Course Outcomes (CO) (R 2013)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Code: C101 Course Name:HS6151 Technical English – I

C101.1	Speak clearly, confidently, comprehensibly
C101.2	Write cohesively and coherently and flawlessly avoiding grammatical errors, using a wide vocabulary range, organizing their ideas logically on a topic.
C101.3	Read different genres of texts adopting various reading strategies.
C101.4	Listen/view and comprehend different spoken discourses/excerpts in different accents
C101.5	communicate with one or many listeners using appropriate communicative strategies.

Course Code: C102 Course Name:MA6151 MATHEMATICS – I

C102.1	This course equips students to have basic knowledge and understanding in one fields of materials, integral and differential calculus.
C102.2	To develop the use of matrix algebra techniques this is needed by engineers for practical applications.
C102.3	To familiarize the student with functions of several variables. This is needed in many branches of engineering.
C102.4	To introduce the concepts of improper integrals, Gamma, Beta and Error functions which are needed in engineering applications.
C102.5	Apply various techniques in solving differential equations.

Course Code: C103 Course Name:PH6151 ENGINEERING PHYSICS I

C103.1	The students will have knowledge on the basics of physics related to properties of matter, optics, acoustics etc
C103.2	To impart knowledge on crystal structure and growing techniques.
C103.3	To understand the response and characteristics of matter for external forces.
C103.4	To understand the principle of laser & Fiber Optics action, types and its applications.
C103.5	Apply fundamental principles to solve practical problems related to materials used for engineering applications

Course Code: C104 Course Name:CY6151 ENGINEERING CHEMISTRY I

C104.1	To make the students conversant with basics of polymer chemistry
C104.2	To acquaint the student with concepts of important photo physical and photochemical processes and spectroscopy.
C104.3	To develop an understanding of the basic concepts of phase rule and its applications to single and two component systems and appreciate the purpose and significance of alloys
C104.4	To acquaint the students with the basics of nano materials, their properties and applications.
C104.5	To make the student acquire sound knowledge of second law of thermodynamics and second law based derivations of importance in engineering applications.

Course Code: C105 Course Name:GE6151 COMPUTER PROGRAMMING

C105.1	Design C Programs for problems.
C105.2	Write and execute C programs for simple applications
C105.3	Learn the organization of a digital computer.
C105.4	Learn to use arrays, strings, functions, pointers, structures and unions in C.
C105.5	Convert the number system and their representation.

Course Code: C106 Course Name:GE6152 ENGINEERING GRAPHICS

C106.1	Perform free hand sketching of basic geometrical constructions and multiple views of objects
C106.2	Do orthographic projection of lines and plane surfaces.
C106.3	Draw projections and solids and development of surfaces.
C106.4	Prepare isometric and perspective sections of simple solids
C106.5	Demonstrate computer aided drafting.

Course Code: C107 Course Name:GE6161 COMPUTER PRACTICES LABORATORY

C107.1	Be familiar with the use of Office software
C107.2	Be exposed to presentation and visualization tools
C107.3	Be exposed to problem solving techniques and flow charts
C107.4	Be familiar with programming in C and Learn to use Arrays, strings, functions, structures and unions.
C107.5	Be familiar with the use of Office software

Course Code: C108 Course Name:GE6162 ENGINEERING PRACTICES LABORATORY

C108.1	To provide exposure to the students with hands on experience on various basic engineering practices in Civil, Mechanical, Electrical and Electronics Engineering.
C108.2	Ability to fabricate carpentry components and pipe connections including plumbing works.
C108.3	Ability to use welding equipments to join the structures.
C108.4	Ability to fabricate electrical and electronics circuits.
C108.5	Ability to Illustrate on centrifugal pump, Air conditioner, operations of smithy, foundry and fittings

Course Code: C109 Course Name:GE6163 PHYSICS & CHEMISTRY LABORATORY

C109.1	To introduce different experiments to test basic understanding of physics concepts applied in optics, thermal physics and properties of
C109.2	The students will be outfitted with hands0on knowledge in the quantitative chemical analysis of water quality related parameters
C109.3	To make the student to acquire practical skills in the determination of water quality parameters through volumetric and instrumental an
C109.4	To acquaint the students with the determination of molecular weight of a polymer by vacometry
C109.5	To provide the basic practical exposure to all the engineering and technological streams in the field of chemistry.

Course Code: C110 Course Name:HS6251 TECHNICAL ENGLISH II

C110.1	Speak convincingly, express their opinions clearly, initiate a discussion, negotiate, argue using appropriate communicative strategies.
C110.2	Write effectively and persuasively and produce different types of writing such as narration, description, exposition and argument as well as creative, critical, analytical and evaluative writing.
C110.3	Read different genres of texts, infer implied meanings and critically analyse and evaluate them for ideas as well as for method of prese
C110.4	Listen/view and comprehend different spoken excerpts critically and infer unspoken and implied meanings.
C110.5	Initiate a discussion, negotiate, argue using appropriate communicative strategies.

Course Code: C111 Course Name:MA6251 MATHEMATICS II

C111.1	To make the student acquire sound knowledge of techniques in solving ordinary differential equations that model engineering problems
C111.2	To acquaint the student with the concepts of vector calculus, needed for problems in all engineering disciplines.
C111.3	To develop an understanding of the standard techniques of complex variable theory so as to enable the student to apply them with confidence, in application areas such as heat conduction, elasticity, fluid dynamics and flow the of electric current.
C111.4	To make the student appreciate the purpose of using transforms to create a new domain in which it is easier to handle the problem that is being investigated.
C111.5	Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.

Course Code: C112 Course Name:PH6251 ENGINEERING PHYSICS II

C112.1	The students will have the knowledge on physics of materials and that knowledge will be used by them in different engineering and technology applications
C112.2	To enrich the understanding of various types of materials and their applications in engineering and technology.
C112.3	To learn the properties of magnetic and superconducting materials.
C112.4	To impart knowledge on modern engineering materials.
C112.5	Modern engineering materials, Nano materials and Carbon nano tubes.

Course Code: C113 Course Name:CY6251 ENGINEERING CHEMISTRY II

C113.1	To make the students conversant with boiler feed water requirements, related problems and water treatment techniques.
C113.2	Principles of electrochemical reactions, redox reactions in corrosiion of materials and methods for corrosion prevention and protection
C113.3	Principles and generation of energy in batteries, nuclear reactors, solar cells, wind mills and fuel cells.
C113.4	Types of fuels, calorific value calculations, manufacture of solid, liquid and gaseous fuels.
C113.5	Preparation, properties and applications of engineering materials.

Course Code: C114 Course Name:CS6201 DIGITAL PRINCIPLES & SYSTEM DESIGN

C114.1	Perform arithmetic operations in any number system.
C114.2	Simplify the Boolean expression using K0Map and Tabulation techniques.
C114.3	Use boolean simplification techniques to design a combinational hardware circuit.
C114.4	Design and Analysis of a given digital circuit – combinational and sequential.
C114.5	Design using PLD.

Course Code: C115 Course Name:CS6202 PROGRAMMING & DATA STRUCTURES I

C115.1	Be familiar with the basics of C programming language.
C115.2	Be exposed to the concepts of ADTs
C115.3	Learn linear data structures – list, stack, and queue.
C115.4	Be exposed to sorting, searching algorithms
C115.5	Apply different Hashing and set algorithms

Course Code: C116 Course Name:GE6262 PHYSICS & CHEMISTRY LABORATORY II

C116.1	To introduce different experiments to test basic understanding of physics concepts applied in optics, thermal physics and properties of
C116.2	Ability to test materials by using their knowledge of applied physics principles in optics and properties of matter
C116.3	To make the student acquire practical skills in the wet chemical and instrumental methods for quantitative estimation of hardness, alkalinity, metal ion content, corrosion in metals and cement analysis.
C116.4	To conversant with hands0on knowledge in the quantitative chemical analysis of water quality related parameters, corrosion measurement and cement analysis.
C116.5	To develop the knowledge of spectrophotometry.

Course Code: C117 Course Name:CS6211 DIGITAL LABORATORY

C117.1	Understand the various logic gates.
C117.2	Be familiar with various combinational circuits
C117.3	Understand the various components used in the design of digital computers.
C117.4	Be exposed to sequential circuits
C117.5	Learn to use HDL
C117.6	Design and Implement a simple digital system.

Course Code: C118 Course Name:CS6212 PROGRAMMING & DATA STRUCTURES LABORATORY

C118.1	Be familiar with c programming
C118.2	Be exposed to implementing abstract data types
C118.3	Apply the different data structures for implementing solutions to practical problems.
C118.4	Develop searching and sorting programs.
C118.5	

Course Code: C201 Course Name:MA6351 TRANSFORMS & PARTIAL DIFFERENTIAL EQUATIONS

C201.1	The understanding of the mathematical principles on transforms and partial differential equations would provide them the ability to formulate and solve some of the physical problems of engineering.
C201.2	Able to understand of Fourier series analysis which is central to many applications in engineering apart from its use in solving boundary value problems
C201.3	To acquaint the student with Fourier transform techniques used in wide variety of situations
C201.4	Apply effective mathematical tools for the solutions of partial differential equations that model several physical processes and to develop Z transform techniques for discrete time systems.
C201.5	Use the effective mathematical tools for the solutions of partial differential equations by using Z transform techniques for discrete time

Course Code: C202 Course Name:CS6301 PROGRAMMING AND DATA STRUCTURES II

C202.1	Design problem solutions using Object Oriented Techniques.
C202.2	Apply the concepts of data abstraction, encapsulation and inheritance for problem solutions.
C202.3	Use the control structures of C++ appropriately.
C202.4	Critically analyse the various algorithms.
C202.5	Apply the different data structures to problem solutions.

Course Code: C203 Course Name:CS6302 DATABASE MANAGEMENT SYSTEMS

C203.1	Design Databases for applications.
C203.2	Use the Relational model, ER diagrams.

C203.3	Apply concurrency control and recovery mechanisms for practical problems.
C203.4	Design the Query Processor and Transaction Processor.
C203.5	Apply security concepts to databases

Course Code: C204 Course Name:CS6303 COMPUTER ARCHITECTURE

C204.1	Design arithmetic and logic unit.
C204.2	Design and analyze pipelined control units
C204.3	Evaluate performance of memory systems.
C204.4	Understand parallel processing architectures
C204.5	Understand the various memory systems and I/O communication

Course Code: C205 Course Name:CS6304 ANALOG AND DIGITAL COMMUNICATION

C205.1	Apply analog and digital communication techniques.
C205.2	Use data and pulse communication techniques.
C205.3	Analyze Source and Error control coding.
C205.4	Utilize multiuser radio communication.
C205.5	Analyze Source and Error control coding.

Course Code: C206 Course Name:GE6351 ENVIRONMENTAL SCIENCE & ENGINEERING

C206.1	Public awareness of environment at infant stage.
C206.2	Ignorance and incomplete knowledge has lead to misconceptions.
C206.3	Development and improvement in standard of living has lead to serious environmental disasters.
C206.4	Able to apply integrated themes and biodiversity.
C206.5	Able to apply natural resources, pollution control and waste management.

Course Code: C207 Course Name:CS6311: PROGRAMMING AND DATA STRUCTURES LABORATORY II

C207.1	Design and implement C++ programs for manipulating stacks, queues, linked lists, trees, and graphs.
C207.2	Develop recursive programs using trees and graphs.
C207.3	Apply the different data structures for implementing solutions to practical problems.
C207.4	Apply good programming design methods for program development.
C207.5	Develop recursive programs using trees and graphs.

Course Code: 208 Course Name: CS6312 DATABASE MANAGEMENT SYSTEMS LABORATORY

C208.1	Design and implement a database schema for a given problem domain
C208.2	Populate and query a database
C208.3	Prepare reports.
C208.4	Create and maintain tables using PL/SQL.
C208.5	Critically analyze the use of Tables, Views, Functions and Procedures

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	Ability to give information and converse with accuracy

Course Code: 210 Course Name:MA6453 PROBABILITY AND QUEUING THEORY

C210.1	The students will have a fundamental knowledge of the probability concepts.
C210.2	It also helps to understand and characterize phenomenon which evolve with respect to time in a probabilistic manner.
C210.3	Acquire skills in analyzing queueing models.
C210.4	Able to understand the mathematical support for real world
C210.5	Have the notion of sampling distributions and statistical techniques used in engineering and management problems.

Course Code: 211 Course Name:CS6551 COMPUTER NETWORKS

C211.1	Identify the components required to build different types of networks
C211.2	Choose the required functionality at each layer for given application
C211.3	Identify solution for each functionality at each layer
C211.4	Trace the flow of information from one node to another node in the network
C211.5	Demonstrate various types of routing techniques

Course Code: 212 Course Name:CS6401 OPERATING SYSTEMS

C212.1	Design various Scheduling algorithms.
C212.2	Perform administrative tasks on Linux Servers.
C212.3	Apply the principles of concurrency.
C212.4	Design deadlock, prevention and avoidance algorithms.
C212.5	Compare iOS and Android Operating Systems.

Course Code: 213 Course Name:CS6402 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	

Course Code: 214 Course Name:EC6504 MICROPROCESSOR AND MICROCONTROLLER

C214.1	Design and implement programs on 8086 microprocessor.
C214.2	Design I/O circuits.
C214.3	Design Memory Interfacing circuits.
C214.4	Design and implement 8051 microcontroller based systems.
C214.5	Modify existing algorithms to improve efficiency

Course Code: 215 Course Name:CS6403 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:CS6411 NETWORKS LABORATORY

C216.1	Use simulation tools
C216.2	Implement the various protocols.
C216.3	Analyse the performance of the protocols in different layers.
C216.4	Analyze various routing algorithms
C216.5	Trace the flow of information from one node to another node in the network

Course Code: 217 Course Name:CS6412 MICROPROCESSOR & MICROCONTROLLER LABORATORY

C217.1	Write ALP Programmes for fixed and Floating Point and Arithmetic
C217.2	Interface different I/Os with processor
C217.3	Generate waveforms using Microprocessors
C217.4	Execute Programs in 8051
C217.5	Explain the difference between simulator and Emulator

Course Code: 218 Course Name:CS6413 OPERATING SYSTEMS LABORATORY

C218.1	Implement deadlock avoidance, and Detection Algorithms
C218.2	Compare the performance of various CPU Scheduling Algorithm
C218.3	Critically analyze the performance of the various page replacement algorithms
C218.4	Create processes and implement IPC
C218.5	Implement File Organization and File Allocation Strategies

Course Code: 301 Course Name:MA6566 DISCRETE MATHEMATICS

C301.1	Have knowledge of the concepts needed to test the logic of a program.
C301.2	Have an understanding in identifying structures on many levels.
C301.3	Be aware of a class of functions which transform a finite set into another finite set which relates to input and output functions in compu
C301.4	Be aware of the counting principles.
C301.5	Be exposed to concepts and properties of algebraic structures such as groups, rings and fields.

Course Code: 302 Course Name:CS6501 INTERNET PROGRAMMING

C302.1	Implement Java programs.
C302.2	Create a basic website using HTML and Cascading Style Sheets.
C302.3	Design and implement dynamic web page with validation using JavaScript objects and by applying different event handling mechanisn
C302.4	Design rich client presentation using AJAX.
C302.5	Design and implement simple web page in PHP, and to present data in XML format.

Course Code: 303 Course Name:CS6502 OBJECT ORIENTED ANALYSIS AND DESIGN

C303.1	Design and implement projects using OO concepts.
C303.2	Use the UML analysis and design diagrams.
C303.3	Apply appropriate design patterns.
C303.4	Create code from design.
C303.5	Compare and contrast various testing techniques.

Course Code: 304 Course Name:CS6503 THEORY OF COMPUTATION

C304.1	Design Finite State Machine, Pushdown Automata, and Turing Machine.
C304.2	Explain the Decidability or Undecidability of various problems
C304.3	Solve the Computational Problems using formal languages
C304.4	Understand the basic concepts of complexity theory.
C304.5	Derive whether a problem is decidable or not.

Course Code: 305 Course Name:CS6504 COMPUTER GRAPHICS

C305.1	Design two dimensional graphics.
C305.2	Apply two dimensional transformations.
C305.3	Design three dimensional graphics.
C305.4	Apply three dimensional transformations.
C305.5	Apply Illumination and color models.

Course Code: 306 Course Name:CS6511 CASE TOOLS LABORATORY

C306.1	Design and implement projects using OO concepts.
C306.2	Use the UML analysis and design diagrams.
C306.3	Apply appropriate design patterns.
C306.4	Create code from design.
C306.5	Compare and contrast various testing techniques

Course Code: 307 Course Name:CS6512 INTERNET PROGRAMMING LABORATORY

C307.1	Design Web pages using HTML/XML and style sheets
C307.2	Create user interfaces using Java frames and applets.
C307.3	Create dynamic web pages using server side scripting.
C307.4	Write Client Server applications.
C307.5	Use the frameworks JSP Strut, Hibernate, Spring

Course Code: 308 Course Name:CS6513 COMPUTER GRAPHICS LABORATORY

C308.1	Create 3D graphical scenes using open graphics library suits
C308.2	Implement image manipulation and enhancement
C308.3	Create 2D animations using tools
C308.4	Apply clipping techniques to graphics.

C308.5	Design Basic 3d Scenes using Blender

Course Code: 309 Course Name:CS6601 DISTRIBUTED SYSTEMS

C309.1	Discuss trends in Distributed Systems.
C309.2	Apply network virtualization.
C309.3	Apply remote method invocation and objects.
C309.4	Design process and resource management systems.
C309.5	Describe the features of peer-to-peer and distributed shared memory systems

Course Code: 310 Course Name:IT6601 MOBILE COMPUTING

C310.1	Explain the basics of mobile telecommunication system
C310.2	Choose the required functionality at each layer for given application
C310.3	Identify solution for each functionality at each layer
C310.4	Use simulator tools and design Ad hoc networks
C310.5	Develop a mobile application.

Course Code: 311 Course Name:CS6660 COMPILER DESIGN

C311.1	Design and implement a prototype compiler.
C311.2	Apply the various optimization techniques.
C311.3	Use the different compiler construction tools.
C311.4	Learn the design principle of a compiler
C311.5	Design and implement a scanner and a parser using LEX and YACC tools

Course Code: 312 Course Name:IT6502 DIGITAL SIGNAL PROCESSING

C312.1	Perform frequency transforms for the signals.
C312.2	Design IIR and FIR filters.
C312.3	Finite word length effects in digital filters
C312.4	Apply the relevant theoretical knowledge to design the digital IIR/FIR filters for the given analog specifications
C312.5	Transform the time domain signal into frequency domain signal and vice-versa

Course Code:313 Course Name:CS6659 ARTIFICIAL INTELLIGENCE

C313.1	Identify problems that are amenable to solution by AI methods.
C313.2	Identify appropriate AI methods to solve a given problem.
C313.3	Formalise a given problem in the language/framework of different AI methods.
C313.4	Implement basic AI algorithms.
C313.5	Design and carry out an empirical evaluation of different algorithms on a problem

Course Code: 314 Course Name:CS6001 C# AND .NET PROGRAMMING

C314.1	List the major elements of the .NET frame work.
C314.2	Explain how C# fits into the .NET platform.
C314.3	Analyze the basic structure of a C# application
C314.4	Design and develop Web based applications on .NET
C314.5	Develop programs using C# on .NET

Course Code: 315 Course Name:IT6702 DATAWAREHOUSING & DATA MINING

C315.1	Apply data mining techniques and methods to large data sets
C315.2	Use data mining tools
C315.3	Compare and contrast the various classifiers.
C315.4	Apply appropriate classification and clustering techniques for data analysis
C315.5	Apply frequent pattern and association rule mining techniques for data analysis

Course Code: 316 Course Name:CS6611 MOBILE APPLICATION DEVELOPMENT LABORATORY

C316.1	Design and Implement various mobile applications using emulators.
C316.2	Deploy applications to handheld devices

C316.3	Able to use GPS in Mobile Application
C316.4	Able to apply application and business logic together
C316.5	Develop mobile applications using RSS Feed, Internal/External Storage, SMS, Multithreading and GPS.

Course Code: 317 Course Name:CS6612 COMPILER LABORATORY

C317.1	Implement the different Phases of compiler using tools
C317.2	Analyze the control flow and data flow of a typical program
C317.3	Optimize a given program
C317.4	Generate an assembly language program equivalent to a source language program
C317.5	Design and implement a scanner and a parser using LEX and YACC tools.

Course Code: 318 Course Name:GE6674 COMMUNICATION AND SOFT SKILLS LABORATORY BASED

C318.1	Take international examination such as IELTS and TOEFL
C318.2	Make presentations and Participate in Group Discussions.
C318.3	Successfully answer questions in interviews.
C318.4	Participate confidently and appropriately in conversations both formal and informal
C318.5	Make effective presentations

Course Code: 401 Course Name:CS6701 CRYPTOGRAPHY AND NETWORK SECURITY

C401.1	Understand OSI security architecture and classical encryption techniques.
C401.2	Acquire fundamental knowledge on the concepts of finite fields and number theory.
C401.3	Understand various block cipher and stream cipher models.
C401.4	Describe the principles of public key cryptosystems, hash functions and digital signature.
C401.5	Understand various Security practices and System security standards

Course Code: 402 Course Name:CS6702 GRAPH THEORY AND APPLICATIONS

C402.1	Be familiar with the most fundamental Graph Theory topics and results.
C402.2	Be exposed to the techniques of proofs and analysis.
C402.3	Use a combination of theoretical knowledge and independent mathematical thinking in creative investigation of questions in graph theo
C402.4	Validate and critically assess a mathematical proof.
C402.5	Apply suitable graph model and algorithm for solving applications.

Course Code: 403 Course Name:CS6703 GRID AND CLOUD COMPUTING

C403.1	Understand how Grid computing helps in solving large scale scientific problems.
C403.2	Gain knowledge on the concept of virtualization that is fundamental to cloud computing.
C403.3	Learn how to program the grid and the cloud.
C403.4	Understand the security issues in the grid and the cloud environment.
C403.5	Evaluate and choose the appropriate technologies, algorithms and approaches for implementation and use of cloud.

Course Code: 404 Course Name:CS6704 RESOURCE MANAGEMENT TECHNIQUES

C404.1	Learn to solve problems in linear programming and Integer programming.
C404.2	Be familiar with resource management techniques.
C404.3	Be exposed to CPM and PERT.
C404.4	Apply integer programming and linear programming to solve real-life applications.
C404.5	students will be able to have clear understanding of managerial functions like planning, organizing

Course Code: 405 Course Name:CS6003 ADHOC AND SENSOR NETWORKS

C405.1	Understand the design issues in ad hoc and sensor networks.
C405.2	Learn the different types of MAC protocols.
C405.3	Be familiar with different types of adhoc routing protocols.
C405.4	Learn the architecture and protocols of wireless sensor networks.
C405.5	To identify and understand security issues in ad hoc and sensor networks.

Course Code: 406 Course Name:IT6005 DIGITAL IMAGE PROCESSING

C406.1	Learn digital image fundamentals.
C406.2	Be exposed to simple image processing techniques.
C406.3	Be familiar with image compression and segmentation techniques.
C406.4	Learn to represent image in form of features.
C406.5	Learn the basics of segmentation, features extraction, compression and recognition methods for color models.

Course Code: 407 Course Name:IT6006 DATA ANALYTICS

C407.1	Apply the statistical analysis methods.
C407.2	Compare and contrast various soft computing frameworks.
C407.3	Design distributed file systems.
C407.4	Apply Stream data model.
C407.5	Use Visualisation techniques

Course Code: 408 Course Name:CS6711 SECURITY LABORATORY

C408.1	Be exposed to the different cipher techniques
C408.2	Learn to implement the algorithms DES, RSA,MD5,SHA-1
C408.3	Learn to use network security tools like GnuPG, KF sensor, Net Strumbler
C408.4	Use different open source tools for network security and analysis
C408.5	Demonstrate the network security system using open source tools

Course Code: 409 Course Name:CS6712 GRID AND CLOUD COMPUTING LABORATORY

C409.1	Be exposed to tool kits for grid and cloud environment.
C409.2	Be familiar with developing web services/Applications in grid framework
C409.3	Learn to run virtual machines of different configuration.
C409.4	Learn to use Hadoop
C409.5	Manipulate large data sets in a parallel environment.

Course Code: 410 Course Name:CS6801 MULTI-CORE ARCHITECTURES AND PROGRAMMING

C410.1	Understand the challenges in parallel and multi-threaded programming.
C410.2	Learn about the various parallel programming paradigms, and solutions.
C410.3	Develop programs using OpenMP and MPI.
C410.4	Compare and contrast programming for serial processors and programming for parallel processors.
C410.5	Design parallel programming solutions to common problems.

Course Code: 411 Course Name:IT6011 KNOWLEDGE MANAGEMENT

C411.1	Use the knowledge management tools
C411.2	Develop knowledge management Applications
C411.3	Design and develop enterprise applications
C411.4	
C411.5	

Course Code: 412 Course Name:GE6075 PROFESSIONAL ETHICS

C412.1	Upon completion of the course, the student should be able to apply ethics in society, discuss the ethical issues related to engineering and realize the responsibilities and rights in the society
C412.2	Judge the role of engineer in environmental issues, computer applications, weapons development, multinational corporations and Corporate Social Responsibility.
C412.3	Distinguish between Moral and Ethics.
C412.4	Helps to discuss the ethical issues related to engineering
C412.5	Realize the responsibility & rights in the society.

Course Code: 413 Course Name:CS6811 PROJECT WORK

C413.1	Gather, organize, summarize and interpret technical literature with the purpose of formulating a project proposal.
C413.2	Write a technical report summarizing state-of-the-art on an identified topic.
C413.3	Present the study using graphics and multimedia techniques.
C413.4	Define intended future work based on the technical review.

C413.5	Select and apply modern tools and technologies.