COURSE OUTCOMES

BATCH: 2018-2022 (R18)

	SNO	Course Code		Name of the Course
I year I Semester	1	MA101BS	C101	MATHEMATICS-I
	2	CH102BS	C102	ENGINEERING CHEMISTRY
	3	EE103ES	C103	BASIC ELECTRICAL ENGINEERING
	4	ME105ES	C104	ENGINEERING WORKSHOP
	5	EN105HS	C105	ENGLISH
	6	CH106BS	C106	ENGINEERING CHEMISTRY LAB
	7	EN107HS	C107	ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB
I year II Semester	8	EE108ES	C108	BASIC ELECTRICAL ENGINEERING LAB
	9	MA201BS	C109	MATHEMATICS – II
	10	AP202BS	C110	APPLIED PHYSICS
	11	CS203ES	C111	PROGRAMMING FOR PROBLEM SOLVING
	12	ME204ES	C112	ENGINEERING GRAPHICS
	13	AP205BS	C113	APPLIED PHYSICS LAB
	14	CS206ES	C114	PROGRAMMING FOR PROBLEM SOLVING LAB
	15	*MC209ES	C115	ENVIRONMENTAL SCIENCE
ar I Se mes	16	CS301ES	C201	ANALOG AND DIGITAL ELECTRONICS

	17	CS302PC	C202	DATA STRUCTURES
	18	MA303BS	C203	COMPUTER ORIENTED STATISTICAL METHODS
	19	CS304PC	C204	COMPUTER ORGANIZATION AND ARCHITECTURE
	20	CS305PC	C205	OBJECT ORIENTED PROGRAMMING USING C++
	21	CS306ES	C206	ANALOG AND DIGITAL ELECTRONICS LAB
	22	CS307PC	C207	DATA STRUCTURES LAB
	23	CS308PC	C208	IT WORKSHOP LAB
II Year II Semester	24	CS309PC	C209	C++ PROGRAMMING LAB
	25	*MC309	C210	GENDER SENSITIZATION LAB
	26	CS401PC	C211	DISCRETE MATHEMATICS
	27	SM402MS	C212	BUSINESS ECONOMICS & FINANCIAL ANALYSIS
	28	CS403PC	C213	OPERATING SYSTEMS
	29	CS404PC	C214	DATABASE MANAGEMENT SYSTEMS
	30	CS405PC	C215	JAVA PROGRAMMING
	31	CS406PC	C216	OPERATING SYSTEMS LAB
III Year I Semester	32	CS407PC	C217	DATABASE MANAGEMENT SYSTEMS LAB
	33	CS408PC	C218	JAVA PROGRAMMING LAB
	34	*MC409	C219	CONSTITUTION OF INDIA
	35	CS501PC	C301	FORMAL LANGUAGES & AUTOMATA THEORY
	36	CS502PC	C302	SOFTWARE ENGINEERING
	37	CS503PC	C303	COMPUTER NETWORKS

	38	CS504PC	C304	WEB TECHNOLOGIES
III Year II Semester	39	CS515PE	C305	PRINCIPLES OF PROGRAMMING LANGUAGES
	40	CS521PE	C306	COMPUTER GRAPHICS
	41	CS505PC	C307	SOFTWARE ENGINEERING LAB
	42	CS506PC	C308	COMPUTER NETWORKS & WEB TECHNOLOGIES LAB
	43	EN508HS	C309	ADVANCED COMMUNICATION SKILLS LAB
	44	*MC510	C310	INTELLECTUAL PROPERTY RIGHTS
	45	CS601PC	C311	MACHINE LEARNING
	46	CS602PC	C312	COMPILER DESIGN
IV Year I Semester	47	CS603PC	C313	DESIGN AND ANALYSIS OF ALGORITHMS
	48	CS615PE	C314	SOFTWARE TESTING METHODOLOGIES
	49	CS713PE	C315	ARTIfiCIAL INTELLIGENCE
	50	CS604PC	C316	MACHINE LEARNING LAB
	51	CS605PC	C317	COMPILER DESIGN LAB
	52	CS625PE	C318	SOFTWARE TESTING METHODOLOGIES LAB
	53	*MC609	C319	ENVIRONMENTAL SCIENCE
	54	CS701PC	C401	CRYPTOGRAPHY & NETWORK SECURITY
	55	CS702PC	C402	DATA MINING
IV Year Semest er II	56	CS714PE	C403	CLOUD COMPUTING
	57	CS725PE	C404	SOFTWARE PROCESS AND PROJECT MANAGEMENT.

	58	CE700OE:	C405	REMOTE SENSING & GIS
	59	CS703PC	C406	CRYPTOGRAPHY & NETWORK SECURITY LAB
	60	CS704PC	C407	INDUSTRIAL ORIENTED MINI PROJECT/ SUMMER INTERNSHIP
	61	CS705PC	C408	SEMINAR
	62	CS706PC	C409	PROJECT STAGE - I
	63	SM801MS	C410	ORGANIZATIONAL BEHAVIOUR
	64	CS815PE	C411	CYBER FORENSICS
	65	MT802OE:	C412	TOTAL QUALITY MANAGEMENT
	66	CS802PC	C413	PROJECT STAGE - II

Course Outcomes

Course Name: ANALOG AND DIGITAL ELECTRONICS   **Batch: 2018-2022**

Course Name	Course Outcomes
C201.1	Ability to Know the characteristics of various components.
C201.2	Ability to Understand the utilization of components.
C201.3	Ability to Design and analyze small signal amplifier circuits
C201.4	Learn Postulates of Boolean algebra and to minimize Combinational functions.
C201.5	Design and analyze combinational and sequential circuits.Know about the logic families and realization of logic Gates.

Course Name: DATA STRUCTURES   **Batch: 2018-2022**

Course Name	Course Outcomes
C202.1	Ability to select the data structures that efficiently model the information in a problem.
C202.2	Ability to assess efficiency trade-offs among different data structure implementations or combinations
C202.3	Implement and know the application of algorithms for sorting and pattern matching.
C202.4	ADesign programs using a variety of data structures, including hash tables, binary and general tree structures, search trees, tries, heaps, graphs, and AVL-trees.
C202.5	Ability to Apply different searching techniques on Nonlinear data structure

Course Name: COMPUTER ORIENTED STATISTICAL METHODS   **Batch: 2018-2022**

Course Name	Course Outcomes
C203.1	Ability to Apply the concepts of probability and distributions to some case studies
C203.2	Ability to Correlate the material of one unit to the material in other units
C203.3	Ability to Resolve the potential misconceptions and hazards in each topic of study
C203.4	Ability to know The sampling theory and testing of hypothesis and making inferences
203.5	Ability to know the Stochastic process and Markov chains.

Course Name: COMPUTER ORGANIZATION AND ARCHITECTURE   **Batch: 2018-2022**

Course Name	Course Outcomes
C204.1	Ability to Understand the basics of instructions sets and their impact on processor design
C204.2	Ability to Demonstrate an understanding of the design of the functional units of a digital computer system

C204.3	Ability to Evaluate cost performance and design trade-offs in designing and constructing a computer processor including memory
C204.4	Ability to Evaluate cost performance and design trade-offs in designing and constructing a computer processor including memory
C204.5	Ability to Recognize and manipulate representations of numbers stored in digital computers

Course Name: OBJECT ORIENTED PROGRAMMING USING C++ (**C205**)　　　　　　**Batch: 2018-2022**

Course Name	Course Outcomes
C205.1	Able to develop programs with reusability.
C205.2	Develop programs for file handling
C205.3	Handle exceptions in programming
C205.4	Develop applications for a range of problems using object-oriented programming techniques
C205.5	Encapsulation of data in virtual functions

Course Name: ANALOG AND DIGITAL ELECTRONICS LAB　　　　　　**Batch: 2018-2022**

Course Name	Course Outcomes
C206.1	Design and test rectifiers with filters
C206.2	Design, construct and test amplifier circuits and interpret the results.
C206.3	Utilize the postulates of the Boolean Algebra to minimize the Combinational circuits
C206.4	Design and Analyze Combinational and Sequential circuits and verify the functionality
C206.5	Realize the logic gates using different Logic families and verify the functionality.

Course Name: DATA STRUCTURES LAB　　　　　　**Batch: 2018-2022**

Course Name	Course Outcomes
C207.1	Appreciate the importance of structure and Abstract data type, and their basic usability in different applications
C207.2	Able to implement linear and non-linear data structures using linked lists

Course Name	Course Outcomes
C207.3	Able to understand and apply various data structures such as stacks, queues, trees, graphs etc. to solve various computing problems.
C207.4	ble to implement various kinds of searching and sorting techniques, and decide when to choose which technique.
C207.5	Able to identify and use a suitable data structure and algorithm to solve a real world problem.

Course Name: IT WORKSHOP LAB **Batch: 2018-2022**

Course Name	Course Outcomes
C208.1	Apply knowledge for computer assembling and software installation and solve trouble shooting problems
C208.2	Ability to effectively use of internet and World Wide Web
C208.3	Ability to effectively use of internet, www and web browsers
C208.4	Apply the tools for documentation
C208.5	Apply the tools for ppt, Budget sheet etc

Course Name: C++ PROGRAMMING LAB **Batch: 2018-2022**

Course Name	Course Outcomes
C209.1	Explain polymorphism and develop C++ programs
C209.2	Develop C++ programs with reusability concept.
C209.3	Compare classes & structures and develop C++ programs using classes & structures
C209.4	Write C++ programs to handle exceptions in programming
C209.5	Solve different type of problems using object-oriented programming Techniques.

Course Name: DISCRETE MATHEMATICS **Batch: 2018-2022**

Course Name	Course Outcomes
C211.1	Ability to understand and construct precise mathematical proofs

C211.2	Ability to use logic and set theory to formulate precise statements
C211.3	Ability to analyze and solve counting problems on finite and discrete structures
C211.4	Ability to describe and manipulate sequences
C211.5	Ability to apply graph theory in solving computing problems

Course Name: BUSINESS ECONOMICS & FINANCIAL ANALYSIS **Batch: 2018-2022**

Course Name	Course Outcomes
C212.1	Understand the relative importance of Business Economics and structure of Business Firms ranging from types, formation, entry and exit from markets and output decisions
C212.2	Be equipped with the tools for analyzing Demand and costs as well as in forecasting product demand and to develop critical and integrative thinking in the Analysis of consumer behavior
C212.3	Able to identify key domestic as well as global economic factors and analyze the impact of fast changing global economic factors with domestic macroeconomic policies
C212.4	To develop the students to understand the accounting language and to have a basic understanding of preparation of financial statement.
C212.5	To assess the company profitability and financial position by suing financial tools and techniques and to explore opportunities for future merger and acquisition and xpansion

Course Name: OPERATING SYSTEMS (C213) **Batch: 2018-2022**

Course Name	Course Outcomes
C213.1	Able to explain the basic concepts of operating systems
C213.2	Able to compare different process scheduling algorithms and interpret the concurrency problem to overcome it by using different solutions
C213.3	Able to estimate the memory allocated for a process
C213.4	Ability to recognize and resolve user problems with standard operating environment
C213.5	Gain practical knowledge of how programming languages, operating systems, and architectures interact and how to use each effectively and sharing of resources among multiple processes in order to detect, prevent and avoid a deadlock

Course Name: DATABASE MANAGEMENT SYSTEMS **Batch: 2018-2022**

Course Name	Course Outcomes

C214.1	Able to choose appropriate database schema for a given problem
C214.2	Able to design an E-R model for real world problem
C214.3	Able to develop relational model for schema refinement
C214.4	Able to build a database for roadway travels and formulate quires using DDl, DMl, DCL commands
C214.5	Able to create triggers, cursors for given problem

Course Name: JAVA PROGRAMMING   **Batch: 2018-2022**

Course Name	Course Outcomes
C215.1	Able to solve real world problems using OOP techniques and understand the use of abstract classes
C215.2	Able to Identify the use of classes, interface, packages in solving specific problems
C215.3	Able to develop multithreaded applications with synchronization.
C215.4	Able to know the importance of collection framework in developing effective programs.
C215.5	Able to develop applets for web applications and GUI based applications

Course Name: OPERATING SYSTEMS LAB   **Batch: 2018-2022**

Course Name	Course Outcomes
C216.1	Able to solve real world problems using OOP techniques and understand the use of abstract classes
C216.2	Able to Identify the use of classes, interface, packages in solving specific problems
C216.3	Able to develop multithreaded applications with synchronization.
C216.4	Able to know the importance of collection framework in developing effective programs.
C216.5	Able to develop applets for web applications and GUI based applications

Course Name: DATABASE MANAGEMENT SYSTEMS LAB   **Batch: 2018-2022**

Course Name	Course Outcomes

C217.1	Able to choose appropriate database schema for a given problem
C217.2	Able to design an E-R model for real world problem
C217.3	Able to develop relational model for schema refinement
C217.4	Able to build a database for roadway travels and formulate quires using DDl, DMl, DCL commands
C217.5	Able to create triggers, cursors for given problem

Course Name: JAVA PROGRAMMING LAB   **Batch: 2018-2022**

Course Name	Course Outcomes
C218.1	Able to write programs for solving real world problems using java collection frame work
C218.2	Able to write programs using abstract classes
C218.3	Able to write multithreaded programs.
C218.4	Able to implement code for data structures and sorting techniques
C218.5	Able to write GUI programs using swing controls in Java.

Course Name: FORMAL LANGUAGES & AUTOMATA THEORY   **Batch: 2018-2022**

Course Name	Course Outcomes
C301.1	Able to understand the concept of abstract machines and their power to recognize the languages.
C301.2	Able to employ finite state machines for modeling and solving computing problems
C301.3	Able to design context free grammars for formal languages. Methods impact the performance of programs
C301.4	Able to distinguish between decidability and undecidability.
C301.5	Able to gain proficiency with mathematical tools and formal methods.

Course Name: SOFTWARE ENGINEERING   **Batch: 2018-2022**

Course Name	Course Outcomes
C302.1	Ability to translate end-user requirements into system and software requirements, using e.g. UML, and structure the requirements in a Software Requirements Document (SRD).
C302.2	Identify and apply appropriate software architectures and patterns to carry out high level design of a system and be able to critically compare alternative choices.
C302.3	Will have experience and/or awareness of testing problems and will be able to develop a simple testing report
C302.4	CO4 Able to Estimate the quality of software process
C302.5	CO5 Able to develop the SRS document for project.

Course Name: COMPUTER NETWORKS   **Batch: 2018-2022**

Course Name	Course Outcomes
C303.1	Gain the knowledge of the basic computer network technology.
C303.2	Gain the knowledge of the functions of each layer in the OSI and TCP/IP reference model.
C303.3	Obtain the skills of subnetting and routing mechanisms.
C303.4	Familiarity with the essential protocols of computer networks, and how they can be applied in network design and implementation.
C303.5	Choose appropriate protocol for desired communication service

Course Name: WEB TECHNOLOGIES   **Batch: 2018-2022**

Course Name	Course Outcomes
C304.1	Gain knowledge of client-side scripting, validation of forms and AJAX programming
C304.2	Understand server-side scripting with PHP language
C304.3	Understand what is XML and how to parse and use **XML** Data with Java
C304.4	To introduce Server-side programming with Java Servlets and JSP
C304.5	Able to contrast server side scripting and Server side programming and develop database connectivity by make use of java and PHP.

Course Name: PRINCIPLES OF PROGRAMMING LANGUAGES   **Batch: 2018-2022**

Course Name	Course Outcomes
C305.1	Acquire the skills for expressing syntax and semantics in formal notation
C305.2	Identify and apply a suitable programming paradigm for a given computing application
C305.3	Gain knowledge of and able to compare the features of various programming languages
C305.4	Ability to Evaluate Merits and Demerits of a Particular Programming Language.
C305.5	Able to Understand and Analyze the Importance of Implementation Process

Course Name: COMPUTER GRAPHICS   **Batch: 2018-2022**

Course Name	Course Outcomes
C306.1	Acquire familiarity with the relevant mathematics of computer graphics.
C3062	Be able to design basic graphics application programs, including animation
C306.3	Be able to design applications that display graphic images to given specifications
C306.4	Able to List various algorithms to detect hidden surfaces and rendering
C306.5	Able to Create animation scenes

Course Name: SOFTWARE ENGINEERING LAB   **Batch: 2018-2022**

Course Name	Course Outcomes
C307.1	Ability to translate end-user requirements into system and software requirements
C3072	Ability to generate a high-level design of the system from the software requirements
C307.3	Will have experience and/or awareness of testing problems and will be able to develop a simple testing report
C307.4	Develop prototype model for a given case study using modern engineering tools.
C307.5	Able to Analyze and translate a specification into a design.

Course Name: COMPUTER NETWORKS & WEB TECHNOLOGIES LAB   **Batch: 2018-2022**

Course Name	Course Outcomes
C308.1	Implement data link layer farming methods
C3082	Analyze error detection and error correction codes.
C308.3	Implement and analyze routing and congestion issues in network design.
C308.4	Implement Encoding and Decoding techniques used in presentation layer
C308.5	To be able to work with different network tools

Course Name: ADVANCED COMMUNICATION SKILLS LAB   **Batch: 2018-2022**

Course Name	Course Outcomes
C309.1	Develops confidence to use relevant vocabulary, using apt kinesics or body language in communication
C3092	Infer the meaning of the text easily through comprehension techniques like, skimming, scanning and effective reading through proper vocabulary
C309.3	Analyze the writing skills through letters, reports and resume writing from the text and use for all professional settings
C309.4	Gather ideas, information and organize them relevantly in making presentations
C309.5	Self assured to organize and deliver discussions, presentations and strategies to face the interviews effectively

Course Name: MACHINE LEARNING   **Batch: 2018-2022**

Course Name	Course Outcomes
C311.1	Understand the concepts of computational intelligence like machine learning
C3112	Ability to get the skill to apply machine learning techniques to address the real time problems in different areas
C311.3	Understand the Neural Networks and its usage in machine learning application
C311.4	Understand the Genetic Algorithms
C311.5	Understand Analytical Learning-

Course Name: COMPILER DESIGN   **Batch: 2018-2022**

Course Name	Course Outcomes
C312.1	Demonstrate the ability to design a compiler given a set of language features
C3122	Demonstrate the the knowledge of patterns, tokens & regular expressions for lexical analysis
C312.3	Acquire skills in using lex tool & yacc tool for devleoping a scanner and parser.
C312.4	Design and implement LL and LR parsers Design algorithms to do code optimization in order to improve the performance of a program interms of space and time complexity
C312.5	Design algorithms to generate machine code

Course Name: DESIGN AND ANALYSIS OF ALGORITHMS   **Batch: 2018-2022**

Course Name	Course Outcomes
C313.1	Introduces the notations for analysis of the performance of algorithms.
C3132	Introduces the data structure disjoint sets
C313.3	Describes major algorithmic techniques (divide-and-conquer, backtracking, dynamic programming, greedy, branch and bound methods) and mention problems for which each technique is appropriate;
C313.4	Describes how to evaluate and compare different algorithms using worst-, average-, and bestcase analysis
C313.5	Explains the difference between tractable and intractable problems, and introduces the problems that are P, NP and NP complete.

Course Name: SOFTWARE TESTING METHODOLOGIES   **Batch: 2018-2022**

Course Name	Course Outcomes
C314.1	Design and develop the best test strategies in accordance to the development model.
C3142	Ability to choose appropriateTransaction Flow Testing
C314.3	Ability to understand how thePaths, Path products and Regular expressions
C314.4	Synthesize efficient State, State Graphs and Transition testing
C314.5	Apply importantGraph Matrices and Application

Course Name: MACHINE LEARNING LAB   **Batch: 2018-2022**

Course Name	Course Outcomes
C316.1	Understand complexity of Machine Learning algorithms and their limitations.
C3162	Understand modern notions in data analysis-oriented computing.
C316.3	Be capable of confidently applying common Machine Learning algorithms in practice and implementing their own.
C316.4	Be capable of performing experiments in Machine Learning using real-world data.
C316.5	Ability Implement linear regression using python.

Course Name: COMPILER DESIGN LAB   **Batch: 2018-2022**

Course Name	Course Outcomes
C317.1	Design and develop interactive and dynamic web applications using HTML, CSS, JavaScript and XML
C3172	Apply client-server principles to develop scalable and enterprise web applications
C317.3	Ability to design, develop, and implement a compiler for any language
C317.4	Able to use lex and yacc tools for developing a scanner and a parser.
C317.5	Able to design and implement LL and LR parsers.

Course Name: SOFTWARE TESTING METHODOLOGIES LAB   **Batch: 2018-2022**

Course Name	Course Outcomes
C318.1	Design and develop the best test strategies in accordance to the development model.
C3182	Design and develope GUI checkpoint for single property
C318.3	Able to design the Database checkpoint for runtime record check
C318.4	Able to develop Silent mode test execution without any interruption
C318.5	Ablility to design Test case for calculator in windows application