

# COURSE OUTCOME STATEMENTS

## III SEM TO VII SEM

### REGULATION 2017

### LIST OF COURSES

S.NO	COURSE CODE	SUBJECT CODE	SUBJECT NAME
<b>SEMESTER- III</b>			
1	C201	MA8351	Discrete Mathematics
2	C202	CS8351	Digital Principles And System Design
3	C203	CS8391	Data Structures
4	C204	CS8392	Object Oriented Programming
5	C205	EC8394	Analog and Digital Communication
6	C206	CS8381	Data Structures Laboratory
7	C207	CS8383	Object Oriented Programming Laboratory
8	C208	CS8382	Digital Systems Laboratory
9	C209	HS8381	Interpersonal Skills/Listening and Speaking
<b>SEMESTER- IV</b>			
10	C210	MA8391	Probability and Statistics
11	C211	CS8491	Computer Architecture
12	C212	CS8492	Database Management Systems
13	C213	CS8451	Design and Analysis of Algorithms
14	C214	CS8493	Operating Systems
15	C215	GE8291	Environmental Science and Engineering
16	C216	CS8481	Database Management Systems Laboratory
17	C217	CS8461	Operating Systems Laboratory
18	C218	HS8461	Advanced Reading and Writing

<b>SEMESTER-V</b>			
19	C301	MA8551	Algebra and Number Theory
20	C302	CS8591	Computer Networks
21	C303	EC8691	Microprocessors and Microcontrollers
22	C304	IT8501	Web Technology
23	C305	CS8494	Software Engineering
24	C306	OCE552	Open Elective I-Geographic Information System
25	C307	EC8681	Microprocessors and Microcontrollers Laboratory
26	C308	CS8581	Networks Laboratory
27	C309	IT8511	Web Technology Laboratory
<b>SEMESTER-VI</b>			
28	C310	IT8601	Computational Intelligence
29	C311	CS8592	Object Oriented Analysis and Design
30	C312	IT8602	Mobile Communication
31	C313	CS8091	Big Data Analytics
32	C314	CS8092	Computer Graphics and Multimedia
33	C315	IT8076	Software Testing
34	C316	CS8662	Mobile Application Development Laboratory
35	C317	CS8582	Object Oriented Analysis and Design Laboratory
36	C318	IT8611	Mini Project
37	C319	HS8581	Professional Communication Laboratory
<b>SEMESTER-VII</b>			
38	C401	MG8591	Principles of Management
39	C402	CS8792	Cryptography and Network Security
40	C403	CS8791	Cloud Computing
41	C404	GE8077	Total Quality Management
42	C405	CS8079	Human Computer Interaction
43	C406	OME752	Supply Chain Management
44	C407	IT8711	FOSS and Cloud Computing Laboratory
45	C408	IT8761	Security Laboratory
<b>SEMESTER-VIII</b>			
46	C409	GE8076	Professional Ethics in Engineering
47	C410	IT8005	Electronic Commerce
48	C411	IT8811	Project Work

## SEMESTER - III

### MA8351 – DISCRETE MATHEMATICS

<b>C201.1</b>	Identify the concepts needed to test the logic of a program
<b>C201.2</b>	Solve problems in mathematical induction, counting principles, permutation and combination
<b>C201.3</b>	Solve problems in recurrence relations
<b>C201.4</b>	Utilize graph theory concepts in computer science
<b>C201.5</b>	Utilize the concepts and properties of algebraic structures such as groups, rings and fields.
<b>C201.6</b>	Solve problems in lattices and Boolean algebra

### CS8351 – DIGITAL PRINCIPLES AND SYSTEM DESIGN

<b>C202.1</b>	Simplify Boolean functions using K-map
<b>C202.2</b>	Design and analyze Combinational circuits with HDL description
<b>C202.3</b>	Design and analyze Sequential circuits
<b>C202.4</b>	Design and analyze Sequential circuits (Registers and Counters) with HDL description
<b>C202.5</b>	Design and analyze Asynchronous Sequential circuits
<b>C202.6</b>	Implement designs using Programmable Logic Devices

### CS8391 – DATA STRUCTURES

<b>C203.1</b>	Implement abstract data types for linked list data structure and apply for problem solution
<b>C203.2</b>	Examine abstract data types for stack and queue data structure and apply for problem solution
<b>C203.3</b>	Examine abstract data types for basic tree data structure (BST, Expression trees, AVL trees) and apply for problem solution
<b>C203.4</b>	Implement abstract data types for advanced tree (B-Trees, B+ Tree, Threaded Binary Tree) and heap data structures and apply for problem solution
<b>C203.5</b>	Inspect abstract data types for graph data structures and apply for problem solution
<b>C203.6</b>	Critically analyze the various sorting, searching algorithms, and hashing techniques

### **CS8392 – OBJECT ORIENTED PROGRAMMING**

<b>C204.1</b>	Develop Java programs based on OOP principles
<b>C204.2</b>	Develop and test Java programs based on inheritance and interfaces
<b>C204.3</b>	Build and test Java applications using exceptions and I/O streams
<b>C204.4</b>	Develop and test Java applications with threads
<b>C204.5</b>	Build Java applications with generic classes.
<b>C204.6</b>	Develop and test interactive Java programs with Swings

### **EC8394 – ANALOG AND DIGITAL COMMUNICATION**

<b>C205.1</b>	Make use of the principles of analog communication techniques
<b>C205.2</b>	Make use of the principles of pulse communication techniques
<b>C205.3</b>	Utilize the fundamentals of data communication
<b>C205.4</b>	Utilize the principles of digital communication techniques
<b>C205.5</b>	Solve source coding and error control coding problems
<b>C205.6</b>	Make use of the fundamentals of multi-user radio communication

### **CS8381 – DATA STRUCTURES LABORATORY**

<b>C206.1</b>	Develop and test C programs to implement linear data structures
<b>C206.2</b>	Use appropriate linear data structures for the given problem
<b>C206.3</b>	Develop and test C programs to implement non-linear data structures
<b>C206.4</b>	Use and test appropriate non-linear data structures for the given problem
<b>C206.5</b>	Develop and test C programs for implementing sorting and searching algorithms
<b>C206.6</b>	Use and test appropriate hashing techniques for the given problem

### **CS8383 – OBJECT ORIENTED PROGRAMMING LABORATORY**

<b>C207.1</b>	Develop and test Java programs to implement simple applications that make use of classes and packages
<b>C207.2</b>	Develop and test Java programs to implement simple applications that make use of inheritance and interfaces
<b>C207.3</b>	Develop and test Java programs to implement applications with array list and exception handling
<b>C207.4</b>	Develop and test Java programs to implement applications with multi-threading
<b>C207.5</b>	Develop and test Java programs to implement applications with file processing
<b>C207.6</b>	Develop and test Java programs to implement applications with generic programming and event handling

### **CS8382 – DIGITAL SYSTEMS LABORATORY**

<b>C208.1</b>	Implement and inspect simplified combinational circuits using logic gate
<b>C208.2</b>	Implement and inspect simplified combinational circuits using MSI devices
<b>C208.3</b>	Implement and inspect various shift registers
<b>C208.4</b>	Implement and inspect various counters
<b>C208.5</b>	Model and examine combinational circuits using HDL
<b>C208.6</b>	Model and examine sequential circuits using HDL

### **HS8381 – INTERPERSONAL SKILLS/LISTENING AND SPEAKING**

<b>C209.1</b>	Listen and respond appropriately
<b>C209.2</b>	Participate in group discussions
<b>C209.3</b>	Make effective presentations
<b>C209.4</b>	Participate confidently and appropriately in conversations both formal and informal
<b>C209.5</b>	Attend the classes regularly
<b>C209.6</b>	Submit the Observation and Record regularly.

## SEMESTER - IV

### MA8391 – PROBABILITY AND STATISTICS

<b>C210.1</b>	Apply the fundamental knowledge of the concepts of probability which can describe real life phenomenon
<b>C210.2</b>	Compare and Contrast various standard distributions which can describe real life phenomenon
<b>C210.3</b>	Make use of the basic concepts of one and two dimensional random variables in engineering applications
<b>C210.4</b>	Examine the concept of testing of hypothesis for small and large samples in real life problems
<b>C210.5</b>	Inspect the basic concepts of classifications of design of experiments for the engineering problems.
<b>C210.6</b>	Examine the statistical techniques used in engineering statistical quality control and management problems.

### CS8491 – COMPUTER ARCHITECTURE

<b>C211.1</b>	Identify the basic organization of computer system and performance of a computer system.
<b>C211.2</b>	Utilize the basic instruction set, operations and addressing modes of MIPS architecture.
<b>C211.3</b>	Examine the procedure involved in designing ALU
<b>C211.4</b>	Compare and Contrast the non-pipelined and pipelined data path implementation of MIPS
<b>C211.5</b>	Inspect Parallel Processing challenges, Hardware Multithreading and Multicore architectures
<b>C211.6</b>	Examine the performance of Memory and I/O systems.

### CS8492 – DATABASE MANAGEMENT SYSTEMS

<b>C212.1</b>	Classify the modern and futuristic database applications based on size and complexity.
<b>C212.2</b>	Construct Relational model from ER model to perform database design effectively and optimize queries using normalization criteria.
<b>C212.3</b>	Examine the database transaction concepts
<b>C212.4</b>	Compare and contrast various indexing strategies in different database systems
<b>C212.5</b>	Examine query optimization algorithms and query optimization techniques
<b>C212.6</b>	Compare and Contrast the distributed database architectures and traditional database architecture.

### CS8451 – DESIGN AND ANALYSIS OF ALGORITHMS

<b>C213.1</b>	Examine mathematically the notion of algorithm, asymptotic notations, and algorithmic efficiency with properties.
<b>C213.2</b>	Inspect the time and space complexity of the algorithms designed using brute force and divide and conquer methods
<b>C213.3</b>	Inspect the time and space complexity of the algorithms designed using dynamic programming techniques.
<b>C213.4</b>	Inspect the time and space complexity of the algorithms designed using greedy techniques.
<b>C213.5</b>	Examine various iterative improvement techniques.
<b>C213.6</b>	Identify the limitations of algorithm power.

### CS8493 – OPERATING SYSTEMS

<b>C214.1</b>	Explain the basics of operating systems like kernel, shell, types and views of operating systems
<b>C214.2</b>	Examine process management with various Scheduling algorithms
<b>C214.3</b>	Inspect the principles of concurrency and deadlock.
<b>C214.4</b>	Compare and Contrast various memory management schemes.
<b>C214.5</b>	Examine file system implementation, protection and security mechanisms.
<b>C214.6</b>	Compare iOS and Android operating systems and perform administrative tasks on Linux servers.

### GE8291 – ENVIRONMENTAL SCIENCE AND ENGINEERING

<b>C215.1</b>	Summarize the concepts of Biodiversity, environment and ecosystem
<b>C215.2</b>	Outline various sources of environmental pollution
<b>C215.3</b>	Identify various natural resources such as Forest, Water and Mineral
<b>C215.4</b>	Identify various natural resources such as Food, Energy and Land
<b>C215.5</b>	Summarize various social issues and impact related to environment.
<b>C215.6</b>	Explain the impact of human population toward environment sustainability

**CS8481 – DATABASE MANAGEMENT SYSTEMS  
LABORATORY**

<b>C216.1</b>	Make use of typical data definitions and manipulation commands
<b>C216.2</b>	Test the implementation of nested and join queries
<b>C216.3</b>	Develop simple application using views, sequences and synonyms.
<b>C216.4</b>	Inspect and implement applications that require front-end tools
<b>C216.5</b>	Examine database programming using implicit and explicit cursors.
<b>C216.6</b>	Test the implementation of Tables, views, functions, procedures, triggers and exception handling.

**CS8461 – OPERATING SYSTEMS LABORATORY**

<b>C217.1</b>	Make use of Linux commands, develop shell programs, implement system calls and simulate Linux commands
<b>C217.2</b>	Test the implementation of processes and IPC
<b>C217.3</b>	Compare the performance of various CPU scheduling algorithms
<b>C217.4</b>	Experiment with the implementation of semaphores, deadlock avoidance algorithm and deadlock detection algorithm
<b>C217.5</b>	Compare the implementation of various memory allocation, memory management and page replacement strategies.
<b>C217.6</b>	Examine the implementation of file allocation and file organization strategies.

**HS8461 – ADVANCED READING AND WRITING**

<b>C218.1</b>	Write different types of Essays
<b>C218.2</b>	Write winning job applications
<b>C218.3</b>	Read and evaluate texts critically
<b>C218.4</b>	Display critical thinking in various professional contexts
<b>C218.5</b>	Attend the classes regularly
<b>C218.6</b>	Submit the Observation and Record regularly.

## SEMESTER - V

### MA8551 – ALGEBRA AND NUMBER THEORY

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

### CS8591 – COMPUTER NETWORKS

<b>C302.1</b>	Explain the basic layers and its functions, and transmission media in computer networks
<b>C302.2</b>	Examine the performance of different types of networks
<b>C302.3</b>	Inspect the functionalities of data link and media access control protocols
<b>C302.4</b>	Examine different routing algorithms
<b>C302.5</b>	Identify appropriate protocol to be used at the transport layer
<b>C302.6</b>	Explain the working of various application layer protocols.

### EC8691 – MICROPROCESSORS AND MICROCONTROLLERS

<b>C303.1</b>	Develop 8086 microprocessor based assembly language programs for specified problem
<b>C303.2</b>	Examine the 8086 signals, bus structure, I/O programming and multiprocessor configurations
<b>C303.3</b>	Inspect various I/O interfacing mechanisms with 8086 microprocessor
<b>C303.4</b>	Examine various programming and application case studies based on 8086 microprocessor
<b>C303.5</b>	Develop 8051 microcontroller based assembly language programs for specified problem
<b>C303.6</b>	Examine various interfacing mechanisms with 8051 microcontroller

### IT8501 – WEB TECHNOLOGY

<b>C304.1</b>	Develop simple web pages using markup languages like HTML and XHTML
<b>C304.2</b>	Build dynamic web pages using DHTML and Java script that is easy to navigate and use
<b>C304.3</b>	Develop server side web pages that have to process request from client side web pages
<b>C304.4</b>	Develop applications using JSP
<b>C304.5</b>	Represent web data using XML and develop web pages using JSP
<b>C304.6</b>	Explain various web services and how they interact

### CS8494 – SOFTWARE ENGINEERING

<b>C305.1</b>	Identify the key activities in managing a software project
<b>C305.2</b>	Compare different process models
<b>C305.3</b>	Summarize the concepts of requirements engineering and analysis modelling
<b>C305.4</b>	Make use of systematic procedure for software design and deployment
<b>C305.5</b>	Compare and contrast the various software testing and maintenance strategies
<b>C305.6</b>	Develop project schedule, identify project costs and efforts required

### OCE552 – GEOGRAPHIC INFORMATION SYSTEM

<b>C306.1</b>	Explain the fundamental concepts about Geographic Information System
<b>C306.2</b>	Summarize the different types of data models
<b>C306.3</b>	Explain about data input and topology
<b>C306.4</b>	Make use of different data analysis tools for data quality and standards
<b>C306.5</b>	Demonstrate the different application areas of Geographic Information System with case studies

### EC8681 – MICROPROCESSORS AND MICROCONTROLLER LABORATORY

<b>C307.1</b>	Develop and Test 8086 based ALP for fixed and floating point arithmetic operations
<b>C307.2</b>	Develop and Test 8086 based ALP for moving data block without overlap, code conversion, decimal arithmetic and matrix operations

<b>C307.3</b>	Develop and Test 8086 based ALP for string manipulation, sorting, searching, password checking, printing RAM size, counters and time delay
<b>C307.4</b>	Develop and Test 8086 based ALP for interfacing various I/O
<b>C307.5</b>	Develop and Test 8051 based ALP for basic arithmetic and logical operations
<b>C307.6</b>	Develop and Test 8051 based ALP for square wave generation, finding 2 <sup>S</sup> compliment and converting unpacked BSD to ASCII

### **CS8581 – NETWORKS LABORATORY**

<b>C308.1</b>	Examine the use of various commands using a network protocol analyzer
<b>C308.2</b>	Experiment with TCP and UDP protocols to implement echo client, echo server, chat and file transfer
<b>C308.3</b>	Compare the performance of transport layer protocols
<b>C308.4</b>	Examine the performance of various network protocols
<b>C308.5</b>	Examine various routing algorithms
<b>C308.6</b>	Infer the importance and implementation of error correcting codes

### **IT8511 – WEB TECHNOLOGY LABORATORY**

<b>C309.1</b>	Test the working of simple web pages designed using markup languages like HTML and XHTML
<b>C309.2</b>	Examine dynamic web pages created using DHTML and Java script
<b>C309.3</b>	Test the working of server side web pages implemented for handling requests from client side web pages
<b>C309.4</b>	Inspect the installation of Apache Tomcat web server
<b>C309.5</b>	Categorize web data using XML and develop web pages using JSP
<b>C309.6</b>	Examine the interactions of web services

## SEMESTER - VI

### IT8601 – COMPUTATIONAL INTELLIGENCE

<b>C310.1</b>	Utilize search algorithms and genetic algorithms for problem solving.
<b>C310.2</b>	Make use of knowledge representation and reasoning techniques in applications which involve perception, reasoning and learning.
<b>C310.3</b>	Make use of fuzzy logic reasoning in applications which involve perception, reasoning and learning.
<b>C310.4</b>	Utilize Bayesian networks, hidden Markov model, supervised learning and decision tree approaches for various applications.
<b>C310.5</b>	Utilize linear regression and classification, Artificial Neural Networks for applications involves learning
<b>C310.6</b>	Make use of computational intelligence techniques for information retrieval.

### CS8592 – OBJECT ORIENTED ANALYSIS AND DESIGN

<b>C311.1</b>	Utilize unified process and use case diagrams for software design
<b>C311.2</b>	Construct static UML diagrams for software design process
<b>C311.3</b>	Construct dynamic UML diagrams for software design process
<b>C311.4</b>	Construct implementation UML diagrams for software design process
<b>C311.5</b>	Transform UML based software design into pattern based design using design patterns
<b>C311.6</b>	Utilize various testing methodologies for object oriented software design.

### IT8602 – MOBILE COMMUNICATION

<b>C312.1</b>	Summarize the basics of mobile telecommunication system and generations of mobile communication technologies
<b>C312.2</b>	Compare various MAC protocols such as TDMA, FDMA and CDMA
<b>C312.3</b>	Examine the various mobile telecommunication systems such as GSM, GPRS and UMTS
<b>C312.4</b>	Inspect the architectures of various wireless LAN technologies
<b>C312.5</b>	Determine the functionality of network layer and Identify a routing protocol for a given Adhoc networks
<b>C312.6</b>	Summarize the functionality of Transport and Application layer

### CS8091 – BIG DATA ANALYTICS

<b>C313.1</b>	Identify big data use cases, characteristics and make use of HDFS and Map-reduce programming model for data analytics
<b>C313.2</b>	Examine the data with clustering and classification techniques
<b>C313.3</b>	Discover the similarity of huge volume of data with association rule mining and examine recommender system
<b>C313.4</b>	Perform analytics on data streams
<b>C313.5</b>	Inspect NoSQL database and its management
<b>C313.6</b>	Examine the given data with R programming

### CS8092 – COMPUTER GRAPHICS AND MULTIMEDIA

<b>C314.1</b>	Make use of various illumination and color model during graphic design
<b>C314.2</b>	Design two dimensional graphics
<b>C314.3</b>	Design three dimensional graphics
<b>C314.4</b>	Utilize various transformation and clipping techniques for graphics
<b>C314.5</b>	Inspect the different types of multimedia file formats
<b>C314.6</b>	Design Basic 3d Scenes using Blender

### IT8076 – SOFTWARE TESTING

<b>C315.1</b>	Summarize software testing principles, origin of defect, cost of defects, defect classes and defect repository
<b>C315.2</b>	Design test cases suitable for a software development for different domains
<b>C315.3</b>	Identify suitable tests to be carried out and document test plans and test case designed
<b>C315.4</b>	Determine test planning based on the document
<b>C315.5</b>	Develop and validate a test plan
<b>C315.6</b>	Make use of automatic testing tools

## CS8662 – MOBILE APPLICATION DEVELOPMENT LABORATORY

<b>C316.1</b>	Design mobile applications using GUI and Layouts
<b>C316.2</b>	Design mobile applications using Event Listener
<b>C316.3</b>	Design mobile applications using Databases
<b>C316.4</b>	Design mobile applications using RSS Feed, Internal/External Storage
<b>C316.5</b>	Design mobile applications using SMS, Multithreading and GPS
<b>C316.6</b>	Inspect and discover own mobile app for simple needs

## CS8552 – OBJECT ORIENTED ANALYSIS AND DESIGN LABORATORY

<b>C317.1</b>	Identify and map basic software requirements in UML mapping
<b>C317.2</b>	Identify use cases and develop the Use Case model
<b>C317.3</b>	Test the compliance of the software with the SRS
<b>C317.4</b>	Identify the conceptual classes and develop a Domain Model and also derive from it a Class diagram
<b>C317.5</b>	Using the identified scenarios, find the interaction between objects and represent them using UML Sequence and Collaboration Diagrams
<b>C317.6</b>	Develop reusability and maintainability of the software system by applying appropriate design patterns

### IT8661 – MINI PROJECT

<b>C318.1</b>	Determine appropriate methodologies for solving problems related to real life situations using the engineering knowledge
<b>C318.2</b>	Comprehend the existing solutions and summarize problem definition
<b>C318.3</b>	Determine design strategies for providing solution to a problem
<b>C318.4</b>	Acquire skills of collaboration and working in teams.
<b>C318.5</b>	Communicate ideas clearly both orally and in written

### HS8551 – PROFESSIONAL COMMUNICATION LABORATORY

<b>C319.1</b>	Develop adequate Soft Skills required for the workplace
<b>C319.2</b>	Make use of effective presentations
<b>C319.3</b>	Utilize Group Discussions or increasing the confidence level
<b>C319.4</b>	Develop interview etiquette and be successful in interview process
<b>C319.5</b>	Develop long-term career plan, stress and time management, respecting social protocols

## SEMESTER - VII

### MG8591 – PRINCIPLES OF MANAGEMENT

<b>C401.1</b>	Describe the influence of historical forces on the current practice of management and primary types of managers and the roles they play
<b>C401.2</b>	Summarize different types of organization, culture, environment and current trends and issues in management
<b>C401.3</b>	Explain planning process, types, policies, strategic management, tools, techniques and decision making steps and process.
<b>C401.4</b>	Describe the purpose of organization, chart, structure and human resource management
<b>C401.5</b>	Summarize the behavioral skills, motivation theories, techniques and leadership skills needed for directing.
<b>C401.6</b>	Outline the system and process of controlling

### CS8792 – CRYPTOGRAPHY AND NETWORK SECURITY

<b>C402.1</b>	Identify the fundamentals of networks security, security architecture, threats and vulnerabilities
<b>C402.2</b>	Examine the mathematical concepts to deal with symmetric key and asymmetric key cryptography
<b>C402.3</b>	Inspect the use of the different cryptographic operations of symmetric cryptographic algorithms
<b>C402.4</b>	Inspect the use of the different cryptographic operations of public key cryptography
<b>C402.5</b>	Examine the various Authentication schemes to simulate different applications
<b>C402.6</b>	Make use of various Security practices and System security standards

### CS8791 – CLOUD COMPUTING

<b>C403.1</b>	Inspect the main concepts, key technologies, strengths and limitations of cloud computing
<b>C403.2</b>	Identify the key and enabling technologies that help in the development of cloud
<b>C403.3</b>	Examine the use of architecture of compute and storage cloud, service and delivery models
<b>C403.4</b>	Examine the core issues of cloud computing such as resource management and security
<b>C403.5</b>	Build and Make use of current cloud technologies
<b>C403.6</b>	Examine the appropriate technologies, algorithms and approaches for implementation and use of cloud

### **GE8077 – TOTAL QUALITY MANAGEMENT**

<b>C404.1</b>	Develop an understanding on quality management philosophies and frameworks
<b>C404.2</b>	Develop in-depth knowledge on various principles of total quality management
<b>C404.3</b>	Make use of quality tools and techniques such as seven management tools, Six Sigma, Benchmarking, FMEA
<b>C404.4</b>	Make use of quality tools and techniques such as cost of quality, QFD, Taguchi Loss function, TPM and performance measures
<b>C404.5</b>	Outline the various quality management standards
<b>C404.6</b>	Summarize the various environmental management system standard

### **CS8079 – HUMAN COMPUTER INTERACTION**

<b>C405.1</b>	Examine the effective dialog for HCI
<b>C405.2</b>	Inspect interactive design process in human computer interaction
<b>C405.3</b>	Inspect software design process in human computer interaction
<b>C405.4</b>	Examine various models and theories related to human computer interaction
<b>C405.5</b>	Utilize the HCI implications for designing multimedia/ ecommerce/ e-learning Web sites
<b>C405.6</b>	Build meaningful user interface

### **OME752 – SUPPLY CHAIN MANAGEMENT**

<b>C406.1</b>	Summarize the role of logistics in supply chain management
<b>C406.2</b>	Explain the concept of supply chain network design
<b>C406.3</b>	Interpret the logistics in supply chain management
<b>C406.4</b>	Explain the concept of sourcing and coordination in supply chain management
<b>C406.5</b>	Summarize the role of information technology in supply chain management

### IT8711 – FOSS & CLOUD COMPUTING LABORATORY

<b>C407.1</b>	Develop applications using gcc, make, version control system
<b>C407.2</b>	Examine the working of web applications after deployed in Paas environment
<b>C407.3</b>	Inspect various virtualization tools such as Virtual Box, VMware workstation
<b>C407.4</b>	Test for implementing new schedulers through simulation in cloud environment
<b>C407.5</b>	Make use of a generic cloud environment that can be used as a private cloud.
<b>C407.6</b>	Inspect the manipulation of large data sets in a parallel environment

### IT8761 – SECURITY LABORATORY

<b>C408.1</b>	Develop code for classical Encryption Techniques to solve the problems.
<b>C408.2</b>	Examine cryptosystems by applying symmetric and public key encryption algorithms
<b>C408.3</b>	Test the use of the code for authentication algorithms
<b>C408.4</b>	Examine a signature scheme using Digital signature standard
<b>C408.5</b>	Inspect the network security system using open source tools for IDS
<b>C408.6</b>	Inspect the network security system using open source tools for automated attack and penetration tools, defeating malware

## SEMESTER – VIII

### GE8076 –PROFESSIONAL ETHICS IN ENGINEERING

<b>C409.1</b>	Create awareness on human values and apply ethics in society.
<b>C409.2</b>	Identify an ethical issue and assess variety of moral issues using ethical theories in engineering.
<b>C409.3</b>	Analyze engineering, social experimentation and engineers as responsible experimenters
<b>C409.4</b>	Infer engineers' safety and their responsibilities, professional rights, employee rights, and intellectual property rights.
<b>C409.5</b>	Interpret various types of ethics like business ethics, environmental ethics and computer ethics.
<b>C409.6</b>	Take part an engineer's as managers, consulting engineers, engineers as expert witness and advisors.

### IT8005 – ELECTRONIC COMMERCE

<b>C410.1</b>	Design Website using HTML CSS and JS.
<b>C410.2</b>	Design Responsive sites.
<b>C410.3</b>	Construct Web Apps, manage, maintain and support Web Apps.
<b>C410.4</b>	Summarize the basic concepts and technologies used in the field of management information systems.
<b>C410.5</b>	Identify the ethical, social, and security issues of information systems.
<b>C410.6</b>	Examine how some of the technologies detailed in the course are used in concert to realize atypical commercial system.

### IT8811 – PROJECT WORK

<b>C411.1</b>	Determine appropriate methodologies for solving problems related to real life situations using the engineering knowledge.
<b>C411.2</b>	Comprehend the existing solutions and summarize problem definition.
<b>C411.3</b>	Determine design strategies for providing solution to a problem.
<b>C411.4</b>	Acquire skills of collaboration and working in teams.
<b>C411.5</b>	Select and Evaluate different tools and techniques for validating the solution to the problem under consideration.
<b>C411.6</b>	Communicate ideas clearly both orally and in written.