COURSE OUTCOMES

BATCH: 2017-2021   (R16)

	SNO	Course Code		Name of the Course
I year I Semester	1	MA101BS	C101	Mathematics-I
	2	CH102BS	C102	Engineering Chemistry
	3	PH103BS	C103	Engineering Physics-I
	4	EN104HS	C104	Professional Communication in English
	5	ME105ES	C105	Engineering Mechanics
	6	EE106ES	C106	Basic Electrical and Electronics Engineering
	7	EN107HS	C107	English Language Communication Skills Lab
	8	ME108ES	C108	Engineering Workshop
	9	*ES109MC	C109	NSS
I year II Semester	10	PH201BS	C110	Engineering Physics-II
	11	MA202BS	C111	Mathematics-II
	12	MA203BS	C112	Mathematics-III

	13	CS204ES	C113	Computer Programming in C
	14	ME205ES	C114	Engineering Graphics
	15	CH206BS	C115	Engineering Chemistry Lab
	16	PH207BS	C116	Engineering Physics Lab
	17	CS208ES	C117	Computer Programming in C Lab
	18	*EA209MC	C118	NCC/NSO
IIYear I Semester	19	MA301BS	C201	Mathematics – IV
	20	CS302ES	C202	Data Structures Through C++
	21	CS303ES	C203	Mathematical Foundations Of Computer Science
	22	CS304ES	C204	Digital Logic Design
	23	CS305ES	C205	Object Oriented Programming Through Java
	24	CS306ES	C206	Data Structures Through C++ Lab
	25	CS307ES	C207	IT Workshop
	26	CS308ES	C208	Object Oriented Programming Through Java Lab
II Year II Semester	27	* MC300ES	C209	Environmental Science and Technology
	28	CS401ES	C210	Computer Organization
	29	CS402ES	C211	Database Management Systems
	30	CS403ES	C212	Operating Systems
	31	CS404ES	C213	Formal Languages And Automata Theory
	32	SM405ES	C214	Business Economics And Financial Analysis

	33	CS406ES	C215	Computer Organization Lab
	34	CS407ES	C216	Database Management Systems Lab
	35	CS408ES	C217	Operating Systems Lab
	36	* MC400HS	C218	Gender Sensitization Lab
III Year I Semester	37	CS501PC	C301	Design And Analysis Of Algorithms
	38	CS502PC	C302	Data Communication And Computer Networks
	39	CS503PC	C303	Software Engineering
	40	SM504MS	C304	Fundamentals Of Management
	41	CS505PC	C305	Design And Analysis Of Algorithms Lab
	42	CS506PC	C306	Computer Networks Lab
	43	CS507PC	C307	Software Engineering Lab
	44	*MC500HS	C308	Professional Ethics
III Year II Semester	45	CS601PC	C309	Compiler Design
	46	CS602PC	C310	Web Technologies
	47	CS603PC	C311	Cryptography And Network Security
	48	CS614PE	C312	Mobile Computing
	49	CE700OE	C313	Remote Sensing And Gis
	50	CS604PC	C314	Cryptography And Network Security Lab
	51	CS605PC	C315	Web Technologies Lab
	52	EN606HS	C316	Advanced English Communication Skills Lab

IV Year I Semester	53	CS701PC	C401	Data Mining
	54	CS702PC	C402	Principles of Programming Languages
	55	CS721PE	C403	Python Programming
	56	CS733PE	C404	Cloud Computing
	57	CS7324PE	C405	Software Process and Project Management
	58	CS703PC	C406	Data Mining Lab
	59	CS751PC	C407	Python Programming Lab
	60	CS705PC	C408	Industry Oriented Mini Project
	61	CS706PC	C409	Seminar
IV Year Semester II	62	CS863PE	C410	Computer Forensics
	63	CS854PE	C411	Modern Software Engineering
	64	ME831OE	C412	Total Quality Management
	65	CS801PC	C413	Major Project

Course Name: MATHEMATICS-IV(C201)   **Batch: 2017-2021**

Course Name	Course outcomes
C201.1	analyze the complex functions with reference to their analyticity, integration using Cauchy's integral theorem
C201.2	find the Taylor's and Laurent's series expansion of complex functionsthe bilinear transformation
C201.3	express any periodic function in term of sines and cosines
C201.4	express a non-periodic function as integral representation
C201.5	analyze one dimensional wave and heat equation

Course Name: DATA STRUCTURES THROUGH C++ (C202)   **Batch: 2017-2021**

Course Name	Course outcomes
C202.1	Ability to choose appropriate data structures to represent data items in real world problems
C202.2	Ability to analyze the time and space complexities of algorithms
C202.3	Ability to design programs using a variety of data structures such as stacks, queues, hash tables
C202.4	Able to analyze and implement various kinds of searching and sorting techniques
C202.5	Ability to design programs using a variety of data structures such as binary trees, search trees, heaps, graphs, and B-trees

Course Name: MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE (C203)   **Batch: 2017-2021**

Course Name	Course outcomes
C203.1	Ability to apply mathematical logic to solve problems
C203.2	Understand sets, relations, functions, and discrete structures
C203.3	Able to use logical notation to define and reason about fundamental mathematical concepts such as sets, relations, and functions.
C203.4	Able to formulate problems and solve recurrence relations
C203.5	Able to model and solve real-world problems using graphs and trees

Course Name: DIGITAL LOGIC DESIGN (C204)   **Batch: 2017-2021**

Course Name	Course outcomes
C204.1	Able to understand number systems and codes
C204.2	Able to solve Boolean expressions using Minimization methods.
C204.3	Able to design the sequential and combinational circuits
C204.4	Able to apply state reduction methods to solve sequential circuits.
C204.5	To implement synchronous state machines using flip-flops

Course Name: OBJECT ORIENTED PROGRAMMING THROUGH JAVA (C205)   **Batch:2017-2021**

Course Name	Course outcomes
C205.1	Able to solve real world problems using OOP techniques
C205.2	Able to understand the use of abstract classes.
C205.3	Able to solve problems using java collection framework and I/o classes
C205.4	Able to develop multithreaded applications with synchronization
C205.5	Able to develop applets for web applications AND GUI based applications)

Course Name: DATA STRUCTURES THROUGH C++ LAB (C206)   **Batch: 2017-2021**

Course Name	Course outcomes
C206.1	Able to identify the appropriate data structures and algorithms for solving real world problems.
C206.2	Able to implement various kinds of searching techniques
C206.3	Able to implement data structures such as stacks queues
C206.4	Able to implement various kinds of sorting techniques
C206.5	Able to implement data structures such as Search trees, and hash

Course Name: IT WORKSHOP (C207)   **Batch: 2017-2021**

Course Name	Course outcomes
C207.1	Apply knowledge for computer assembling and software installation
C207.2	Ability how to solve the trouble shooting problems

C207.3	Apply the tools for preparation of PPT
C207.4	Apply the tools for preparation of Documentation
C207.5	Apply the tools for preparation of budget sheet etc

Course Name: OBJECT ORIENTED PROGRAMMING THROUGH JAVA LAB (C208)   **Batch: 2017-2021**

Course Name	Course outcomes
C208.1	Able to solve real world problems using OOP techniques.
C208.2	Able to understand the use of abstract classes
C208.3	Able to solve problems using java collection framework and I/o classes.
C208.4	Able to develop multithreaded applications with synchronization.
C208.5	Able to develop applets for web applications and design GUI based applications.

Course Name: COMPUTER ORGANIZATION (C210)   **Batch: 2017-2021**

Course Name	Course outcomes
C210.1	Able to understand the basic components and the design of CPU, ALU and Control Unit.
C210.2	Ability to understand memory hierarchy and its impact on computer Cost/performance.
C210.3	Ability to understand the advantage of instruction level parallelism and pipelining for High performance Processor design
C210.4	Ability to understand the instruction set, instruction formats and addressing modes of 8086.
C210.5	Ability to write assembly language programs to solve problems

Course Name: DATABASE MANAGEMENT SYSTEM (C211)   **Batch: 2017-2021**

Course Name	Course outcomes
C211.1	Demonstrate the basic elements of a relational database management system
C211.2	Ability to identify the data models for relevant problems.
C211.3	Ability to design entity relationship model and convert entity relationship diagrams into RDBMS and formulate SQL queries on the data.
C211.4	Apply normalization for the development of application software
C211.5	An ability to perform experiments to analyze and interpret data for different applications

Course Name: OPERATING SYSTEMS (C212)   **Batch: 2017-2021**

Course Name	Course outcomes
C212.1	Apply optimization techniques for the improvement of system performance.
C212.2	Ability to design and solve synchronization problems
C212.3	Learn about minimization of turnaround time, waiting time and response time and also maximization of throughput by keeping CPU as busy as possible.
C212.4	Ability to change access controls to protect files
C212.5	Ability to compare the different operating systems.

Course Name: FORMAT LANGUAGES AND AUTOMATA THEORY (C213)   **Batch: 2017-2021**

Course Name	Course outcomes
C213.1	Able to understand the concept of abstract machines and their power to recognize the languages.
C213.2	Able to employ finite state machines for modeling and solving computing problems.
C213.3	Able to design context free grammars for formal languages
C213.4	Able to distinguish between decidability and undecidability
C213.5	Able to gain proficiency with mathematical tools and formal methods

V Course Name: BUSINESS ECONOMICS AND FINANCIAL ANALYSIS (C214)   **Batch: 2017-2021**

Course Name	Course outcomes
C214.1	The students will understand the various Forms of Business and the impact of economic variables on the Business
C214.2	The Demand, Supply, Production, Cost, Market Structure, Pricing aspects are learnt
C214.3	The Students can study the firm's financial position by analysing the Financial Statements of a Company.
C214.4	Understand the framework for both manual and computerized accounting process ratio analysis.
C214.5	Develop an understanding of Analyze how capital budgeting decisions are carried out

Course Name: COMPUTER ORGANIZATION LAB (C215)   **Batch: 2017-2021**

Course Name	Course outcomes
C215.1	CO1.Ability to learn logic gates using NAND & NOR

C215.2	CO2.Ability to learn Full Adder using gates
C215.3	CO3.Ability to learn All Combinational circuits using ICs
C215.4	CO4.Ability to learn decoder counter using Ics/Ability to learn Assembly languages program for various expressions
C215.5	CO5.Ability to learn shift register using Ics/Ability to learn ALP for Sorting an away of numbers

Course Name: DATABASE MANAGEMENT SYSTEMS LAB (C216) **Batch: 2017-2021**

Course Name	Course outcomes
C216.1	Ability to design and implement a database schema for given problem.
C216.2	Able to Capable to design and build a GUI application
C216.3	Able to Apply the normalization techniques for development of application software to realistic problems.
C216.4	Ability to formulate queries using SQL DML/DDL commands.
C216.5	Ability to formulate queries using SQL DCL commands.

Course Name: OPERATING SYSTEMS LAB (C217) **Batch: 2017-2021**

Course Name	Course outcomes
C217.1	CO1. Ability to develop application programs using system calls in Unix.
C217.2	CO2. Ability to implement interprocess communication between two processes.
C217.3	CO3. Ability to design and solve synchronization problems.
C217.4	CO4.Ability to simulate and implement operating system concepts such as scheduling
C217.5	CO5.Ability to simulate and implement operating system concepts deadlock management, file management, and memory management.

Course Name: DESIGN OF ANAYSIS AND ALGORITHMS (C301) **Batch: 2017-2021**

Course Name	Course outcomes
C301.1	Ability to analyze the performance of algorithms
C301.2	Ability to choose appropriate algorithm design techniques for solving problems
C301.3	Ability to understand how the choice of data structures and the algorithm design methods impact the performance of programs
C301.4	Synthesize efficient algorithms in common engineering design situations
C301.5	Apply important algorithmic design paradigms and methods of analysis

Course Name: DATA COMMUNICATION AND COMPUTER NETWORKS (C302)   **Batch: 2017-2021**

Course Name	Course outcomes
C302.1	Students should be understand and explore the basics of Computer Networks and Various Protocols. He/She will be in a position to understand the World Wide Web concepts..
C302.2	Students will be in a position to administrate a network and flow of information further he/she can understand easily the concepts of network security, Mobile and ad hoc networks.
C302.3	To analyze different routing algorithms in network layer
C302.4	To assume Standards for LAN elements and protocols of transport layer
C302.5	To discuss various protocols such as FTP, HTTP, Telnet, DNS

Course Name: SOFTWARE ENGINEERING (C303)   **Batch: 2017-2021**

Course Name	Course outcomes
C303.1	Ability to identify the minimum requirements for the development of application
C303.2	Ability to develop, maintain, efficient, reliable and cost effective software solutions
C303.3	Ability to critically thinking and evaluate assumptions and arguments.
C303.4	Apply various software development lifecycle models to a development project. This includes developing a project plan and making a simple schedule and resource allocation model.
C303.5	Use various test strategies for quality software product

Course Name: Fundamentals of Management (C304)   **Batch: 2017-2021**

Course Name	Course outcomes
C304.1	The students understand the significance of Management in their Profession.
C304.2	The various Management Functions like Planning, Organizing, Staffing, Leading,Motivation and Control aspects are learnt in this course.
C304.3	The students can explore the Management Practices in their domain area.
C304.4	The student is able to understand the principles of an organization
C304.5	The student is able to understand the Leader ship and leadership styles

Course Name: Design of Anaysis and Algorithms Lab(C305)   **Batch: 2017-2021**

Course Name	Course outcomes
C305.1	Ability to write programs in java to solve problems using algorithm design techniques such as Divide and

	Conquer
C305.2	Ability to write pograms in java to solve problems using Greedy
C305.3	Ability to write pograms in java to solve problems using backtracking strategy
C305.4	Ability to write pograms in java to solve problems using dynamic programming techniques
C305.5	ability to develop searching Techniques

Course Name: COMPUTER NETWORKS LAB (C306)　　　　　　　　　**Batch: 2017-2021**

Course Name	Course outcomes
C306.1	Ability to understand the encryption and decryption concepts in Linux environmen
C306.2	Ability to apply appropriate algorithm for the finding of shortest route.
C306.3	Ability to configure the routing table
C306.4	Able to obtain broadcast tree using subnet
C306.5	ability to understand error detection and error correction

Course Name: SOFTWARE ENGINEERING LAB (C307)　　　　　　　　**Batch: 2017-2021**

Course Name	Course outcomes
C307.1	Ability to understand Problem Analysis and Project Planning
C307.2	Ability to understand Software Requirement Analysis
C307.3	Ability to understand Data Modeling
C307.4	Able to apply Software Designing
C307.5	ability to develop Prototype model

Course Name: Compiler Design (C309)　　　　　　　**Batch: 2017-2021**

Course Name	Course outcomes
C309.1	Ability to design, develop, and implement a compiler for any language.
C309.2	Able to use lex and yacc tools for developing a scanner and a parser.)
C309.3	Able to design and implement LL and LR parsers
C309.4	Able to design algorithms to perform code optimization in order to improve the performance of a program in terms of space and time complexity
C309.5	Ability to design algorithms to generate machine code

Course Name: Web Technologies (C310)   **Batch: 2017-2021**

Course Name	Course outcomes
C310.1	gain knowledge of client side scripting, validation of forms and AJAX programming.
C310.2	have understanding of server side scripting with PHP language
C310.3	have understanding of what is XML and how to parse and use XML Data with Java.
C310.4	To introduce Server side programming with Java Servlets and JSP
C310.5	gain knowledge of client side scripting, validation of forms and AJAX programming

Course Name: Cryptography And Network Security (C311)   **Batch: 2017-2021**

Course Name	Course outcomes
C311.1	Student will be able to understand basic cryptographic algorithms, message and web authentication and security issues.
C311.2	Ability to identify information system requirements for both of them such as client and server.
C311.3	Ability to understand the current legal issues towards information security.
C311.4	Ability to Describe network security services and mechanisms.
C311.5	Various network security applications, IPSec, Firewall, IDS, Web security, Email security, and Malicious software etc.

Course Name: MOBILE COMPUTING (C312)   **Batch: 2017-2021**

Course Name	Course outcomes
C312.1	Able to think and develop new mobile application
C312.2	Able to take any new technical issue related to this new paradigm and come up with a solutions
C312.3	Able to understand & develop any existing or new protocol related to mobile environment
C312.4	Able to understand about data dissemination and synchronization
C312.5	Able to develop new ad hoc network applications and/or algorithms/protocols.

Course Name: Remote Sensing And GIS (C313)   **Batch: 2017-2021**

Course Name	Course outcomes
C313.1	Retrieve the information content of remotely sensed data
C313.2	Analyze the energy interactions in the atmosphere and earth surface features

C313.3	Interpret the images for preparation of thematic maps.
C313.4	Apply problem specific remote sensing data for engineering applications
C313.5	Analyze spatial and attribute data for solving spatial problems Create GIS and cartographic outputs for presentation

Course Name: Crytography and Network Security Lab (C314)   **Batch: 2017-2021**

Course Name	Course outcomes
C314.1	Ability to Identify basic security attacks and services.
C314.2	Ability to Use symmetric and asymmetric key algorithms for cryptography
C314.3	Ability to Make use of Authentication functions
C314.4	Ability to Understand computer security principles and discuss ethical issues for theft of information. Identify threat models and common computer network security goals
C314.5	Ability to Analyze firewalls, DOS attacks and defense types. Dramatize example scenarios in DNS and IPSec applications .

Course Name: WEB TECHNOLOGIES LAB (C315)   **Batch: 2017-2021**

Course Name	Course outcomes
C315.1	Able to Use LAMP Stack for web applications
C315.2	Able to Use Tomcat Server for Servlets and JSPs
C315.3	Able to Write simple applications with Technologies like HTML, Javascript, AJAX, PHP,Servlets and JSPs
C315.4	Able to Connect to Database and get results
C315.5	Able to Parse XML files using Java (DOM and SAX parsers)

Course Name: Advanced English Communication Skills Lab (C316)   **Batch: 2017-2021**

Course Name	Course outcomes
C316.1	Able to Acquire vocabulary and use it contextually
C316.2	Able to Listen and speak effectively
C316.3	Able to Develop proficiency in academic reading and writing
C316.4	Able to Increase possibilities of job prospects.
C316.5	Able to Communicate confidently in formal and informal contexts

Course Name: DATA MINING (C401) **Batch: 2017-2021**

Course Name	Course outcomes
C401.1	Ability to analyze the perform the preprocessing of data and apply mining techniques on it
C401.2	Ability to identify the association rules,classification and clusters in large data sets.
C401.3	Ability to understand the classification and Evaluation of classifers and selecting the best split Algorithm
C401.4	Ability to solve real world problems in business and scientific information using data mining
C401.5	Ability to classify web pages, extracting knowledge from the web

Course Name: PRINCIPLES OF PROGRAMMING LANGUAGES (C402) **Batch: 2017-2021**

Course Name	Course outcomes
C402.1	Ability to express syntax and semantics in formal notation.
C402.2	Ability to apply suitable programming paradigm for the application.
C402.3	Ability to compare the features of various programming languages.
C402.4	Able to understand the programming paradigms of modern programming languages.
C402.5	Able to understand the concepts of ADT and OOP. • Ability to program in different language paradigms and evaluate their relative benefits.

Course Name: PYTHON PROGRAMMING (C403) **Batch: 2017-2021**

Course Name	Course outcomes
C403.1	Identify Python syntax and semantics and be fluent in the use of Python flow control and functions.
C403.2	Demonstrate proficiency in handling Strings and File Systems.
C403.3	Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions
C403.4	Interpret the concepts of Object-Oriented Programming as used in Python.
C403.5	Explain exemplary applications related to Network Programming, Web Services and Databases in Python.

Course Name: CLOUD COMPUTING (C404) **Batch: 2017-2021**

Course Name	Course outcomes
C404.1	Ability to understand different types of computing in this computer Era

C404.2	Ability to understand various service delivery models of cloud computing Architecture.
C404.3	Ability to understand the cloud service models.
C404.4	Ability to understand the ways in which cloud can be Programmed and deployed.
C404.5	Ability to understand different cloud service Providers.

Course Name: SOFTWARE PROCESS AND PROJECT MANAGEMENT. (C405)   **Batch: 2017-2021**

Course Name	Course outcomes
C405.1	A more advanced knowledge of the region including research and writing in a seminar format
C405.2	Self-study on multidisciplinary areas related to CSE engineering
C405.3	Develop required skills for technical presentataion
C405.4	Concentrate on specific topic in scientific and engineering fields
C405.5	Discuss new trends among group of students and facilities

Course Name:DATA MINING LAB (C406)   **Batch: 2017-2021**

Course Name	Course outcomes
C406.1	Ability to implement practical Experience using data mining techniques on real world data sets
C406.2	Ability to add mining algorithms as a component to the exiting tools
C406.3	Ability to apply mining techniques for realistic data
C406.4	Ability to apply Mining techniques for Hospital Management system.
C406.5	Ability to apply Mining techniques for Credit Risk Assessment.

Course Name: PYTHON PROGRAMMING LAB. (C407)   **Batch: 2017-2021**

Course Name	Course outcomes
C407.1	Ability to understand the basic concepts scripting and the contributions of scripting languages
C407.2	Ability to explore python especially the object oriented concepts, and the built in objects of python.
C407.3	Ability to create the practical and contemporary applications such as TCP/IP network programming.
C407.4	Ability to Create Web Applications.
C407.5	Ability to create the Discrete Event Simulations.

Course Name: MINI PROJECT (C408)   **Batch: 2017-2021**

Course Name	Course outcomes
C408.1	Ability to Work in a team
C408.2	Ability to Understand the various phases involved in developing a product
C408.3	Ability to Express/interpret their views with out hesitation
C408.4	Ability to Produce the project in product based form
C408.5	Ability to Present the project orally and in written report

Course Name: SEMINAR(C409)   **Batch: 2017-2021**

Course Name	Course outcomes
C409.1	A more advanced knowledge of the region including research and writing in a seminar format
C409.2	Self-study on multidisciplinary areas related to CSE engineering
C409.3	Develop required skills for technical presentataion
C409.4	Concentrate on specific topic in scientific and engineering fields
C409.5	Discuss new trends among group of students and facilities

Course Name: COMPUTER FORENSICS (C410)   **Batch: 2017-2021**

Course Name	Course outcomes
C410.1	Understand the real time computer forensic issue.
C410.2	Understand data recovery, forensics lab certification and physical requirements.
C410.3	Identify different storage formats for data acquisition.
C410.4	Analyze various data acquisition tools for collecting digital evidence.
C410.5	Identify and apply various computer forensics tools to solve the computer forensic cases.

Course Name: MODERN SOFTWARE ENGINEERING (C411)   **Batch: 2017-2021**

Course Name	Course outcomes
C411.1	CO1 Ability to understand agile development
C411.2	CO2 Able to explain the basic concept of collaborating
C411.3	CO3 Able to define releasing
C411.4	CO4 Able to understand the planing risk management

C411.5	CO5 Ability to understand the developing and incremental requirements

Course Name: TOTAL QUALITY MANAGEMENT (C412)   **Batch: 2017-2021**

Course Name	Course outcomes
C412.1	Understand the significance of quality control and business performance
C412.2	Understand the significance of customer focus and satisfaction
C412.3	Able to identify the system approach and organizing for quality implementation
C412.4	Understand the cost of quality and quality management
C412.5	Understand the significance of universal standards and ISO9000

Course Name: MAJOR PROJECT (C413)   **Batch: 2017-2021**

Course Name	Course outcomes
C413.1	Ability to Apply convert theoretical concepts into working model
C413.2	Ability to Improve their communication skills and team work
C413.3	Ability to Plan, implement and document the problem solution
C413.4	Ability to Analyze, design, and develop while providing solution to the problem
C413.5	Ability to Use the latest technology and tools which are sort after by the industries