Course Outcomes (CO) (R 2017)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Code: 101 Course Name:HS8151 COMMUNICATIVE ENGLISH

C101.1	Read articles of a general kind in magazines and newspapers.
C101.2	Participate effectively in informal conversations; introduce themselves and their friends and express opinions in English.
C101.3	Comprehend conversations and short talks delivered in English
C101.4	Write short essays of a general kind and personal letters and emails in English.
C101.5	Communicate with one or many listeners using appropriate communicative strategies

Course Code: 102 Course Name:MA8151 ENGINEERING MATHEMATICS I

C102.1	Use both the limit definition and rules of differentiation to differentiate functions.
C102.2	Apply differentiation to solve maxima and minima problems.
C102.3	Evaluate integrals both by using Riemann sums and by using the Fundamental Theorem of Calculus.
C102.4	Apply integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
C102.5	Evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts.

Course Code: 103 Course Name:PH8151 ENGINEERING PHYSICS

C103.1	The students will gain knowledge on the basics of properties of matter and its applications,
C103.2	The students will acquire knowledge on the concepts of waves and optical devices and their applications in fibre optics,
C103.3	The students will have adequate knowledge on the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers,
C103.4	The students will get knowledge on advanced physics concepts of quantum theory and its applications in tunneling microscopes,
C103.5	The students will understand the basics of crystals, their structures and different crystal growth techniques.

Course Code: 104 Course Name:CY8151 ENGINEERING CHEMISTRY

C104.1	The knowledge gained on engineering materials, fuels, energy sources and water treatment techniques will facilitate better understanding of engineering processes and applications for further learning.
C104.2	To make the student acquire sound knowledge of second law of thermodynamics and second law based derivations of importance in engineering applications in all disciplines.
C104.3	To acquaint the student with concepts of important photophysical and photochemical processes and spectroscopy.
C104.4	To develop an understanding of the basic concepts of phase rule and its applications to single and two component system and appreciate the purpose and significance of alloys.
C104.5	To acquaint the students with the basics of nano materials, their properties and applications.

Course Code: 105 Course Name:GE8151 PROBLEM SOLVING AND PYTHON PROGRAMMING

C105.1	Develop simple applications in C using basic constructs
C105.2	Design and implement applications using arrays and strings
C105.3	Develop and implement applications in C using functions and pointers.
C105.4	Develop applications in C using structures.
C105.5	Design applications using sequential and random access file processing.

Course Code: 106 Course Name:GE8152 ENGINEERING GRAPHICS

C106.1	Familiarize with the fundamentals and standards of Engineering graphics
C106.2	Perform freehand sketching of basic geometrical constructions and multiple views of objects.
C106.3	Project orthographic projections of lines and plane surfaces.
C106.4	Draw projections and solids and development of surfaces.
C106.5	Visualize and to project isometric and perspective sections of simple solids.

Course Code: 107 Course Name:GE8161 PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY

C107.1	Write, test, and debug simple Python programs.
C107.2	Implement Python programs with conditionals and loops.
C107.3	Develop Python programs step-wise by defining functions and calling them.
C107.4	Use Python lists, tuples, dictionaries for representing compound data.
C107.5	Read and write data from/to files in Python.

Course Code: 108 Course Name:BS8161 PHYSICS AND CHEMISTRY LABORATORY

C108.1	Apply principles of elasticity, optics and thermal properties for engineering applications.
C108.2	The students will be outfitted with hands-on knowledge in the quantitative chemical analysis of water quality related parameters.
C108.3	To provide the basic practical exposure to all the engineering and technological streams in the field of chemistry
C108.4	To gain the knowledge about light, sound, laser, fiber optics and magnetism.
C108.5	To develop the knowledge of conductometric titration and viscometry

Course Code: 109 Course Name:HS8251 TECHNICAL ENGLISH

C109.1	Read technical texts and write area- specific texts effortlessly.
C109.2	Listen and comprehend lectures and talks in their area of specialisation successfully.
C109.3	Speak appropriately and effectively in varied formal and informal contexts.
C109.4	Write reports and winning job applications.
C109.5	Initiate a discussion, negotiate, argue using appropriate communicative strategies.

Course Code: 110 Course Name:MA8251 ENGINEERING MATHEMATICS II

C110.1	Eigen values and eigenvectors, diagonalization of a matrix, Symmetric matrices, Positive definite matrices and similar matrices.
C110.2	Gradient, divergence and curl of a vector point function and related identities.
C110.3	Evaluation of line, surface and volume integrals using Gauss, Stokes and Green‘s theorems and their verification.
C110.4	Analytic functions, conformal mapping and complex integration.
C110.5	Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.

Course Code: 111 Course Name:PH8252 PHYSICS FOR INFORMATION SCIENCE

C111.1	Gain knowledge on classical and quantum electron theories, and energy band structures,
C111.2	Acquire knowledge on basics of semiconductor physics and its applications in various devices,
C111.3	Get knowledge on magnetic properties of materials and their applications in data storage,
C111.4	Have the necessary understanding on the functioning of optical materials for optoelectronics,
C111.5	Understand the basics of quantum structures and their applications in carbon electronics..

Course Code: 112 Course Name:BE8255 BASIC ELECTRICAL, ELECTRONICS AND MEASUREMENT ENGINEERING

C112.1	Discuss the essentials of electric circuits and analysis.
C112.2	Discuss the basic operation of electric machines and transformers
C112.3	Introduction of renewable sources and common domestic loads.
C112.4	Introduction to measurement and metering for electric circuits.
C112.5	

Course Code: 113 Course Name:GE8291 ENVIRONMENTAL SCIENCE AND ENGINEERING

C113.1	Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection. One will obtain knowledge on the following after completing the course.
C113.2	Public awareness of environmental is at infant stage.
C113.3	Ignorance and incomplete knowledge has lead to misconceptions
C113.4	Development and improvement in std. of living has lead to serious environmental disasters
C113.5	Introduction to measurement and metering for electric circuits.

Course Code: 114 Course Name:CS8251 PROGRAMMING IN C

C114.1	Develop simple applications in C using basic constructs
C114.2	Design and implement applications using arrays and strings
C114.3	Develop and implement applications in C using functions and pointers.
C114.4	Develop applications in C using structures.
C114.5	Design applications using sequential and random access file processing.

Course Code: 115 Course Name:GE8261 ENGINEERING PRACTICES LABORATORY

C115.1	Fabricate carpentry components and pipe connections including plumbing works.
C115.2	Use welding equipments to join the structures.
C115.3	Carry out the basic machining operations
C115.4	Make the models using sheet metal works
C115.5	Illustrate on centrifugal pump, Air conditioner, operations of smithy, foundary and fittings

Course Code: 116 Course Name:CS8261 C PROGRAMMING LABORATORY

C116.1	Develop C programs for simple applications making use of basic constructs, arrays and strings.
C116.2	Develop C programs involving functions, recursion, pointers, and structures.
C116.3	Design applications using sequential and random access file processing.
C116.4	Develop applications in C using structures.
C116.5	Develop simple applications in C using basic constructs

Course Code: 201 Course Name:MA8351 DISCRETE MATHEMATICS

C201.1	Have knowledge of the concepts needed to test the logic of a program.
C201.2	Have an understanding in identifying structures on many levels.
C201.3	Be aware of a class of functions which transform a finite set into another finite set which relates to input and output functions in computer science.
C201.4	Be aware of the counting principles.
C201.5	Be exposed to concepts and properties of algebraic structures such as groups, rings and fields.

Course Code: 202 Course Name:CS8351 DIGITAL PRINCIPLES AND SYSTEM DESIGN

C202.1	Simplify Boolean functions using KMap
C202.2	Design and Analyze Combinational and Sequential Circuits
C202.3	Implement designs using Programmable Logic Devices
C202.4	Write HDL code for combinational and Sequential Circuits
C202.5	Implement sequential circuits like registers and counters

Course Code: 203 Course Name:CS8391 DATA STRUCTURES

C203.1	Implement abstract data types for linear data structures.
C203.2	Apply the different linear and non-linear data structures to problem solutions.
C203.3	Demonstrate advantages and disadvantages of specific algorithms and data structures
C203.4	Critically analyze the various sorting algorithms.
C203.5	Ability to have knowledge of tree and graph concepts

Course Code: 204 Course Name:CS8392 OBJECT ORIENTED PROGRAMMING

C204.1	Develop Java programs using OOP principles
C204.2	Develop Java programs with the concepts inheritance and interfaces
C204.3	Build Java applications using exceptions and I/O streams
C204.4	Develop Java applications with threads and generics classes
C204.5	Develop interactive Java programs using swings

Course Code: 205 Course Name:COMMUNICATION ENGINEERING

C205.1	Ability to comprehend and appreciate the significance and role of this course in the present contemporary world
C205.2	Apply analog and digital communication techniques.
C205.3	Use data and pulse communication techniques.
C205.4	Analyze Source and Error control coding.
C205.5	Use data and pulse communication techniques.

Course Code: 206 Course Name:CS8381 DATA STRUCTURES LABORATORY

C206.1	Write functions to implement linear and non-linear data structure operations
C206.2	Suggest appropriate linear / non-linear data structure operations for solving a given problem
C206.3	Appropriately use the linear / non-linear data structure operations for a given problem
C206.4	Apply appropriate hash functions that result in a collision free scenario for data storage and retrieval
C206.5	analyze the various sorting algorithms.

Course Code: 207 Course Name:CS8383 OBJECT ORIENTED PROGRAMMING LABORATORY

C207.1	Develop and implement Java programs for simple applications that make use of classes, packages and interfaces.
C207.2	Develop and implement Java programs with arraylist, exception handling and multithreading .
C207.3	Design applications using file processing, generic programming and event handling.
C207.4	Develop interactive Java programs using swings
C207.5	Develop Java applications with threads and generics classes

Course Code: 208 Course Name:CS8382 DIGITAL SYSTEMS LABORATORY

C208.1	Implement simplified combinational circuits using basic logic gates

C208.2	Implement combinational circuits using MSI devices
C208.3	Implement sequential circuits like registers and counters
C208.4	Simulate combinational and sequential circuits using HDL
C208.5	Implement designs using Programmable Logic Devices

Course Code: 209 Course Name:HS8381 INTERPERSONAL SKILLS/LISTENING & SPEAKING

C209.1	Listen and respond appropriately.
C209.2	Participate in group discussions
C209.3	Make effective presentations
C209.4	Participate confidently and appropriately in conversations both formal and informal
C209.5	Make effective presentations.

Course Code: 210 Course Name:MA8402 PROBABILITY & QUEUING THEORY

C210.5	Understand the fundamental knowledge of the concepts of probability and have knowledge of standard distributions which can describe real life phenomenon.
C210.6	Understand the basic concepts of one and two dimensional random variables and apply in engineering applications.
C210.7	Apply the concept of random processes in engineering disciplines.
C210.8	Acquire skills in analyzing queueing models
C210.9	Understand and characterize phenomenon which evolve with respect to time in a probabilistic manner

Course Code: 211 Course Name:CS8491 COMPUTER ARCHITECTURE

C211.1	Understand the basics structure of computers, operations and instructions.
C211.2	Design arithmetic and logic unit.
C211.3	Understand pipelined execution and design control unit.
C211.4	Understand parallel processing architectures.
C211.5	Understand the various memory systems and I/O communication

Course Code: 212 Course Name:CS8492 DATABASE MANAGEMENT SYSTEMS

C212.1	Classify the modern and futuristic database applications based on size and complexity
C212.2	Map ER model to Relational model to perform database design effectively
C212.3	Write queries using normalization criteria and optimize queries
C212.4	Compare and contrast various indexing strategies in different database systems
C212.5	Appraise how advanced databases differ from traditional databases

Course Code: 213 Course Name:CS8451 DESIGN AND ANALYSIS OF ALGORITHMS

C213.1	Design algorithms for various computing problems
C213.2	Analyze the time and space complexity of algorithms
C213.3	Critically analyze the different algorithm design techniques for a given problem.
C213.4	Modify existing algorithms to improve efficiency.
C213.5	Categorize the problem as P,NP and NP complete problems , assess the complexity and design solutions using backtracking or branch and bound approach.

Course Code: 214 Course Name:CS8493 OPERATINGS SYSTEMS

C214.1	Analyze various scheduling algorithms.
C214.2	Understand deadlock, prevention and avoidance algorithms.
C214.3	Compare and contrast various memory management schemes.
C214.4	Understand the functionality of file systems.
C214.5	Perform administrative tasks on Linux Servers.

Course Code: 215 Course Name:CS8494 SOFTWARE ENGINEERING

C215.1	Identify the key activities in managing a software project.
C215.2	Compare different process models.
C215.3	Concepts of requirements engineering and Analysis Modeling.
C215.4	Apply systematic procedure for software design and deployment.
C215.5	Compare and contrast the various testing and maintenance.

Course Code: 216 Course Name:CS8481 DATABASE MANAGEMENT SYSTEMS LABORATORY

C216.1	Use typical data definitions and manipulation commands.
C216.2	Design applications to test Nested and Join Queries
C216.3	Implement simple applications that use Views

C216.4	Implement applications that require a Front-end Tool
C216.5	Critically analyze the use of Tables, Views, Functions and Procedures

Course Code: CS8461 Course Name: OPERATING SYSTEMS LABORATORY	
C217.1	Compare the performance of various CPU Scheduling Algorithms
C217.2	Implement Deadlock avoidance and Detection Algorithms
C217.3	Implement Semaphores
C217.4	Create processes and implement IPC
C217.5	Analyze the performance of the various Page Replacement Algorithms

Course Code: 218 Course Name:HS8461 ADVANCED READING & WRITING

C218.1	Compare the performance of various CPU Scheduling Algorithms
C218.2	Implement Deadlock avoidance and Detection Algorithms
C218.3	Implement Semaphores
C218.4	Create processes and implement IPC
C218.5	Analyze the performance of the various Page Replacement Algorithms

Course Code: 301 Course Name:MA8551 ALGEBRA AND NUMBER THEORY

C301.1	Apply the basic notions of groups, rings, fields which will then be used to solve related problems.
C301.2	Explain the fundamental concepts of advanced algebra and their role in modern mathematics and applied contexts.
C301.3	Demonstrate accurate and efficient use of advanced algebraic techniques.
C301.4	Demonstrate their mastery by solving non - trivial problems related to the concepts, and by proving simple theorems about the, statements proven by the text.
C301.5	Apply integrated approach to number theory and abstract algebra, and provide a firm basis for further reading and study in the subject.

Course Code: 302 Course Name:CS8591 COMPUTER NETWORKS

C302.1	Understand the basic layers and its functions in computer networks.
C302.2	Evaluate the performance of a network.
C302.3	Understand the basics of how data flows from one node to another
C302.4	Analyze and design routing algorithms.
C302.5	Design protocols for various functions in the network.

Course Code: 303 Course Name:EC8691 MICROPROCESSORS AND MICROCONTROLLERS

C303.1	Understand and execute programs based on 8086 microprocessor.
C303.2	Design Memory Interfacing circuits.
C303.3	Design and interface I/O circuits.
C303.4	Design and implement 8051 microcontroller based systems.
C303.5	Design a microcontroller based system

Course Code: 304 Course Name:CS8501 THEORY OF COMPUTATION

C304.1	Construct automata, regular expression for any pattern.
C304.2	Write Context free grammar for any construct.
C304.3	Design Turing machines for any language.
C304.4	Propose computation solutions using Turing machines.
C304.5	Derive whether a problem is decidable or not.

Course Code: 305 Course Name:CS8592 OBJECT ORIENTED ANALYSIS AND DESIGN

C305.1	Express software design with UML diagrams
C305.2	Design software applications using OO concepts.
C305.3	Identify various scenarios based on software requirements
C305.4	Transform UML based software design into pattern based design using design patterns
C305.5	Understand the various testing methodologies for OO software

Course Code: 306 Course Name:OMD553 TELEHEALTH TECHNOLOGY

C306.1	Apply multimedia technologies in telemedicine.
C306.2	Explain Protocols behind encryption techniques for secure transmission of data.
C306.3	Apply telehealth in healthcare.
C306.4	
C306.5	

Course Code: 307 Course Name:EC8681 MICROPROCESSORS AND MICROCONTROLLERS LABORATORY

C307.1	Write ALP Programmes for fixed and Floating Point and Arithmetic operations .
C307.2	Interface different I/Os with processor
C307.3	Generate waveforms using Microprocessors
C307.4	Execute Programs in 8051
C307.5	Explain the difference between simulator and Emulator

Course Code: 308 Course Name:CS8582 OBJECT ORIENTED ANALYSIS AND DESIGN LABORATORY

C308.1	Perform OO analysis and design for a given problem specification.
C308.2	Identify and map basic software requirements in UML mapping.
C308.3	Improve the software quality using design patterns and to explain the rationale behind applying specific design patterns
C308.4	Test the compliance of the software with the SRS.
C308.5	To test the software against its requirements specification

Course Code: 309 Course Name:CS8581 NETWORKS LABORATORY

C309.1	Implement various protocols using TCP and UDP.
C309.2	Compare the performance of different transport layer protocols.
C309.3	Use simulation tools to analyze the performance of various network protocols.
C309.4	Analyze various routing algorithms.
C309.5	Implement error correction codes.

Course Code: 310 Course Name:CS8651 INTERNET PROGRAMMING

C310.1	Construct a basic website using HTML and Cascading Style Sheets.
C310.2	Build dynamic web page with validation using Java Script objects and by applying different event handling mechanisms.
C310.3	Develop server side programs using Servlets and JSP.
C310.4	Construct simple web pages in PHP and to represent data in XML format.
C310.5	Use AJAX and web services to develop interactive web applications

Course Code: 311 Course Name:CS8691 ARTIFICIAL INTELLIGENCE

C311.1	Use appropriate search algorithms for any AI problem
C311.2	Represent a problem using first order and predicate logic
C311.3	Provide the apt agent strategy to solve a given problem
C311.4	Design software agents to solve a problem
C311.5	Design applications for NLP that use Artificial Intelligence.

Course Code: 312 Course Name:CS8601 MOBILE COMPUTING

C312.1	Explain the basics of mobile telecommunication systems
C312.2	Illustrate the generations of telecommunication systems in wireless networks
C312.3	Determine the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network
C312.4	Explain the functionality of Transport and Application layers
C312.5	Develop a mobile application using android/blackberry/ios/Windows SDK

Course Code: 313 Course Name:CS8602 COMPILER DESIGN

C313.1	Understand the different phases of compiler.
C313.2	Design a lexical analyzer for a sample language.
C313.3	Apply different parsing algorithms to develop the parsers for a given grammar.
C313.4	Understand syntax-directed translation and run-time environment.
C313.5	Learn to implement code optimization techniques and a simple code generator.
C313.6	Design and implement a scanner and a parser using LEX and YACC tools.

Course Code: 314 Course Name:CS8603 DISTRIBUTED SYSTEMS

C314.1	Elucidate the foundations and issues of distributed systems
C314.2	Understand the various synchronization issues and global state for distributed systems.
C314.3	Understand the Mutual Exclusion and Deadlock detection algorithms in distributed systems
C314.4	Describe the agreement protocols and fault tolerance mechanisms in distributed systems
C314.5	Describe the features of peer-to-peer and distributed shared memory systems

Course Code: 315 Course Name:CS8075 DATA WAREHOUSING AND DATA MINING

C315.1	Design a Data warehouse system and perform business analysis with OLAP tools.

C315.2	Apply suitable pre-processing and visualization techniques for data analysis
C315.3	Apply association rule mining techniques for data analysis
C315.4	Apply appropriate classification and clustering techniques for data analysis
C315.5	To study algorithms for finding hidden and interesting patterns in data

Course Code: 316 Course Name:CS8661 INTERNET PROGRAMMING LABORATORY

C316.1	Construct Web pages using HTML/XML and style sheets.
C316.2	Build dynamic web pages with validation using Java Script objects and by applying different event handling mechanisms.
C316.3	Develop dynamic web pages using server side scripting.
C316.4	Use PHP programming to develop web applications.
C316.5	Construct web applications using AJAX and web services

Course Code: 317 Course Name:CS8662 MOBILE APPLICATION DEVELOPMENT LABORATORY

C317.1	Develop mobile applications using GUI and Layouts.
C317.2	Develop mobile applications using Event Listener.
C317.3	Develop mobile applications using Databases.
C317.4	Develop mobile applications using RSS Feed, Internal/External Storage, SMS, Multi-threading and GPS.
C317.5	Analyze and discover own mobile app for simple needs.

Course Code: 318 Course Name:HS8581 PROFESSIONAL COMMUNICATION

C318.1	Make effective presentations
C318.2	Participate confidently in Group Discussions.
C318.3	Attend job interviews and be successful in them.
C318.4	Develop adequate Soft Skills required for the workplace
C318.5	To equip students with effective speaking and listening skills in English.

Course Code: 401 Course Name:MG8591 PRINCIPLES OF MANAGEMENT

C401.1	Upon completion of the course, students will be able to have clear understanding of managerial functions like planning, organizing, staffing, leading & controlling.
C401.2	Able to direct a group and control the group.
C401.3	have same basic knowledge on international aspect of management
C401.4	The students are exposed to the basic knowledge on international aspect of management
C401.5	to learn the application of the principles in an organization .

Course Code: 402 Course Name:CS8792 CRYPTOGRAPHY AND NETWORK SECURITY

C402.1	Understand the fundamentals of networks security, security architecture, threats and vulnerabilities
C402.2	Apply the different cryptographic operations of symmetric cryptographic algorithms
C402.3	Apply the different cryptographic operations of public key cryptography
C402.4	Apply the various Authentication schemes to simulate different applications.
C402.5	Understand various Security practices and System security standards

Course Code: 403 Course Name:CS8791 CLOUD COMPUTING

C403.1	Articulate the main concepts, key technologies, strengths and limitations of cloud computing.
C403.2	Learn the key and enabling technologies that help in the development of cloud.
C403.3	Develop the ability to understand and use the architecture of compute and storage cloud, service and delivery models.
C403.4	Explain the core issues of cloud computing such as resource management and security.
C403.5	Be able to install and use current cloud technologies.

Course Code: 404 Course Name:SOFTWARE PROJECT MANAGEMENT

C404.1	At the end of the course the students will be able to practice Project Management principles while developing a software.
C404.2	Gain extensive knowledge about the basic project management concepts, framework and the process models.
C404.3	Obtain adequate knowledge about software process models and software effort estimation techniques.
C404.4	Estimate the risks involved in various project activities.
C404.5	Learn staff selection process and the issues related to people management

Course Code: 405 Course Name:CS8088 WIRELESS ADHOC AND SENSOR NETWORKS

C405.1	Identify different issues in wireless ad hoc and sensor networks .
C405.2	To analyze protocols developed for ad hoc and sensor networks
C405.3	To identify and understand security issues in ad hoc and sensor networks

C405.4	To learn about the Transport Layer protocols and their QoS for ad hoc and sensor networks
C405.5	To understand the working of MAC and Routing Protocols for ad hoc and sensor networks

Course Code:406 Course Name:OBM752 HOSPITAL MANAGEMENT

C406.1	Explain the principles of hospital administration
C406.2	identify the importance of human resource management
C406.3	list various marketing research techniques
C406.4	identify information management systems and its uses
C406.5	understand safety procedures followed n hospitals

Course Code: 407 Course Name:CS8711 CLOUD COMPUTING LABORATORY

C407.1	Configure various virtualization tools such as Virtual Box, VMware workstation.
C407.2	Design and deploy a web application in a PaaS environment.
C407.3	Learn how to simulate a cloud environment to implement new schedulers.
C407.4	Install and use a generic cloud environment that can be used as a private cloud.
C407.5	Manipulate large data sets in a parallel environment.

Course Code: 408 Course Name:SECURITY LABORATORY

C408.1	Develop code for classical Encryption Techniques to solve the problems.
C408.2	Build cryptosystems by applying symmetric and public key encryption algorithms.
C408.3	Construct code for authentication algorithms.
C408.4	Develop a signature scheme using Digital signature standard.
C408.5	Demonstrate the network security system using open source tools

Course Code: 409 Course Name:CS8080 INFORMATION RETRIEVAL TECHNIQUES

C409.1	Use an open source search engine framework and explore its capabilities
C409.2	Apply appropriate method of classification or clustering.
C409.3	Design and implement innovative features in a search engine.
C409.4	Design and implement a recommender system.
C409.5	To learn different techniques of recommender system

Course Code: 410 Course Name:GE8076 PROFESSIONAL ETHICS IN ENGINEERING

C410.1	Upon completion of the course, the student should be able to apply ethics in society.
C410.2	Distinguish between Moral and Ethics.
C410.3	Helps to discuss the ethical issues related to engineering
C410.4	Realize the responsibility & rights in the society.
C410.5	discuss the ethical issues related to engineering and realize the responsibilities and rights in the society.

Course Code: 411 Course Name:CS8811 PROJECT WORK

C411.1	Gather, organize, summarize and interpret technical literature with the purpose of formulating a project proposal.
C411.2	Write a technical report summarizing state-of-the-art on an identified topic.
C411.3	Present the study using graphics and multimedia techniques.
C411.4	Define intended future work based on the technical review.
C411.5	Select and apply modern tools and technologies.