII</b>	<b>C402 - CRYPTOGRAPHY AND NETWORK SECURITY</b>	<b>C402.1</b>	<b>Understand</b> the fundamentals of networks security, security architecture, threats and vulnerabilities.
		<b>C402.2</b>	<b>Apply</b> the different cryptographic operations of symmetric cryptographic algorithms.
		<b>C402.3</b>	<b>Apply</b> the different cryptographic operations of public key cryptography.
		<b>C402.4</b>	<b>Apply</b> the various Authentication schemes to simulate different applications.
		<b>C402.5</b>	<b>Understand</b> various Security practices and System security standards.
<b>IV / VII</b>	<b>C403 - CLOUD COMPUTING</b>	<b>C403.1</b>	<b>Compare</b> the Distributed Computing, Grid and Cloud Architectures.
		<b>C403.2</b>	<b>Apply</b> grid computing techniques to solve large scale scientific problems
		<b>C403.3</b>	<b>Apply</b> the concepts of virtualization
		<b>C403.4</b>	<b>Make use of</b> grid and cloud tool kits
		<b>C403.5</b>	<b>Apply</b> the security models in the grid and cloud environment

Year/SEM	Course	Course Outcomes	
IV / VII	<b>C404 – SOFTWARE PROJECT MANAGEMENT</b>	<b>C404.1</b>	<b>Analyze</b> the need for Software Project Management and control
		<b>C404.2</b>	<b>Classify</b> the various activities of project scheduling and evaluation
		<b>C404.3</b>	<b>Contrast</b> the risk assessment and management process
		<b>C404.4</b>	<b>Build</b> the different models of software process and network planning
		<b>C404.5</b>	<b>Utilize</b> the characteristic of organizational behaviors and management
IV / VII	<b>C405 – WIRELESS AD HOC AND SENSOR NETWORKS</b>	<b>C405.1</b>	<b>Apply</b> the basic concepts of network architecture and applications of ad hoc and wireless sensor networks
		<b>C405.2</b>	<b>Analyze</b> the protocol design issues and different categories of MAC protocols
		<b>C405.3</b>	<b>Select</b> routing protocols for ad hoc and wireless sensor networks with respects to some protocol design issues
		<b>C405.4</b>	<b>Categorize</b> the sensor characteristics and WSN layer protocols
		<b>C405.5</b>	<b>Analyze</b> the Qos related performance measurements of ad hoc and sensor networks
IV / VII	<b>C406 – SYSTEM ENGINEERING</b>	<b>C406.1</b>	<b>Apply</b> systems engineering principles to make decision for optimization.
		<b>C406.2</b>	<b>Understanding</b> of the systems engineering discipline and be able to use the core principles and processes for designing effective system.
		<b>C406.3</b>	<b>Build</b> the software design process and user interface
		<b>C406.4</b>	<b>Apply</b> the systematic procedure for software design and deployment
		<b>C406.5</b>	<b>Compare and contrast</b> the various testing and maintenances

<b>Year/SEM</b>	<b>Course</b>	<b>Course Outcomes</b>	
IV / VII	C407 - SECURITY LABORATORY	<b>C407.1</b>	<b>Construct</b> the cryptographic algorithms for data communication
		<b>C407.2</b>	<b>Develop</b> the performance of various security algorithms
		<b>C407.3</b>	<b>Create</b> the Digital signature for secure data transmission
		<b>C407.4</b>	<b>Select</b> the different open source tools for network security and analysis
		<b>C407.5</b>	<b>Design</b> intrusion detection system using network security tool.
IV / VII	C408 - CLOUD COMPUTING LABORATORY	<b>C408.1</b>	<b>Select</b> the Grid Toolkit.
		<b>C408.2</b>	<b>Design</b> and Implement applications on Grid.
		<b>C408.3</b>	<b>Select</b> the Cloud Toolkit
		<b>C408.4</b>	<b>Design and implement</b> cloud applications on Cloud.
		<b>C408.5</b>	<b>Construct</b> the applications according to the services.

Year/SEM	Course	Course Outcomes	
IV / VIII	<b>C409 - INFORMATION RETRIEVAL TECHNIQUES</b>	<b>C409.1</b>	<b>Apply</b> information retrieval principles to locate relevant information in large collections of data
		<b>C409.2</b>	<b>List</b> the various information retrieval models
		<b>C409.3</b>	<b>Examine</b> the features of retrieval systems for web-based and other search tasks
		<b>C409.4</b>	<b>Analyze</b> the performance of retrieval systems using test collections
		<b>C409.5</b>	<b>Make use of</b> practical recommendations about deploying information retrieval systems in different search domains, including considerations for document management and querying
IV / VIII	<b>C410 – INFORMATION SECURITY</b>	<b>C410.1</b>	<b>Utilize</b> the basics of information security
		<b>C410.2</b>	<b>Design</b> the legal, ethical and professional issues in information security
		<b>C410.3</b>	<b>Make use of</b> the aspects of risk management.
		<b>C410.4</b>	<b>Compare and contrast</b> various standards in the Information Security System
		<b>C410.5</b>	<b>Design</b> and implementation of Security Techniques.
IV / VIII	<b>C412 - PROJECT</b>	<b>C412.1</b>	<b>Estimate</b> the problem by applying acquired knowledge.
		<b>C412.2</b>	<b>Develop</b> the executable project modules after considering risks
		<b>C412.3</b>	<b>Choose</b> efficient tools for designing project modules.
		<b>C412.4</b>	<b>Combine</b> all the modules through effective team work after efficient testing.
		<b>C412.5</b>	<b>Elaborate</b> the completed task and compile the project report.

## **GNANAMANI COLLEGE OF TECHNOLOGY**

Department of Computer Science and Engineering

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

*Batch: 2017-2021*

*Regulation: 2017*

Year/SE M	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2
I/I	C101 - COMMUNICATIVE ENGLISH	C101.1	-	-	-	-	-	-	-	-	-	3	-	3	2	3
		C101.2	-	-	-	-	-	-	-	-	3	3	-	3	2	2
		C101.3	-	-	-	-	-	-	-	-	-	3	-	2	2	3
		C101.4	-	-	-	-	-	-	-	-	-	3	-	2	2	3
		C101.5	-	-	-	-	-	-	-	-	-	3	-	3	2	3
		C101	-	-	-	-	-	-	-	-	3.00	3.00	-	2.60	2.00	2.80
I/I	C102 - ENGINEERING MATHEMATICS -1	C102.1	3	3	-	-	-	-	-	-	-	-	-	3	2	2
		C102.2	3	3	2	2	-	-	-	-	-	-	-	3	2	2
		C102.3	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		C102.4	3	3	3	2	-	-	-	-	-	-	-	3	1	2
		C102.5	3	3	2	2	-	-	-	-	-	-	-	3	2	2
		C102	3.00	3.00	2.50	2.00	-	-	-	-	-	-	-	3.00	1.80	2.00
I/I	C103 - ENGINEERING PHYSICS	C103.1	3	3	2	-	-	-	-	-	-	2	-	-	-	2
		C103.2	3	3	2	-	-	-	-	-	-	2	-	2	-	2
		C103.3	3	3	2	-	-	-	-	-	-	2	-	2	-	2
		C103.4	3	3	2	-	-	-	-	-	-	2	-	3	-	-
		C103.5	3	3	2	-	-	-	-	-	-	2	-	3	-	1
		C103	3.00	3.00	2.00	-	-	-	-	-	-	2.00	-	2.50	-	1.75

Year / SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO 1	PSO2
I / I	<b>C104 - ENGINEERING CHEMISTRY</b>	<b>C104.1</b>	3	3	2	-	-	-	-	2	-	-	-	2	-	-
		<b>C104.2</b>	3	3	-	-	-	-	-	-	-	-	-	2	-	1
		<b>C104.3</b>	3	2	-	-	-	-	-	-	-	-	-	2	-	2
		<b>C104.4</b>	3	3	-	-	-	-	-	-	-	-	-	2	-	-
		<b>C104.5</b>	3	-	-	-	-	-	-	2	-	-	-	2	-	2
		<b>C104</b>	<b>3.00</b>	<b>2.75</b>	<b>2.00</b>	-	-	-	-	<b>2.00</b>	-	-	-	<b>2.00</b>	-	<b>1.67</b>
I / I	<b>C105- PROBLEM SOLVING AND PYTHON PROGRAMMING</b>	<b>C105.1</b>	3	3	3	-	-	-	-	-	-	-	-	2	3	2
		<b>C105.2</b>	3	3	3	-	-	-	-	-	-	-	-	2	3	2
		<b>C105.3</b>	3	3	2	-	-	-	-	-	-	-	-	3	3	2
		<b>C105.4</b>	3	3	3	-	-	-	-	-	-	-	-	3	3	2
		<b>C105.5</b>	3	2	3	-	-	-	-	-	-	-	-	3	3	2
		<b>C105</b>	<b>3.00</b>	<b>2.80</b>	<b>2.80</b>	-	-	-	-	-	-	-	-	<b>2.60</b>	<b>3.00</b>	<b>2.00</b>
I / I	<b>C106 – ENGINEERING GRAPHICS</b>	<b>C106.1</b>	3	3	3	2	-	-	-	-	-	-	-	3	1	2
		<b>C106.2</b>	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		<b>C106.3</b>	3	3	3	1	-	-	-	-	-	-	-	3	2	1
		<b>C106.4</b>	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		<b>C106.5</b>	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		<b>C106</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>1.80</b>	-	-	-	-	-	-	-	<b>3.00</b>	<b>1.80</b>	<b>1.80</b>

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I / I	C107 -PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY	C107.1	3	3	3	-	-	-	-	2	3	3	-	2	3	2
		C107.2	3	3	3	-	-	-	-	2	2	3	-	2	3	2
		C107.3	3	3	3	-	-	-	-	2	3	2	-	3	3	2
		C107.4	3	2	3	-	-	-	-	2	3	2	-	3	3	2
		C107.5	3	2	2	-	-	-	-	3	2	3	-	2	3	2
		C107	3.00	2.60	2.80	-	-	-	-	2.20	2.60	2.60	-	2.40	3.00	2.00
I / I	C108 -PHYSICS AND CHEMISTRY LABORATORY	C108.1	3	3	-	-	-	-	-	2	3	3	-	2	-	2
		C108.2	3	3	-	-	-	-	-	2	3	3	-	2	-	-
		C108.3	3	3	-	-	-	-	-	2	3	-	-	2	-	1
		C108.4	3	3	-	-	-	2	-	2	3	3	-	2	-	-
		C108.5	3	3	-	-	-	2	-	2	3	3	-	2	-	2
		C108	3.00	3.00	-	-	-	2.00	-	2.00	3.00	3.00	-	2.00	-	1.67
I / II	C109 - TECHNICAL ENGLISH	C109.1	-	-	-	-	-	-	-	2	3	-	2	2	2	2
		C109.2	-	-	-	-	-	-	-	-	3	-	2	2	2	2
		C109.3	-	-	-	-	-	-	-	-	3	-	2	2	2	2
		C109.4	-	-	-	-	-	-	-	2	3	-	2	2	2	2
		C109.5	-	-	-	2	-	-	-	2	3	-	2	2	2	2
		C109	-	-	-	2.00	-	-	-	2.00	3.00	-	2.00	2.00	2.00	2.00

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
I / II	<b>C110 – ENGINEERING MATHEMATICS - II</b>	C110.1	3	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C110.2	3	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C110.3	3	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C110.4	3	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C110.5	3	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		<b>C110</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>2.00</b>	-	-	-	-	-	-	-	-	<b>3.00</b>	<b>2.00</b>	<b>2.00</b>
I / II	<b>C111 - PHYSICS FOR INFORMATION SCIENCE</b>	C111.1	3	3	2	-	-	-	-	-	-	2	-	-	-	-	2
		C111.2	3	3	2	-	-	-	-	2	-	2	-	2	-	-	-
		C111.3	3	3	2	-	-	-	-	2	-	2	-	2	-	-	-
		C111.4	3	3	2	-	-	-	-	-	-	2	-	2	-	-	-
		C111.5	3	3	2	-	-	-	-	-	-	2	-	2	-	-	-
		<b>C111</b>	<b>3.00</b>	<b>3.00</b>	<b>2.00</b>	-	-	-	-	<b>2.00</b>	-	<b>2.00</b>	-	<b>2.00</b>	-	<b>2.00</b>	
I / II	<b>ELECTRICAL, ELECTRONICS AND MEASUREMENT</b>	C112.1	3	3	3	-	-	-	-	-	-	-	-	-	2	2	-
		C112.2	3	3	3	-	-	-	-	-	-	-	-	-	2	2	-
		C112.3	3	3	3	-	-	-	-	-	-	-	-	-	2	2	-
		C112.4	3	3	3	-	-	-	-	-	-	-	-	-	2	2	-
		C112.5	3	3	3	-	-	-	-	-	-	-	-	-	2	2	-
		<b>C112</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	-	-	-	-	-	-	-	-	-	<b>2.00</b>	<b>2.00</b>	-

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
I / II	<b>C113 – ENVIRONMENTAL SCIENCE AND ENGINEERING</b>	C113.1	3	-	-	-	-	2	-	2	-	-	-	3	2	2
		C113.2	3	-	-	-	-	2	-	2	-	-	-	3	2	2
		C113.3	3	-	-	-	-	2	-	2	-	-	-	3	2	2
		C113.4	3	-	-	-	-	2	-	-	-	-	-	2	2	2
		C113.5	3	1	-	-	-	2	-	-	-	2	-	2	2	2
		<b>C113</b>	<b>3.00</b>	<b>1.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.00</b>	<b>-</b>	<b>2.00</b>	<b>-</b>	<b>2.00</b>	<b>-</b>	<b>2.60</b>	<b>2.00</b>	<b>2.00</b>
I / II	<b>C114 – PROGRAMMING IN C</b>	C114.1	3	3	3	-	-	-	-	3	2	3	-	2	3	3
		C114.2	3	3	3	-	-	-	-	2	2	2	-	3	3	3
		C114.3	3	3	3	-	-	-	-	2	2	2	-	3	3	3
		C114.4	3	3	3	-	-	-	-	2	2	3	-	3	3	3
		C114.5	3	3	3	-	-	-	-	2	2	3	-	3	3	3
		<b>C114</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.20</b>	<b>2.00</b>	<b>2.60</b>	<b>-</b>	<b>2.80</b>	<b>3.00</b>	<b>3.00</b>
I / II	<b>C115 – ENGINEERING PRACTICES LAB</b>	C115.1	3	3	-	-	-	-	3	-	-	-	3	3	3	2
		C115.2	3	3	2	-	-	-	3	-	-	-	3	3	3	1
		C115.3	-	-	2	-	-	-	3	-	-	-	3	3	3	1
		C115.4	3	2	3	2	2	-	-	-	-	2	3	3	3	1
		C115.5	3	3	3	-	-	3	3	-	3	-	3	3	3	2
		<b>C115</b>	<b>3.00</b>	<b>2.75</b>	<b>2.50</b>	<b>2.00</b>	<b>2.00</b>	<b>3.00</b>	<b>3.00</b>	<b>-</b>	<b>3.00</b>	<b>2.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>1.40</b>

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO1 1	PO1 2	PSO 1	PSO2
I / II	C116-C PROGRAMMING LABORATORY - II	C116.1	3	3	3	-	-	-	-	3	2	3	-	2	3	3
		C116.2	3	3	3	-	-	-	-	3	2	3	-	3	2	3
		C116.3	3	3	3	-	-	-	-	3	2	3	-	3	2	3
		C116.4	3	3	2	-	-	-	-	2	2	2	-	3	3	2
		C116.5	3	3	3	-	-	-	-	3	2	3	-	3	3	3
		C116	3.00	3.00	2.80	-	-	-	-	2.80	2.00	2.80	-	2.80	2.60	2.80
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 PRINCIPAL AND SYSTEM DESIGN	C202.1	3	3	3	-	-	-	-	-	-	-	-	-	2	2
		C202.2	3	3	3	3	3	-	-	-	-	-	-	3	3	2
		C202.3	3	3	3	-	3	-	-	-	-	-	-	3	3	-
		C202.4	3	3	3	-	-	-	-	-	-	-	-	2	-	2
		C202.5	3	-	3	-	-	-	-	-	-	-	-	3	3	2
		C202	3.00	3.00	3.00	3.00	3.00	-	-	-	-	-	-	3.00	2.75	2.00

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2
II / III	C203- DATA STRUCTURES	C203.1	3	3	3	2	-	-	-	-	-	-	-	3	3	2
		C203.2	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C203.3	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C203.4	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C203.5	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C203	3.00	3.00	3.00	2.00	-	-	-	-	-	-	-	3.00	3.00	2.80
II / III	C204- OBJECT ORIENTED PROGRAMMING	C204.1	3	3	3	-	-	-	-	-	-	-	-	3	3	3
		C204.2	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C204.3	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C204.4	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C204.5	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C204	3.00	3.00	3.00	2.00	-	-	-	-	-	-	-	3.00	3.00	3.00
II / III	C205- COMMUNICATI ON ENGINEERING	C205.1	-	-	-	-	-	-	-	-	-	3	-	3	3	3
		C205.2	-	-	-	-	-	-	-	-	3	3	-	3	2	2
		C205.3	-	-	-	-	-	-	-	-	-	3	-	2	3	3
		C205.4	-	-	-	-	-	-	-	-	-	3	-	2	2	2
		C205.5	-	-	-	-	-	-	-	-	-	3	-	3	3	3
		C205	-	-	-	-	-	-	-	-	3.00	3.00	-	2.60	2.60	2.60
II / III	C206 – DATA STRUCTURE LAB	C206.1	3	3	3	-	-	-	-	2	3	3	-	2	3	3
		C206.2	3	3	3	-	-	-	-	3	3	3	-	3	3	3
		C206.3	3	3	3	-	-	-	-	2	3	3	-	3	3	3
		C206.4	3	3	3	-	3	-	-	3	2	3	-	3	3	3
		C206.5	3	3	3	-	3	-	-	2	2	3	-	3	3	3
		C206	3.00	3.00	3.00	-	3.00	-	-	2.40	2.60	3.00	-	2.80	3.00	3.00

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 LAB	C207.1	3	3	3	-	-	-	-	2	3	3	-	3	3	3
		C207.2	3	3	3	-	-	-	-	2	3	3	-	3	3	3
		C207.3	3	3	3	-	-	-	-	2	3	3	-	3	3	3
		C207.4	3	3	3	-	3	-	-	2	3	3	-	3	3	3
		C207.5	3	3	3	-	3	-	-	2	3	3	-	3	3	3
		C207	3.00	3.00	3.00	-	3.00	-	-	2.00	3.00	3.00	-	3.00	3.00	3.00
II / III	C208 – DIGITAL SYSTEM LAB	C208.1	3	3	3	2	3	-	-	-	-	-	2	2	3	3
		C208.2	3	3	3	3	3	-	-	-	-	-	2	3	2	2
		C208.3	3	3	3	3	3	-	-	-	-	-	2	3	2	2
		C208.4	3	3	3	2	3	-	-	-	-	-	2	2	2	2
		C208.5	3	3	3	3	3	-	-	-	-	-	2	3	2	2
		C208	3.00	3.00	3.00	2.60	3.00	-	-	-	-	-	2.00	2.60	2.20	2.20
II / III	C209 – INTERPERSONAL SKILL,LISTING AND SPEAKING	C209.1	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C209.2	-	-	-	-	-	-	-	-	2	3	-	2	2	3
		C209.3	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C209.4	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C209.5	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C209	-	-	-	-	-	-	-	2.00	3.00	-	2.00	2.80	3.00	
II / IV	C210 – PROBABILITY AND QUEUING THEORY	C210.1	3	3	3	3	-	-	-	-	-	-	-	3	2	2
		C210.2	2	3	2	2	-	-	-	-	-	-	-	3	2	3
		C210.3	2	3	2	3	-	-	-	-	-	-	-	3	2	2
		C210.4	3	3	3	3	-	-	-	-	-	-	-	3	2	2
		C210.5	3	3	3	3	-	-	-	-	-	-	-	3	2	2
		C210	2.60	3.00	2.60	2.80	-	-	-	-	-	-	-	3.00	2.00	2.20

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
II / IV	C211 - COMPUTER ARCHITECTURE	C211.1	3	3	3	2	-	-	-	-	-	-	-	2	3	3
		C211.2	3	3	3	2	-	-	-	-	-	-	-	2	3	3
		C211.3	3	3	3	2	-	-	-	-	-	-	-	2	3	3
		C211.4	3	3	3	2	-	-	-	-	-	-	-	2	3	3
		C211.5	3	3	3	2	-	-	-	-	-	-	-	2	3	3
		C211	3.00	3.00	3.00	2.00	-	-	-	-	-	-	-	2.00	3.00	3.00
II / IV	C212 - DATABASE MANAGEMENT SYSTEM	C212.1	3	3	3	1	-	-	-	-	-	-	-	3	3	3
		C212.2	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C212.3	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C212.4	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C212.5	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C212	3.00	3.00	3.00	1.80	-	-	-	-	-	-	-	3.00	3.00	3.00
II / IV	C213 - DESIGN AND ANALYSIS OF ALGORITHMS	C213.1	3	3	3	3	-	-	-	-	2	2	-	3	3	3
		C213.2	3	3	3	3	-	-	-	-	3	2	-	3	3	3
		C213.3	3	3	3	3	-	-	-	-	2	2	-	3	3	3
		C213.4	3	3	3	3	-	-	-	-	3	3	-	3	3	3
		C213.5	3	3	3	3	-	-	-	-	2	3	-	3	3	3
		C213	3.00	3.00	3.00	3.00	-	-	-	-	2.40	2.40	-	3.00	3.00	3.00
II / IV	C214 - OPERATING SYSTEM	C214.1	3	3	3	-	-	-	-	-	-	-	-	3	3	3
		C214.2	3	3	2	3	-	-	-	-	-	-	-	3	3	3
		C214.3	3	2	3	3	-	-	-	-	-	-	-	3	3	3
		C214.4	3	3	3	3	-	-	-	-	-	-	-	3	3	3
		C214.5	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		C214	3.00	2.80	2.80	2.75	-	-	-	-	-	-	-	3.00	3.00	3.00

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
II / IV	C215 – SOFTWARE ENGINEERING	C215.1	3	3	3	1	2	2	-	2	2	3	-	3	3	3
		C215.2	3	3	3	2	2	2	-	3	2	3	-	3	3	3
		C215.3	3	3	3	2	2	2	-	2	2	2	-	3	3	3
		C215.4	3	3	3	2	2	2	-	2	2	2	-	3	3	3
		C215.5	3	3	3	2	2	2	-	3	2	2	-	3	3	3
		C215	3.00	3.00	3.00	1.80	2.00	2.00	-	2.40	2.00	2.40	-	3.00	3.00	3.00
II / IV	C216 – DATABASE MANAGEMENT SYSTEM LAB	C216.1	3	3	3	1	-	-	-	3	2	2	-	3	3	3
		C216.2	3	3	3	2	-	-	-	3	3	3	-	3	3	3
		C216.3	3	3	3	2	-	-	-	2	2	2	-	3	3	3
		C216.4	3	3	3	2	-	-	-	3	3	3	-	3	3	3
		C216.5	3	3	3	3	-	-	-	2	2	3	-	3	3	3
		C216	3.00	3.00	3.00	2.00	-	-	-	2.60	2.40	2.60	-	3.00	3.00	3.00
II / IV	C217 - OPERATING SYSTEMS LAB	C217.1	3	3	3	-	-	-	-	2	2	2	-	3	3	3
		C217.2	3	3	3	3	-	-	-	3	3	2	-	3	3	3
		C217.3	3	3	3	2	-	-	-	2	3	3	-	3	3	3
		C217.4	3	3	3	2	3	-	-	3	3	3	-	3	3	3
		C217.5	3	3	3	2	3	-	-	3	2	3	-	3	3	3
		C217	3.00	3.00	3.00	2.25	3.00	-	-	2.60	2.60	2.60	-	3.00	3.00	3.00

<b>Year/ SEM</b>	<b>Course</b>	<b>CO/PO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PO12</b>	<b>PSO1</b>	<b>PSO2</b>
II / IV	C218 -ADVANCE READING AND WRITING	C218.1	-	-	-	-	-	-	-	-	2	3	-	2	2	2
		C218.2	-	-	-	-	-	-	-	-	2	3	-	2	2	2
		C218.3	-	-	-	-	-	-	-	-	2	3	-	2	3	2
		C218.4	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C218.5	-	-	-	-	-	-	-	-	2	3	-	2	3	3
		C218	-	-	-	-	-	-	-	-	<b>2.00</b>	<b>3.00</b>	-	<b>2.00</b>	<b>2.60</b>	<b>2.40</b>
III/ V	C301 – ALGEBRA AND NUMBER THEORY	C301.1	3	3	3	-	-	-	-	-	3	-	-	-	2	2
		C301.2	3	3	3	-	-	-	-	-	3	-	-	-	1	1
		C301.3	3	3	3	-	-	-	-	-	3	-	-	-	2	2
		C301.4	3	2	3	-	-	-	-	-	2	-	-	-	2	2
		C301.5	3	3	3	-	-	-	-	-	3	-	-	-	2	2
		C301	<b>3.00</b>	<b>2.80</b>	<b>3.00</b>	-	-	-	-	-	<b>2.80</b>	-	-	-	<b>1.80</b>	<b>1.80</b>

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
III / V	<b>C302 – COMPUTER NETWORK</b>	<b>C302.1</b>	3	2	3	-	-	-	-	-	-	-	-	3	3	3
		<b>C302.2</b>	3	3	2	-	-	-	-	-	-	-	-	2	2	3
		<b>C302.3</b>	3	3	3	-	-	-	-	-	-	-	-	2	2	3
		<b>C302.4</b>	3	3	2	2	-	-	-	-	-	-	-	3	3	3
		<b>C302.5</b>	3	3	3	2	-	-	-	-	-	-	-	3	3	3
		<b>C302</b>	<b>3.00</b>	<b>2.80</b>	<b>2.60</b>	<b>2.00</b>	-	-	-	-	-	-	-	<b>2.60</b>	<b>2.60</b>	<b>3.00</b>
III / V	<b>C303 – MICROPROCESSORS AND MICROCONTROLLERS</b>	<b>C303.1</b>	3	-	-	-	3	-	-	-	-	-	-	3	3	3
		<b>C303.2</b>	-	-	3	2	-	-	-	-	-	-	-	3	3	3
		<b>C303.3</b>	-	2	3	3	3	-	-	-	-	-	-	3	2	2
		<b>C303.4</b>	2	-	-	-	3	-	-	-	-	-	-	3	3	3
		<b>C303.5</b>	-	2	3	3	-	-	-	-	-	-	-	3	2	2
		<b>C303</b>	<b>2.50</b>	<b>2.00</b>	<b>3.00</b>	<b>2.67</b>	<b>3.00</b>	-	-	-	-	-	-	<b>3.00</b>	<b>2.60</b>	<b>2.60</b>
III / V	<b>C304 - THEORY OF COMPUTATION</b>	<b>C304.1</b>	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		<b>C304.2</b>	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		<b>C304.3</b>	3	3	3	3	-	-	-	-	-	-	-	3	2	2
		<b>C304.4</b>	3	3	3	3	-	-	-	-	-	-	-	3	2	2
		<b>C304.5</b>	3	3	3	3	-	-	-	-	-	-	-	2	2	2
		<b>C304</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>2.60</b>	-	-	-	-	-	-	-	<b>2.80</b>	<b>2.00</b>	<b>2.00</b>
III / V	<b>C305 – OBJECT ORIENTED ANALYSIS AND DESIGN</b>	<b>C305.1</b>	3	3	3	2	-	2	-	-	-	-	-	2	3	3
		<b>C305.2</b>	3	3	3	2	-	3	-	-	-	-	-	3	3	3
		<b>C305.3</b>	3	3	3	3	-	3	-	-	-	-	-	3	3	2
		<b>C305.4</b>	3	3	2	2	-	3	-	-	-	-	-	2	3	3
		<b>C305.5</b>	3	3	3	3	-	3	-	-	-	-	-	3	3	3
		<b>C305</b>	<b>3.00</b>	<b>3.00</b>	<b>2.80</b>	<b>2.40</b>	-	<b>2.80</b>	-	-	-	-	-	<b>2.60</b>	<b>3.00</b>	<b>2.80</b>

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
III / V	C306 -AIR POLLUTION AND CONTROL ENGINEERING	C306.1	3	3	3	-	-	-	-	-	-	-	-	3	3	3
		C306.2	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C306.3	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C306.4	3	3	2	-	-	-	-	-	-	-	-	3	3	2
		C306.5	3	3	2	-	-	-	-	-	-	-	-	3	2	2
		C306	3.00	3.00	2.20	-	-	-	-	-	-	-	-	3.00	2.40	2.20
III / V	C307 - MICROPROCESSORS AND MICROCONTROLLERS LAB	C307.1	3	-	-	3	-	-	-	-	-	-	-	3	3	3
		C307.2	2	2	-	3	-	-	-	-	-	-	-	3	2	3
		C307.3	3	3	3	3	-	-	-	-	-	-	-	3	3	3
		C307.4	3	-	-	3	-	-	-	-	-	-	-	3	3	3
		C307.5	2	-	-	3	3	-	-	-	-	-	-	3	3	2
		C307	2.60	2.50	3.00	3.00	3.00	-	-	-	-	-	-	3.00	3.00	2.80
III / V	C308 - OBJECT ORIENTED ANALYSIS AND DESIGN LABORATORY	C308.1	3	3	3	-	3	2	-	2	2	3	-	3	3	2
		C308.2	3	3	3	-	2	3	-	3	2	3	-	3	3	2
		C308.3	3	3	3	-	3	3	-	3	3	2	-	3	2	2
		C308.4	3	3	3	-	3	2	-	2	3	3	-	3	2	3
		C308.5	3	3	3	-	2	3	-	3	3	2	-	3	2	3
		C308	3.00	3.00	3.00	-	2.60	2.60	-	2.60	2.60	2.60	-	3.00	2.40	2.40
III / V	C309 – NETWORK LABORATORY	C309.1	3	2	3	1	-	-	-	2	3	3	-	3	3	3
		C309.2	3	2	3	2	-	-	-	2	3	3	-	3	3	3
		C309.3	3	3	3	2	3	-	-	3	3	3	-	3	3	3
		C309.4	3	3	3	2	2	-	-	2	3	3	-	3	3	3
		C309.5	3	3	3	3	3	-	-	2	3	3	-	3	3	3
		C309	3.00	2.60	3.00	2.00	2.67	-	-	2.20	3.00	3.00	-	3.00	3.00	3.00

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
III / VI	C310 – INTERNET PROGRAMMING	C310.1	3	2	3	-	-	-	-	2	2	2	-	3	3	2
		C310.2	2	2	3	-	-	-	-	1	2	2	-	3	2	3
		C310.3	2	2	3	-	-	-	-	1	2	2	-	3	2	3
		C310.4	2	2	3	-	-	-	-	1	2	2	-	3	3	2
		C310.5	2	2	3	-	-	-	-	1	2	2	-	2	2	3
		C310	2.20	2.00	3.00	-	-	-	-	1.20	2.00	2.00	-	2.80	2.40	2.60
III / VI	C311 - ARTIFICIAL INTELLIGENCE	C311.1	3	3	3	-	-	-	-	-	-	-	-	2	3	3
		C311.2	3	3	2	-	-	-	-	-	-	-	-	2	3	2
		C311.3	3	2	3	-	-	-	-	-	-	-	-	2	3	3
		C311.4	3	3	3	-	3	-	-	-	-	-	-	2	3	3
		C311.5	3	3	3	-	3	-	-	-	-	-	-	2	3	2
		C311	3.00	2.80	2.80	-	3.00	-	-	-	-	-	-	2.00	3.00	2.60
III / VI	C312 – MOBILE COMPUTING	C312.1	3	3	3	2	-	-	-	2	2	3	-	3	3	3
		C312.2	3	3	3	3	-	-	-	2	2	2	-	3	3	3
		C312.3	3	3	3	3	-	-	-	2	2	2	-	3	3	3
		C312.4	3	3	2	3	-	-	-	2	2	2	-	3	2	3
		C312.5	3	3	3	2	-	-	-	2	2	3	-	3	3	3
		C312	3.00	3.00	2.80	2.60	-	-	-	2.00	2.00	2.40	-	3.00	2.80	3.00
III / VI	C313 – COMPILER DESIGN	C313.1	3	2	-	-	-	-	-	-	-	-	-	-	-	2
		C313.2	3	2	-	-	-	-	-	-	-	-	-	3	-	2
		C313.3	3	3	3	3	-	-	-	-	-	-	-	3	3	-
		C313.4	3	3	3	3	-	-	-	-	-	-	-	3	3	-
		C313.5	3	-	2	-	-	-	-	-	-	-	-	3	-	2
		C313	3.00	2.50	2.67	3.00	-	-	-	-	-	-	-	3.00	3.00	-

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
III / VI	C314 -DISTRIBUTED SYSTEMS	C314.1	3	3	2	2	-	-	-	-	-	-	-	3	3	2
		C314.2	3	3	2	3	-	-	-	-	-	-	-	3	3	2
		C314.3	3	3	3	3	-	-	-	-	-	-	-	3	3	2
		C314.4	3	3	3	2	-	-	-	-	-	-	-	3	3	2
		C314.5	3	3	3	3	-	-	-	-	-	-	-	3	3	2
		C314	3.00	3.00	2.60	2.60	-	-	-	-	-	-	-	3.00	3.00	2.00
III / VI	C315- DATA WAREHOUSING AND DATAMINING	C315.1	3	3	3	-	-	-	-	-	-	-	-	2	3	2
		C315.2	3	3	3	-	-	-	-	-	-	-	-	2	3	2
		C315.3	3	3	3	-	-	-	-	-	-	-	-	2	2	2
		C315.4	3	3	3	-	3	-	-	-	-	-	-	2	3	3
		C315.5	3	3	3	-	2	-	-	-	-	-	-	2	3	3
		C315	3.00	3.00	3.00	-	2.50	-	-	-	-	-	-	2.00	2.80	2.40
III / VI	C316- INTERNET PROGRAMMING LAB	C316.1	3	3	3	-	3	2	-	2	2	1	-	2	3	2
		C316.2	3	3	3	-	3	2	-	2	2	2	-	2	3	2
		C316.3	3	3	3	-	2	2	-	2	2	3	-	3	3	2
		C316.4	3	3	3	-	3	3	2	2	3	3	-	3	3	2
		C316.5	3	3	3	-	3	3	2	3	3	3	-	3	3	3
		C316	3.00	3.00	3.00	-	2.80	2.40	2.00	2.20	2.40	2.40	-	2.60	3.00	2.20



Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
IV / VII	<b>C401 - PRINCIPLES OF MANAGEMENT</b>	<b>C401.1</b>	3	3	3	-	-	-	-	-	-	-	3	-	3	3
		<b>C401.2</b>	3	3	3	-	-	-	-	-	-	-	3	-	3	3
		<b>C401.3</b>	3	3	3	-	-	-	-	-	-	-	3	-	3	3
		<b>C401.4</b>	3	3	3	-	-	-	-	-	-	-	3	-	3	3
		<b>C401.5</b>	3	3	3	-	-	-	-	-	-	-	3	-	3	3
		<b>C401</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>-</b>	<b>3.00</b>	<b>-</b>	<b>3.00</b>	<b>3.00</b>						
IV / VII	<b>C402 - CRYPTOGRAPHY AND NETWORK SECURITY</b>	<b>C402.1</b>	3	3	3	-	-	-	-	-	-	-	-	-	2	1
		<b>C402.2</b>	3	2	3	-	-	-	-	-	-	-	-	-	2	2
		<b>C402.3</b>	3	3	2	-	-	-	-	-	-	-	-	-	3	3
		<b>C402.4</b>	3	2	3	-	-	-	-	-	-	-	-	-	1	3
		<b>C402.5</b>	3	3	1	-	-	-	-	-	-	-	-	-	3	3
		<b>C402</b>	<b>3.00</b>	<b>2.60</b>	<b>2.40</b>	<b>-</b>	<b>2.20</b>	<b>2.40</b>								
IV / VII	<b>C403 - CLOUD COMPUTING</b>	<b>C403.1</b>	3	3	2	2	2	3	3	2	2	2	2	2	3	3
		<b>C403.2</b>	3	3	2	2	2	3	3	1	2	2	3	2	3	3
		<b>C403.3</b>	3	3	3	2	3	3	3	-	2	3	3	3	3	2
		<b>C403.4</b>	3	3	3	2	3	3	3	2	2	2	3	3	3	3
		<b>C403.5</b>	3	3	3	2	3	3	3	2	2	3	3	3	3	3
		<b>C403</b>	<b>3.00</b>	<b>3.00</b>	<b>2.60</b>	<b>2.00</b>	<b>2.60</b>	<b>3.00</b>	<b>3.00</b>	<b>1.40</b>	<b>2.00</b>	<b>2.40</b>	<b>2.80</b>	<b>2.60</b>	<b>3.00</b>	<b>2.80</b>
IV / VII	<b>C404 - SYSTEM ENGINEERING</b>	<b>C404.1</b>	3	3	2	3	-	-	-	-	-	-	-	3	-	-
		<b>C404.2</b>	3	3	2	-	-	-	-	-	-	-	-	3	-	-
		<b>C404.3</b>	3	2	1	-	-	-	-	-	-	-	-	3	-	-
		<b>C404.4</b>	3	2	1	-	-	-	-	-	-	-	-	3	-	-
		<b>C404.5</b>	3	3	2	3	-	-	-	-	-	-	-	3	-	-
		<b>C404</b>	<b>3.00</b>	<b>2.60</b>	<b>1.60</b>	<b>3.00</b>	<b>-</b>	<b>3.00</b>	<b>-</b>	<b>-</b>						

Year/ SEM	Course	CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
IV / VII	C405 – SOFTWARE PROJECT MANAGEMENT	C405.1	3	2	2	-	-	-	-	-	-	-	-	2	3	2
		C405.2	3	2	3	1	-	-	-	-	-	-	-	2	3	3
		C405.3	3	3	3	2	-	-	-	-	-	-	-	3	3	2
		C405.4	3	3	3	2	-	-	-	-	-	-	-	3	3	2
		C405.5	2	3	3	2	-	-	-	-	-	-	-	3	3	-
		C405	2.80	2.60	2.80	1.75	-	-	-	-	-	-	-	2.60	3.00	2.25
IV / VII	C406 – WIRELESS ADHOC AND SENSOR NETWORKS	C406.1	3	2	3	1	-	-	-	-	-	-	-	3	3	2
		C406.2	3	3	2	2	-	-	-	-	-	-	-	3	3	3
		C406.3	3	3	2	2	2	-	-	-	-	-	-	3	3	3
		C406.4	3	2	3	3	3	-	-	-	-	-	-	3	3	2
		C406.5	3	3	3	2	2	-	-	-	-	-	-	3	3	3
		C406	3.00	2.60	2.60	2.00	2.33	-	-	-	-	-	-	3.00	3.00	2.60
IV / VII	C407 – CLOUD COMPUTING LABORATORY	C407.1	3	3	2	2	2	3	3	2	2	2	2	2	3	3
		C407.2	3	3	2	2	2	3	3	1	2	2	3	2	3	3
		C407.3	3	3	3	2	3	3	3	-	2	3	3	3	3	2
		C407.4	3	3	3	2	3	3	3	2	2	2	3	3	3	3
		C407.5	3	3	3	2	3	3	3	2	2	3	3	3	3	3
		C407	3.00	3.00	2.60	2.00	2.60	3.00	3.00	1.40	2.00	2.40	2.80	2.60	3.00	2.80
IV / VII	C408 – SECURITY LABORATORY	C408.1	3	3	3	-	2	-	-	2	1	1	-	2	3	3
		C408.2	3	3	3	-	2	-	-	2	1	1	-	2	3	2
		C408.3	3	3	2	-	3	-	-	3	2	2	-	3	3	3
		C408.4	3	3	2	-	3	-	-	3	2	2	-	3	3	3
		C408.5	2	3	2	-	3	-	-	2	-	1	-	2	3	3
		C408	2.80	3.00	2.40	-	2.60	-	-	2.40	1.20	1.40	-	2.40	3.00	2.80

<b>Year/ SEM</b>	<b>Course</b>	<b>CO/PO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PO12</b>	<b>PSO1</b>	<b>PSO2</b>
<b>IV / VIII</b>	<b>C409 – INFORMATION SECURITY</b>	<b>C409.1</b>	3	3	3	-	-	-	-	-	-	-	-	2	2	2
		<b>C409.2</b>	3	3	3	1	-	-	-	-	-	-	-	2	2	2
		<b>C409.3</b>	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		<b>C409.4</b>	3	3	3	2	-	-	-	-	-	-	-	3	3	2
		<b>C409.5</b>	3	3	3	2	-	-	-	-	-	-	-	3	3	2
		<b>C409</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>1.75</b>	-	-	-	-	-	-	-	<b>2.60</b>	<b>2.40</b>	<b>2.00</b>
<b>IV / VIII</b>	<b>C410 – INFORMATION RETRIEVAL TECHNIQUES</b>	<b>C410.1</b>	3	3	3	-	-	-	-	-	-	-	-	3	3	2
		<b>C410.2</b>	3	3	3	3	-	-	-	-	-	-	-	3	2	2
		<b>C410.3</b>	3	3	3	2	-	-	-	-	-	-	-	3	2	2
		<b>C410.4</b>	3	3	3	3	-	-	-	-	-	-	-	3	2	2
		<b>C410.5</b>	3	3	3	3	-	-	-	-	-	-	-	3	2	2
		<b>C410</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>2.75</b>	-	-	-	-	-	-	-	<b>3.00</b>	<b>2.20</b>	<b>2.00</b>
<b>IV / VIII</b>	<b>C411 - PROJECT</b>	<b>C411.1</b>	3	2	2	2	2	2	-	2	3	2	2	3	3	3
		<b>C411.2</b>	3	3	2	3	3	3	-	3	3	3	2	3	3	3
		<b>C411.3</b>	3	3	3	3	3	2	2	3	3	3	2	3	2	3
		<b>C411.4</b>	3	3	3	3	3	2	3	3	3	3	3	3	3	3
		<b>C411.5</b>	3	3	3	3	3	2	3	3	3	3	3	3	3	3
		<b>C411</b>	<b>3.00</b>	<b>2.80</b>	<b>2.60</b>	<b>2.80</b>	<b>2.80</b>	<b>2.20</b>	<b>2.67</b>	<b>2.80</b>	<b>3.00</b>	<b>2.80</b>	<b>2.40</b>	<b>3.00</b>	<b>2.80</b>	<b>3.00</b>

