



MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY

Kalitheerthalkuppam, Puducherry- 605 107.

Department of Computer Science and Engineering

Course Outcome

2014-2018

New Regulation (2014-2018)

FIRST SEMESTER	
Course Code	Course Name
C101	Mathematics – I
C102	Physics
C103	Chemistry
C104	Basic electrical and electronics Engineering
C105	Engineering Thermodynamics
C106	Computer Programming
C107(P)	Computer Programming lab
C108(P)	Engineering Graphics
C109(P)	Basic Electrical & Electronics Laboratory
SECOND SEMESTER	
C110	Mathematics – II
C111	Material Science
C112	Environmental Science
C113	Basic Civil and Mechanical Engineering
C114	Engineering Mechanics
C115	Communicative English
C116(P)	Physics Laboratory
C117(P)	Chemistry Laboratory
C118(P)	Workshop Practice
C119(P)	NSS / NCC *
THIRD SEMESTER	
C201	Mathematics - III
C202	Electronics Devices and Circuits
C203	Object Oriented Programming and Design
C204	Digital System Design
C205	Data Structures

C206	Computer Organization and Architecture
C207(P)	Electronics Devices and Circuits Lab
C208(P)	Data Structures Laboratory
C209(P)	Digital system design Laboratory
FOURTH SEMESTER	
C210	Mathematics -IV
C211	Microprocessors and Microcontrollers
C212	Automata Languages and Computations
C213	Design and Analysis of Algorithms
C214	Object Oriented Programming
C215	Graphics and Image Processing
C216(P)	Microprocessor and Microcontrollers Laboratory
C217(P)	Design and Analysis of Algorithms Lab
C218(P)	Object Oriented Programming Languages
C219(P)	Physical Education*
FIFTH SEMESTER	
C301	Operating Systems
C302	Computer Networks
C303	Database Management Systems
C304	Language Translators
C305	Software Engineering
C306(P)	Operating Systems Laboratory
C307(P)	Computer Networks Laboratory
C308(P)	Database Management Systems Lab
C309	General Proficiency - I
SIXTH SEMESTER	
C310	Enterprises Solution
C311	Embedded Systems
C312	Web Technology

C313	Elective-I – OOAD
C314	Elective-II –E-Business
C315(P)	Enterprises Solutions Laboratory
C316(P)	Embedded Systems Laboratory
C317(P)	Web Technology Laboratory
C318(P)	Industrial Visits/Training
C319	General Proficiency-II
SEVENTH SEMESTER	
C401	Artificial Intelligence
C402	Computer Hardware and Network Troubleshooting
C403	Platform Technology
C404	Software Testing and Quality Assurance
C405(P)	Artificial Intelligence Laboratory
C406(P)	Troubleshooting Laboratory
C407(P)	Platform Technology Laboratory
C408(P)	Project Work (Phase I)
EIGHTH SEMESTER	
C409	Engineering Economics and Management
C410	Information Security
C411	Elective-V –Mobile Computing
C412	Elective-VI - Grid Computing
C413(P)	Professional Ethics Practice
C414(P)	Seminar
C415(P)	Comprehensive Viva-Voce
C416(P)	Project Work (Phase-II)



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I 3.1.1 Course Outcomes(Cos)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence ,if asked) (05)

(NEW REGULATION) Batch (2014-2018)

Course Name: C101		Year of Study:2014 -2015
MATHEMATICS - I		
C101.1	Learn the evaluation policy of Curvature, evolutes and some special functions like Gamma & Beta function.	
C101.2	Apply partial derivatives to find maxima and minima.	
C101.3	Able to evaluate double integrals and triple integrals, which are used to evaluate area and volume of defined and undefined shapes.	
C101.4	Gain the knowledge to solve first order differential equation arising in Engineering Field.	
C101.5	Gain the knowledge to solve higher order differential equation and able to form mathematical & physical interpretation of its solution.	
C101.6	Acquire knowledge of Differential and Integral Calculus concepts which are very much essential to solve the problems occurring in the areas of Engineering and Technology.	

Course Name: C102		Year of Study: 2014-2015
PHYSICS		
C102.1	Understand the concepts of ultrasonic production ,detection applications and acoustical properties of buildings.	
C102.2	Learn the light properties like interference ,diffraction and polarization and study their parameters like resolving power ,dispersive power of optical devices.	
C102.3	Understand the basic operating principles of laser, its applications, optical fiber, and its types, transmission characteristics, applications of optical fibers.	
C102.4	Study the wave mechanics concepts through wave equations and applying the knowledge of barrier penetration problem in designing electronic devices like tunnel	
C102.5	Understand nuclear properties ,power production through reactors and gain knowledge of fusion reactors which is under research.	
C102.6	Expose the students to different areas of physics which have direct relevance and applications to different Engineering disciplines. To understand the concepts of physics	

Course Name: C103		Year of Study: 2014 -2015
CHEMISTRY		
C103.1	To Impart the students in-depth in the discipline of water technology and develop innovative methods to produce soft water for industrial use and potable water at cheaper cost.	
C103.2	Fundamentals and formation of polymers with its properties and engineering applications of polymers such as conducting polymers can be understood.	
C103.3	Students are able to Illustrate the practical importance of electrochemistry for solving challenges and design of batteries.	

C103.4	This unit implicit the concept of corrosion and insist the students to apply their knowledge for protection of different metals from corrosion.
C103.5	Guide the students to gain the knowledge about the cooling curves, phase diagrams, alloys and their practical importance.
C103.6	Strengthen the fundamentals of chemistry and then build an interface of theoretical concepts with their industrial/engineering applications.

Course Name: C104 Year of Study: 2014 -2015	
BASIC ELECTRICAL AND ELECTRONICS ENGINEERING	
C104.1	Ability to solve the circuit connections, conversion techniques and to understand the basic concepts in AC circuits.
C104.2	Ability to gain the knowledge in power measurements and to solve the mesh and nodal analysis in AC and DC circuits.
C104.3	Ability to understand the operating principles of stationary, rotating machines and power plant.
C104.4	Understand the basic operation, function and applications of PN junction diode, transistor and transducer.
C104.5	Understand the basic operation and function of logic gates flip flops, registers and counters.
C104.6	Gain knowledge on various communication systems and network models.

Course Name: C105 Year of Study: 2014 -2015	
ENGINEERING THERMODYNAMICS	
C105.1	Study about basic concepts of engineering thermodynamic principles and various system and properties of engineering thermodynamics. Student can understand the thermodynamic axioms and ability to solve the problems in real world.
C105.2	At end of this subjects can able to know the various flow process of thermodynamics and its derivatives. Can improve the numerical analysis of various flow processes in engineering thermodynamics. Students can develop the problem solving methodology and adopt this for various mechanical systems to know its behaviour.
C105.3	Can able to understand the role of heat pumps as energy systems and ability to analyse the efficiency of various heat engines .Students can able to understand the heat engine process and get a mastery of solving practical problems in real world.
C105.4	Students gain the in-depth knowledge of various process of different gas power cycles and ability to solve different types of practical problems in real world and can able to analyse the various gas power cycles efficiency numerically.
C105.5	Can able to understand the role of refrigeration as energy system. Students gain the in depth knowledge of working of various refrigeration system and use of refrigerant in refrigeration system. Ability to analyse the efficiency of different types of refrigeration
C105.6	To develop an intuitive understanding of underlying physical mechanism and a mastery of solving practical problems in real world.

Course Name: C106		Year of Study: 2014 -2015
COMPUTER PROGRAMMING		
C106.1	Have a deeper knowledge on the evolution of computers, components and its applications, have an awareness of internet, network structures, word processing and worksheets.	
C106.2	Know about various problem solving techniques, basics tokens of C program and its	
C106.3	Learn about various control statements, declaration and initialization of arrays, functions, storage classes and string functions.	
C106.4	Became familiar on structure, pointers and its manipulation.	
C106.5	Know about Pre-processors, command line arguments and various file operations.	
C106.6	How programming can be applied to real math problems.	

Course Name: C107		Year of Study: 2014 -2015
COMPUTER PROGRAMMING LABORATORY		
C 107.1	Study the basic DOS commands such as copy, move, delete, make directory with the help of command line.	
C 107.2	To solve problems using algorithm and flowchart.	
C 107.3	To solve problems of arithmetic and logical expressions.	
C 107.4	Can develop programs for searching and sorting using arrays and pointers	
C 107.5	To build functions using recursion.	
C 107.6	Students will get the practical knowledge and to implement various technique in C programming using branching, looping, arrays, structures and pointers and file concepts.	

Course Name: C108		Year of Study: 2014 -2015
ENGINEERING GRAPHICS LAB		
C108.1	Students will be able to know and understand the conventions and the methods of engineering drawing.	
C108.2	Student's ability to perform basic sketching techniques will improve.	
C108.3	To provide sound knowledge about projection and section of solids.	
C108.4	Students will be able to draw orthographic projections and isometric projections.	
C108.5	Acquired knowledge about 2D modelling through AUTO CAD software.	
C108.6	Students will be able to improve their visualization skills so that they can apply these skills in developing new products.	

Course Name: C109		Year of Study: 2014-2015
BASIC ELECTRICAL AND ELECTRONICS ENGINEERING		
C109.1	Understand the tools, accessories and various types of joints which are needed for electrical	
C109.2	Ability to design the various types of wiring like staircase, tube light, fan, doctors room and godown wiring and controlling of lamp from different places.	

C109.3	Ability to implement the application of diode and transistor by constructing the rectifiers with and without filters and RC coupled amplifier.
C109.4	Ability to verify the Kirchhoff's law, Demorgan's theorem and implementation of digital functions using logic gates
C109.5	Ability to measure the voltages, frequency and phase sequence in cathode ray oscilloscope
C109.6	Gain knowledge in domestic wiring and application of electronics device in the field of electrical engineering.

Course Name: C110		Year of Study: 2014-2015
MATHEMATICS - II		
C110.1	Find the Eigen values and Eigen vectors of a matrix and use Cayley-Hamilton Theorem for finding the inverse of a matrix.	
C110.2	understand the statements of Stoke's Theorem and Gauss Divergence Theorem and be aware of applications of these theorems in Engineering Field.	
C110.3	Compute the Laplace Transform of a Continuous function and familiar with its basic properties, including the initial and final value theorems.	
C110.4	Compute the Inverse Laplace Transform and solving integral equations and differential equation with initial conditions.	
C110.5	Determine the Fourier Transform, Fourier Cosine and Sine Transform of elementary functions, properties of transforms and its applications in engineering.	
C110.6	Acquire knowledge of matrix algebra technique, vector calculus, Laplace and Fourier Transform which are very much essential to solve the problems occurring in the areas of Engineering and Technology.	

Course Name: C111		Year of Study: 2014-2015
MATERIAL SCIENCE		
C111.1	Students will understand the concept of crystallography –crystal structure and defects in the crystalline solids	
C111.2	Students will understand about the dielectric polarization mechanism and how the frequency and temperature effects the polarization. It also make the student to understand about dielectric loss when a dielectric is subjected to an ac field .Student will understand about the dielectric materials such as piezo,pyro and fero electric material.	
C111.3	The outcome of third unit make the student to understand about the basic concepts of magnetic materials and different magnetic materials like dia,para , ferro, antiferro and ferri materials and for the better understanding the idea has been extended to domain theory of ferromagnetism. The student will understand about the ferrites and its application to magnetic materials.	
C111.4	Students can understand some of the basic concepts of semiconductor and the effect of temperature to the Fermi level in the intrinsic concentration. Students will understand about hall effect and its application . Students will understand about superconductors ,properties of superconductor and types of superconductor	

C111.5	Students will understand some of the basic concepts of glass its preparation ,properties and its application concentration. Students will understand about liquid crystal display and its types. Students will understand about nanomaterials and its application.Students will understand about carbon nano tubes.
C111.6	To understand the importance of material science as a subject that revolutionized modern day technologies and revolutionized modern day technologies which lead to the development of new materials and devices for all branches of engineering.

Course Name: C112		Year of Study: 2014-2015
ENVIRONMENTAL SCIENCE		
C112.1	Students will get sufficient knowledge about the available natural resources and they can apply their knowledge in designing the techniques which require optimum use of natural	
C112.2	Realize the importance of ecosystem and biodiversity for maintaining ecological balance.	
C112.3	To identify the causes and effects of air pollution and to draw the conclusions concerning personal methods of reducing air pollution. To develop awareness about the role of ozone layer, importance of rain water harvesting and climate change.	
C112.4	To acquire the sufficient knowledge about water pollution and its causes, effects. Therefore, students can design the environmental friendly processes/design in Engineering.	
C112.5	Ability to consider issues of environment and sustainable development in his personal and professional undertakings	
C112.6	Provides a comprehensive knowledge in environmental science, environmental issues and the management from an interdisciplinary perspective.	

Course Name: C113		Year of Study:2014-2015
BASIC CIVIL AND MECHANICAL ENGINEERING		
C113.1	Understand the building classification as per National building code.	
C113.2	Get the idea about construction procedure for various components of the building.	
C113.3	Students understand the principles of surveying, construction procedure for roads, bridges	
C113.4	Understand and working of Internal and external combustion systems	
C113.5	Student will be able know Non-Conventional Energy Systems	
C113.5	Student will be able to know types Metal Joining	
C113.6	Students can able to gain skills about various engine, Energy & joints.	

Course Name: C114		Year of Study: 2014-2015
ENGINEERING MECHANICS		
C114.1	Understand the basic laws of mechanics and resolution of forces using different methods.	

C114.2	Learn and apply the knowledge on analysis of forces acting on the trusses and effect of friction force on bodies.
C114.3	Learn about the centroid and moment of inertia for plane and solid figures.
C114.4	Understand the three laws of motion, principles of dynamics for particles.
C114.5	The student will be able to analyse the laws of motion for rigid bodies.
C114.6	The student will be able to analyse the effects of forces acting on the bodies in practical situation.

Course Name: C115		Year of Study: 2014-2015
COMMUNICATIVE ENGLISH		
C115.1	To make the students understand the concepts of LSRW skills.	
C115.2	To improve their communication skills by making them understand the communication process	
C115.3	To make the students develop their skills by involving in many activities related to the development of the English language	
C115.4	To make the students understand the different formats used in business and in organisations.	
C115.5	Students were able to develop their spoken skills by making them to involve in many activities related to it.	
C115.6	The students will be developing the four important skills i.e listening, reading, writing and speaking skills for making good communication in the language.	

Course Name: C116		Year of Study: 2014-2015
PHYSICS LAB		
C116.1	Student will understand how to find the thickness of the specimen and also to find the radius of curvature using the phenomenon of interference	
C116.2	Student can understand to find the specific rotatory power of an optically active solution using the principle of polarization	
C116.3	Thermal conductivity of the bad conductor and the rubber tube can be determined by the principle of heat and the student can understand to find the specific rotatory of the optically active solution by Laurent method	
C116.4	Students can be able to determine the Refractive index and dispersive of the solid prism and Refractive index of quartz prism. Student will acquire knowledge to find the wavelength and number of lines in the grating by the principle of optics	
C116.5	Students acquire knowledge about the magnetometer and Jolly method of determining the pressure coefficient of air at constant volume.	
C116.6	The students can be able to understand the different phenomenon of optics such as interference, polarization that correlates between the theory and practical. Students will understand about the thermal conductivity, magnetism and also the determination of pressure coefficient of air at constant volume.	

Course Name: C117		Year of Study: 2014-2015
CHEMISTRY LAB		
C117.1	To Impart the students in-depth in the discipline of water technology and develop innovative methods to produce soft water for industrial use and potable water at cheaper cost.	
C117.2	Fundamentals and formation of polymers with its properties and engineering applications of polymers such as conducting polymers can be understood.	
C117.3	Students are able to Illustrate the practical importance of electrochemistry for solving challenges and design of batteries.	
C117.4	This unit implicit the concept of corrosion and insist the students to apply their knowledge for protection of different metals from corrosion.	
C117.5	Guide the students to gain the knowledge about the cooling curves, phase diagrams, alloys and their practical importance.	
C117.6	Strengthen the fundamentals of chemistry and then build an interface of theoretical concepts with their industrial/engineering applications.	

Course Name: C118		Year of Study: 2014-2015
WORKSHOP LAB		
C118.1	Understand and comply with workshop safety regulations.	
C118.2	Student will be able to make various joints in the given object with the available work	
C118.3	Student will be able to know how much a joint will take for the assessment of time	
C118.4	Students can able to Identify the hand tools and instruments.	
C118.5	Students can able to gain knowledge about various operations carried out in sheet metal.	
C118.6	Students can able to gain skills about various tools used in welding to make simple joints.	

Course Name: C119		Year of Study: 2014-2015
NSS		
C119.1	To create awareness in social and environmental issues.	
C119.2	To participate in relief and rehabilitation work during natural calamities	
C119.3	To develop some proposals for local slum area development and waste disposal.	
C119.4	To create team work among students and produce efficient results.	

C119.5	The students were taught to operate scientific Instruments or Advanced software.
C119.6	To motivate the students to prepare the professional and scientific reports.

Course Name: C201		Year of Study: 2015-2016
MATHEMATICS - III		
C201.1	Identify complex variable function. Apply C.R equations for testing of Analyticity of the complex function.	
C201.2	Construct conformal mappings between regions. Solve problems on bilinear transformation and find the Taylor's and Laurent's series .	
C201.3	Analyze the complex functions with reference to their analyticity, integration using Cauchy's integral theorem and Cauchy ' s Residue theorem.	
C201.4	Express any periodic function as Fourier series, Fourier Sine and Cosine series.	
C201.5	Finding Fourier series for numerical values of any function.	
C201.6	Interpret and use the basic concepts of analytic function, Taylor and Laurent series, Singularities, residues, conformal mapping , Fourier series and harmonic analysis.	

Course Name: C202		Year of Study: 2015-2016
ELECTRONIC DEVICES AND CIRCUITS		
C202.1	Understand in detail the operation, characteristics and various parameters of diodes.	
C202.2	Learn and gain insight into the operation, characteristics and functional aspects of BJT in different configurations.	
C202.3	Study and compare different types large signal amplifiers by its conversion efficiency and distortion	
C202.4	Understand in depth the construction, operation and characteristics of different types of feedback amplifiers and oscillators.	
C202.5	Knowledge on linear IC operational amplifier IC 741 and to understand its applications in the field of engineering	
C202.6	Knowledge about basic electronic components and circuits	

Course Name: C203		Year of Study: 2015-2016
OBJECT ORIENTED PROGRAMMING AND DESIGN		
C 203.1	Student understand evolution of programming languages, input/output, control structures, classes and objects, functions in C++	
C 203.2	Student have ability to write programs using constructors and destructors. Ability to implement the real time scenario using overloading and inheritance	
C 203.3	Student understand the in-depth concepts of pointers and arrays, dynamic memory management and semantics, data binding, polymorphism and virtual functions	

C 203.4	Student understand the in-depth concepts of files, templates and exception handling and have ability to choose required concept in implementing complex scenarios
C 203.5	Students understand the concepts of object modelling and object oriented software development by learning the use-case, class, activity and interaction diagrams
C 203.6	Student have ability to chose the programming language among the various modern programming languages efficiently in creating a application

Course Name: C204		Year of Study: 2015-2016
DIGITAL SYSTEM DESIGN		
C204.1	An ability to formulate and solve problems in Digital system design, implementation of digital system, understands the binary number system and Boolean algebra.	
C204.2	Apply fundamental knowledge of combinational logic using only of universal gates and building blocks of combinational circuits.	
C204.3	Apply fundamental design procedure of synchronous sequential circuits consisting of the state transition table diagram performance state reduction and state assignment and development flip-flop and design of registers and counters. Students to understand the	
C204.4	Students must be able to understand the types of memories organization of RAM and ROM and also utilize programmable device such as FPGA, PAL and PLA.	
C204.5	Students able to represent complex digital circuits in the form of the hierarchically organized VHDL design/simulation software tools.	
C204.6	Students understand the Different Model and Design Multiplexer, Counter and Adders any prototypes using the state of the art reconfigurable device.	

Course Name: C205		Year of Study: 2015-2016
DATA STRUCTURES		
C205.1	To impart knowledge on the basis of creating and analysing programs and also Apply Algorithm for solving problems like sorting, searching.	
C205.2	Ability to understand the basic data structures such as stack, queue and linked list	
C205.3	An ability to understand the basis of tree and apply problem solving techniques	
C205.4	An ability to understand the basis of graph and apply different problem solving	
C205.5	Student will be able to understand the data structures that associates keys with values by using tables, different external storage devices	
C205.6	Student must be able to choose appropriate data structure as applied to specified problem definition.	

Course Name: C206		Year of Study: 2015-2016	
COMPUTER ORGANIZATION AND ARCHITECTURE			
C 206.1	Understanding the working Principles of functional unit of basic computer and data transfer methods using different addressing modes		

C 206.2	Understands the concept of Intel 32 bit architecture and the internal working principle of the Intel 32 bit processor
C 206.3	Understanding the concepts of different I/O devices accessing with priority and the handling of Interrupt functions.
C 206.4	Understands the internal memory functionality and the data transfer between memory units and other functional units of a system
C 206.5	Understanding the working of different pipelining methods and the handling of various hazard problem
C 206.6	Understand Basics of Computers, Machine Instructions and Programs

Course Name: C207		Year of Study: 2015-2016
ELECTRONIC DEVICE AND CIRCUITS LAB		
C207.1	Student can able to understand the basic circuits in Electronics like Amplifiers, Oscillators, Operational amplifier.	
C207.2	Student can able to understand VI characteristics of semiconductor devices like diode, BJT and UJT.	
C207.3	To create team work among students and produce efficient results	
C207.4	The students were taught to operate scientific instruments are advanced software	
C207.5	To motivate the students to prepare a professional and scientific reports	
C207.6	To make the students get developed and practice the observational skills	

Course Name: C208		Year of Study: 2015-2016
DATA STRUCTURES LABORATORY		
C 208.1	Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures	
C 208.2	Student will be able to analyze the time and space efficiency of the given problem and will be familiar with various sorting algorithms	
C 208.3	Students will be able to use linear data structures like stacks, queues , linked list and capable to identify the appropriate data structure for given problem	
C 208.4	Students will have an ability to implement various applications of linear data structures	
C 208.5	Students will have an ability to implement various non-linear data structures and able to solve real time problems by choosing appropriate data structure .	
C 208.6	Students will have an ability to identify and implement the data structure which is more suitable for developing a given application	

Course Name: C209		Year of Study: 2015-2016
DIGITAL SYSTEM AND DESIGN LABORATORY		
C 209.1	Understanding the Study of logic gates and realization of OR, AND, NOT AND XOR Functions using universal gates.	
C 209.2	To Develop the skills for use programmable logic parts for implementation of combinational circuits and sequential circuits.	
C209.3	Students will Work in a design team that can propose, design, successfully implement, and report on a digital circuit design project.	
C209.4	Students will able to design the combinational and sequential circuits using Registers and flip-flops Ability to develop Verilog modules for building digital system components	
C209.5	To develop skills, techniques and learn state-of-the-art engineering tools (such as VHDL) to design, implement and test modern-day digital systems on FPGA.	
C209.6	Students will able to learn the concepts of Digital circuit and implement the combinational and sequential circuits.	

Course Name: C210		Year of Study: 2015-2016
DISCRETE MATHEMATICS AND GRAPH THEORY		
C210.1	Formulate and solve partial differential equation.	
C210.2	Derive and obtain the solution of wave equation and boundary value problems.	
C210.3	Derive and obtain the solution of heat equation and boundary value problems.	
C210.4	Apply least square method to fit various curves for the given data Investigate the validity of Hypothesis by Z - distribution techniques.	
C210.5	Calculation of Analysis of Variance and explain the use of the Chi-squared test and its	
C210.6	Acquire basic understanding of the most common partial differential equations, and to solve boundary value problems for Laplace's equation, the heat equation, the wave equation. Investigate the validity of Hypothesis by various distribution techniques.	

Course Name: C211		Year of Study: 2015-2016
MICROPROCESSORS AND MICROCONTROLLERS		
C211.1	Student will understand the working of 8085 microprocessor architecture, its evolution, need and application. They will also have an ability to write assembly language programs using 8085 instruction set	
C211.2	Students will understand the concepts of interrupts, DMA, Timer and controller IC's used with 8085 microprocessor	
C211.3	Students will have ability to solve problems based on memory mapping and addressing. They will also understand the working of peripheral interfacing devices with 8085 microprocessor	
C211.4	Student will understand the working of 8086 microprocessor architecture, memory organization, interrupts and assembler directives. They will also have an ability to write assembly language programs using 8086 instruction set	

C211.5	Student will understand the working of 8051 microcontroller architecture, port operations, interrupts, memory organization and interfacing. They will also have an ability to write assembly language programs using 8051 instruction set
C211.6	Student will understand the working of 8085, 8086, 8051 microprocessors and microcontrollers and will have an ability to write assembly language program to create an application

Course Name: C212		Year of Study: 2015-2016
AUTOMATA LANGUAGES AND COMPUTATION		
C212.1	To impart knowledge on the basis of formal languages, regular expressions and automata theory as the basis of all computer science languages design.	
C212.2	To demonstrate the relation between regular expressions, languages and grammar with formal mathematical methods	
C212.3	To understand the concept of Push Down Automata performing tasks of moderate complexity and parsing of various grammars such as LL(k) and LR(k)	
C212.4	Ability to develop Turing machines and to classify decidable and undecidable problems	
C212.5	To impart knowledge on solvable and unsolvable problems, to classify the concepts of NP-completeness and NP-hard problem.	
C212.6	Students will be able to apply mathematical and formal techniques for solving problems in computer science	

Course Name: C213		Year of Study: 2015-2016
DESIGN AND ANALYSIS OF ALGORITHM		
C213.1	Students gain an in depth knowledge about Change of variables & Range transformation, Searching and sorting algorithms with space & time Complexity.	
C213.2	Students will gain fundamental knowledge about Recursive algorithms, searching methods, Identify, formulate, and solve merging and scheduling problems.	
C213.3	Students can apply basic knowledge and understanding of the analysis, synthesis and design of complex systems based on Dynamic programming and traversal Techniques.	
C213.4	Students can apply their knowledge on solving problems related to Backtracking Techniques and analyze their Search complexity.	
C213.5	Students can develop the bounding algorithm and its functions by mapping their control abstraction based on FIFO & LIFO.	
C213.6	Students can Apply data abstraction in solving programming problems. Selection of relevant algorithm technique and combinations of relevant data structures for the given problems in terms of memory and run time efficiency.	

Course Name: C214		Year of Study: 2015-2016
OBJECT ORIENTED PROGRAMMING		
C214.1	Ability to conceptualize the problem in terms of object oriented features.	
C214.2	Ability to provide multi programming capacity to simulate parallel execution	

C214.3	Ability to design and develop a real world applications using swing and event handling mechanism.
C214.4	Ability to design and develop database oriented applications.
C214.5	Ability to design client server applications. Ability to create distributed applications using RMI
C214.6	An ability to design and develop a complete object oriented applications

Course Name: C215		Year of Study: 2015-2016
GRAPHICS AND IMAGE PROCESSING		
C215.1	Understand the functioning of display devices and other I/O devices used for Computer	
C215.2	Students know the different algorithms for 2D image representation and transformations.	
C215.3	Understand basics of image processing different mathematical representation for Image Processing techniques	
C215.4	Understand the different image quality improvement techniques such as smoothening, sharpening, noise removal, restoration and filtering methods	
C215.5	Students will understand Image Compression techniques.	
C215.6	Students will get adequate knowledge about Graphics and Image Processing domains	

Course Name: C216		Year of Study: 2015-2016
MICROPROCESSORS AND MICROCONTROLLERS LABORATORY		
C 216.1	TO Design and implement programs on 8085 microprocessor with assembly language of instruction sets.	
C 216.2	To Design and implement programs on 8086 microprocessor with assembly language of instruction sets.	
C 216.3	To Design interfacing circuits with 8085 microprocessor with assembly language of instruction.	
C 216.4	To Design and implement 8051 microcontroller instruction with assembly language.	
C 216.5	By understanding the Key concepts of 8051 microcontroller architecture, various types of instructions. Design interfacing circuits with 8086 microprocessor with assembly language.	
C 216.6	To Understand the concepts related to I/O and memory interfacing of the assembly language.	
C 216	Students will able to learn the concepts of microprocessor and microcontroller. Students will design and develop the controller based projects.	

Course Name: C217		Year of Study: 2015-2016
DESIGN AND ANALYSIS OF ALGORITHM LABORATORY		
C 217.1	Students will understand and design an effective algorithm for various types of searching and sorting using divide and conquer Technique.	
C 217.2	Student will get the practical knowledge to implement various shortest path and spanning tree algorithms in a high level language and to analyze the performance of various algorithms.	

C 217.3	Student will implement various search and traversal methods like BFS, DFS and compare the performance and complexity of recursive algorithm.
C 217.4	Student will get the practical knowledge to implement Backtracking technique for the problems like N-Queen, Sum of Subset, and Hamiltonian Cycle, Graph coloring and Knapsack problem.
C 217.5	Understanding the Bounding techniques to kill the non promising nodes using the search space tree and to implement LIFO and FIFO.
C 217.6	Understanding the problem given and design the algorithm using various algorithm design techniques such as Divide and Conquer algorithms, Dynamic Programming, Backtracking Algorithms, Greedy method and Graph Traversal Algorithms, Branch and Bound.

Course Name: C218		Year of Study: 2015-2016
OBJECT ORIENTED PROGRAMMING LABORATORY		
C 218.1	Understanding and studying the Principles of Object Oriented Programming Concepts using C++	
C 218.2	Understand and apply the programming language Java in object oriented software development	
C 218.3	Identify, formulate and solve problems by using object oriented programming.	
C 218.4	Designs will demonstrate the use of good object-oriented design principles including encapsulation and information hiding.	
C 218.5	An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.	
C 218.6	Understanding the Object Oriented Programming Concepts and applying it simple application.	

Course Name: C219		Year of Study: 2015-2016
PHYSICAL EDUCATION		
C219.1	Physical education majors demonstrate understanding of how individuals learn and develop and can provide opportunities that support students' physical, cognitive, social, and emotional development	
C219.2	Physical education majors demonstrate an understanding of individual and group motivation and behavior by creating safe learning environments that encourage positive social interaction, active engagement in learning, and self-motivation	
C219.3	To create team work among students and produce efficient results.	
C219.4	The students were taught to operate Advanced playing kits.	
C219.5	To motivate the students to prepare the professional and scientific reports.	
C219.6	To make the students get developed and practice the observational skills	

Course Name: C301		Year of Study: 2016-2017
OPERATING SYSTEMS		
C301.1	It will impart the fundamental understanding of operating systems. Students will understand Basics of Computers, Machine Instructions and Programs.	
C301.2	Will get a clear view on how processes are scheduled and the different problems raised during the synchronization in background.	
C301.3	Understanding of how critical resources are shared and while sharing the various kind of deadlock occurs and also will know the methods for handing deadlocks	
C301.4	It provides in-depth knowledge on virtual memory concepts, file access methods and	
C301.5	It makes the students to understand the file concept and its operations, Will get insight on how file systems and how security is provided. Student Will get in-depth knowledge about kernel architecture and learn how OS services are provided in LINUX.	
C301.6	It gives the students a clear knowledge about what is operating system and the things which are incorporated to know about the hardware system, various memory protection, process, file concepts, paging etc.	

Course Name: C302		Year of Study: 2016-2017
COMPUTER NETWORKS		
C302.1	To understand and analyse the network environment and understand the technology of communication. Enable to design a protocol for communication of data in various environment.	
C302.2	To understand the flow of data from physical layer to data link layer and learn the protocols used in data link layer. To learn the channel allocation procedure, collision detection and various network IEEE Standards.	
C302.3	To understand the services and design issue of network layer and algorithms to routing data to the next layer. Also enables to learn the congestion in data flow and how to avoid those congestions. To learn internetworking and their related protocols and algorithms.	
C302.4	The student are able to analyse the working procedure of data in transport layer and establish time management in TCP.	
C302.5	The student are able to develop web pages and solve the cryptographic issues and analyse the working procedure of data in application layer.	
C302.6	Given an environment, after analyzing the channel characteristics, appropriate channel access mechanism an data link protocols are chosen to design a network.	

Course Name: C303		Year of Study: 2016-2017
DATABASE MANGEMENT SYSTEM		
C303.1	Understand the database architecture and its features, Understand the relational algebra operations and Have a ability to write SQL queries.	
C303.2	Have a ability to draw Entity Relationship Diagrams for a given scenario, Understand the concepts of storage and file structure and Understand the concepts of Indexing and Hashing	
C303.3	Understand the basic concepts of Relational Database Design and Have a ability to decompose a given relation into several normal forms	
C303.4	Understand the concepts of Query processing and Have a ability to apply selection operation, sorting and join operations in writing queries. Understand the concepts of query	
C303.5	Have a knowledge on Concurrency based protocol, Timestamp based protocols and Have a knowledge on Recovery algorithms and their mechanisms	
C303.6	Students can able to integrate the DBMS to real world data, industrial applications and he /she able to design the database system by learning the concept.	

Course Name: C304		Year of Study: 2016-2017
LANGUAGE TRANSLATORS		
C304.1	An ability to design and implement assemblers for different computer architectures and apply knowledge to generate machine language.	
C304.2	To understand how linker and loader create an executable program from an object module created by assembler and compiler.	
C304.3	An ability to understand the various phases of compiler and compare its working with	
C304.4	An ability to use formal attributed grammars for specifying the syntax and semantics of programming languages, and their impact on compiler design.	
C304.5	An ability to understand various types of optimizations on intermediate code and generate assembly code.	
C304.6	Student will be able to understand the code generation design a compiler for a concise programming language	

Course Name: C305		Year of Study: 2016-2017
SOFTWARE ENGINEERING		
C305.1	Understanding the Various approach in Software Development life cycle.	
C305.2	Understanding the Complete strategic approaches towards project management and estimation techniques followed in software Development.	
C305.3	Understanding the good software design and the function oriented software design.	
C305.4	Understanding the concepts of object oriented design approach	

C305.5	Understanding the process involved in user interface design and studying various testing methods.
C305.6	Ability to apply basic knowledge to develop, maintain and evaluate large-scale software systems to produce efficient, reliable, robust and cost-effective software solutions

Course Name: C306		Year of Study: 2016-2017
OPERATING SYSTEMS LABORATORY		
C306.1	Studying the basic Shell Programming and applying it UNIX operating environment.	
C306.2	Build 'C' program for process and file system management using system calls	
C306.3	Choose the best CPU scheduling algorithm for a given problem instance	
C306.4	Identify the performance of various page replacement algorithms	
C306.5	Develop algorithm for the storage systems- file allocation strategies	
C306	Understanding the Operating System concepts and studying it using Simulation Programs using C Language	

Course Name: C307		Year of Study: 2016-2017
COMPUTER NETWORKS LABORATORY		
C307.1	To understand and Familiarize with transmission media, connector, Hubs, Switches and installation of NIC.	
C307.2	Implementation of client server applications with TCP/UDP Socket Programming in a standalone machine and in a network	
C307.3	Students will be able to implement and compare the various routing algorithms and able to handle errors using CRC and hamming code techniques.	
C307.4	Students will able to design remote system and implement it using RMI,RCE,RCP techniques	
C307.5	Students will understand the installation and working with simulation tools like NS2 and Glomosim	
C307.6	Students will able to learn networking concepts and able to develop a network	

Course Name: C308		Year of Study: 2016-2017
DATABASE MANAGEMENT SYSTEMS LABORATORY		
C 308.1	To Understand the various basic Database concepts	
C 308.2	To implement various DDL, DML, DQL, DTL and DCL commands	
C 308.3	To Implement Various Query types	
C 308.4	To study procedural query language to implement functions, procedures, cursors, triggers, packages and exception handling	

C 308.5	To implement database connectivity for a given relational schema
C 308.6	Understanding the Database concepts by Design and Developing Applications using Oracle Software

Course Name: C309		Year of Study: 2016-2017
GENERAL PROFICIENCY-I		
C309.1	Students will understand the basic communication theory.	
C309.2	Students will develop and ensure the personality development and soft skills.	
C309.3	Students will enhance their writing skills	
C309.4	Speaking Skills of the students will be developed by doing communication activities	
C309.5	Students gain the knowledge to solve numerical and verbal aptitude	
C309.6	Students will develop confidence on how to face an interview by practising the above mentioned points	

Course Name: C310		Year of Study: 2016-2017
ENTERPRISE SOLUTIONS		
C310.1	Understand the in-depth knowledge about Basic ERP implementation and basic SCM,CRM and BPR	
C310.2	Understanding about SAP Architecture with SAP modules and ABAP Programming Environment	
C310.3	Students get in-depth knowledge of SQL , PL/SQL, Forms and Reports	
C310.4	Gain the Knowledge about People soft and People Soft Enterprise HRMs and Financial management	
C310.5	Gain the Knowledge about Siebel Business components and Business objects	
C310.6	To acquire knowledge on different types ERP Software Open ERP Package (OODO), SAP, People Soft, Siebel and Oracle.	

Course Name: C311		Year of Study: 2016-2017
EMBEDDED SYSTEMS		
C311.1	Understands the various Embedded processor features and ARM family details.	
C311.2	Understand the registers and data processing instructions based on ARM instructions	
C311.3	Understand the registers and data processing instructions based on THUMB instructions.	
C311.4	Understand the execution of ARM based C program implementation	
C311.5	Understand the various real time operating systems and their needs that support for scheduling various tasks	

C311.6	Understand the concepts of embedded processors and RTOS
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Course Name: C312		Year of Study: 2016-2017
WEB TECHNOLOGY		
C312.1	Students will understand the major components and protocols of internet applications and they will have the ability to design a web page, students will get acquainted with client side and server side programming languages for web.	
C312.2	The students will get acquainted with client side and server side programming languages for web.	
C312.3	Enables to design and develop the web page using xml language by schema techniques and formatting objects by integrating into web.	
C312.4	Will understand the importance of the multimedia in web designing and the usage of the web application development and deployment. It makes to learn the various issues incorporated in usage of the web application over network.	
C312.5	Understand the importance of the web services and the modules involved in building the service. The service deployment made to be understand. Students will learn to develop programmes using Ajax concepts	
C312.6	Students will learn to know how to design and deploy the web pages using various languages with server support.	

Course Name: C313		Year of Study: 2016-2017
OBJECT ORIENTED ANALYSIS AND DESIGN		
C313.1	To study about the life cycle model for software development process and different object methodologies to guide the development of a computer-based application.	
C313.2	To learn about UML (Unified Modelling Language) for specifying, constructing, visualizing and documenting the software system and its components.	
C313.3	The main objective of analysis is to capture a complete, unambiguous, and consistent picture of the requirements of the system	
C313.4	The basic objective is to formalize the design process assist in establishing a scientific foundation for the object-oriented design process.	
C313.5	To study about the problems occur during software development and the solution to avoid the error.	
C313.6	Students will be able to understand the concept of Object Oriented Software Analysis, Design and Development Process with UML Diagrams	

Course Name: C314		Year of Study: 2016-2017
E-BUSINESS		
C314.1	To demonstrate an understanding of the foundation and importance of E-commerce	

C314.2	Aware of secure electronic transaction and its mechanisms to protect their transaction and payment through online.
C314.3	Able to know the importance of encryption mechanisms and to protect the personal information using various security threats.
C314.4	To acquire knowledge on flow of Secure Electronic Transaction using Master/ Visa Card and Secure Email technologies.
	To understand the need of E-business and E-marketing through Internet/ WWW.
C314.6	Appreciate and understand topics related to e-business such as supply chain management, customer relationship management change management, E-procurement, and e-marketing.

Course Name: C315		Year of Study: 2016-2017
ENTERPRISE SOLUTIONS LABORATORY		
C 315.1	Understanding the Principles of ERP solutions related to Business problems and Simple application using ODOO ERP packages. To study SQL and PL/SQL	
C 315.2	To understand the various Components of HRM and financial Modules.	
C 315.3	To understand the various Components of SAP.	
C 315.4	To Understanding the ERP related concepts using SAP and Peoplesoft. Design and Develop any one application using Siebel.	
C 315.5	To Understanding the ERP related concepts using SAP and Peoplesoft. Design and Develop any one application using Siebel.	
C 315.6	Students can able to understand how ERP systems are used in Various industries for maintenance and planning of business	

Course Name: C316		Year of Study: 2016-2017
EMBEDDED SYSTEMS LABORATORY		
C 316.1	Understanding the fundamentals of ARM processor and its importance in embedded programming environment with external Hardware devices.	
C 316.2	Students know the ARM processor and its registers allocation to perform Assembly programs using IDE environment.	
C 316.3	Understanding the working principle of ARM processor with Embedded C programs using ARM IDE environment and interface with LPC2148 KIT.	
C 316.4	To enable the students to understand Embedded C programs using KIEL and Hex code is loaded into the LPC 2148 KIT using FLASHMAGIC software.	
C 316.5	Understanding the Use of RTOS with ARM Processor on IDE Environment using ARM Tool chain and Library	
C 316.6	Students able to code for their innovative concepts and to provide a platform for the students to do multidisciplinary projects	

Course Name: C317		Year of Study: 2016-2017
WEB TECHNOLOGY LABORATORY		
C 317.1	Understand the history of the internet and related internet concepts that are vital in understanding web development.	
C 317.2	Demonstrate the important HTML tags for designing static pages and separate design for content using Cascading Style Sheet.	
C 317.3	Write a server side java application called Servlet to catch form data sent from client, process it and store it on database.	
C 317.4	Write a server side java application called JSP to catch form data sent from client and store it on database	
C 317.5	Use the Web application development software tools i.e Ajax, PHP, XML, Servlets, JSP etc. and identify the environments currently available on the market to design web sites.	
C 317.6	Have a Good grounding of Web Application Terminologies, Internet Tools, E – Commerce and other web services.	

Course Name: C318		Year of Study: 2016-2017
Industrial Visits/Training		
C318.1	Ability to demonstrate the use, interpretation and application of an appropriate international engineering standard in a specific situation.	
C318.2	Ability to analyze a given engineering problem, identify an appropriate problem solving methodology, implement the methodology and propose a meaningful solution.	
C318.3	Ability to apply prior acquired knowledge in problem solving.	
C318.4	Ability to work in new technology based on industrial requirements.	
C318.5	Ability to work in a team and to take initiatives.	
C318.6	Ability to effectively communicate solution to problems (oral, visual, written) and manage a project within a given time frame.	

Course Name: C319		Year of Study: 2016-2017
GENERAL PROFICIENCY-II		
C319.1	Students will be able to differentiate the words and spellings of English language used in various countries.	
C319.2	Students would have developed their writing skills. They would know how to write a letter and prepare a resume.	
C319.3	This unit helped the students to develop their oral skills. Students will gain confidence in speaking the language. Students will develop as how to tackle a situation.	
C319.4	Students would have got a gist as how to be a groomed professional in the technical world.	

C319.5	The students will have an idea as how to reason out the answers for logical questions in the future exams.
C319.6	The students will develop their communication skill and will be able to handle situations at

Course Name: C401		Year of Study: 2017-2018
ARTIFICIAL INTELLIGENCE		
C401.1	To search and discover intelligent characteristics of existing AI projects, Intelligent agents. To understand different search strategies for a problem.	
C401.2	To understand different Knowledge Representation schemes for typical AI problems. To understand the logic for Knowledge Representation using propositional and predicate logical notations. To Design knowledge based agent using filler structures.	
C401.3	To understand the Logics of reasoning and uncertainty. To Learn different AI logic Algorithms using Bayes Theorem and Dempster Shaffer Theory.	
C401.4	To design and implement a typical AI problem to be solved Using Machine Learning Techniques. Design applications related to Natural Language Processing and Web applications.	
C401.5	To understand the Advanced Gaming Techniques in AI. To understand the concepts of Robotics and its applications. To understand the representation of Expert system and its Cells.	
C401.6	Students can gain Capability to develop intelligent systems and they can apply heuristic concepts to design efficient algorithms that help to attain the goals in satisfactory manner. Design applications related to Natural Language Processing and Web applications.	

Course Name: C402		Year of Study: 2017-2018
COMPUTER HARDWARE AND NETWORK TROUBLE SHOOTING		
C402.1	Understand the basic internal structures and evaluation of computers.	
C402.2	Identify and understand the various components of motherboard, Bus standards, SMPS and BIOS.	
C402.3	Understand the memory hierarchy and needs of primary and secondary storage and troubleshooting the memory problems.	
C402.4	Students clearly understand about various kinds of Input and Output Devices and troubleshooting the I/O related problems.	
C402.5	Interface external I/O Devices with the different network topologies and trouble shoot network related problems.	
C402.6	Understand the software and hardware components and its importance for the communication along with device interface.	

Course Name: C403	Year of Study: 2017-2018
PLATFORM TECHNOLOGY	

C403.1	Student must have the knowledge of .NET Framework, CLR, Class Library, MSIL, components of CLR Namespace, Input and Output, Serialisation, Enterprise Services, Interoperability and GUIs.
C403.2	Students must have an ability to write a C# .NET programs and must have knowledge of object oriented concept.
C403.3	Students must have an ability to write VB .NET programs and must have knowledge of object oriented concept.
C403.4	Direct Access to Data, Accessing Data with Datasets and must have knowledge of these concepts
C403.5	Students must have knowledge of J2EE: Enterprise Edition Overview.
C403.6	The subject is deal with the practical knowledge in objected oriented concept and can know how to integrate C# with database by using ADO.NET connectivity.

Course Name: C404		Year of Study: 2017-2018
SOFTWARE TESTING AND QUALITY ASSURANCE		
C404.1	Understanding the Theoretical approach in different types testing and their applications.	
C404.2	Understanding the Complete strategic approaches followed in Black box and White Box	
C404.3	Understanding the testing methodology applied in Object oriented Software.	
C404.4	Understanding the quality process applied in the testing strategies and the reviews audits followed in the quality process.	
C404.5	Understanding the process involved in automated testing and studying the international standard procedures.	
C404.6	Understanding the different testing methods and quality standards involved in testing	

Course Name: C405		Year of Study: 2017-2018
ARTIFICIAL INTELLIGENCE LABORATORY		
C 405.1	Understanding the concepts of prolog and implementing recursive algorithms and parallel implementation of Knowledge representation.	
C 405.2	Students can apply the Search and traversal concepts to design efficient search algorithms that help to attain the goals in satisfactory manner.	
C 405.3	Students must able to perform various knowledge representation using Propositional and predicate logic. The expert system can be build to using a prolog language.	
C405.4	Students can design applications related to Natural Language Processing and Web applications.	
C405.5	Understanding the concepts of game playing and to develop the Expert system based on real world challenges.	
C405.6	Understanding various design trends in knowledge representation and NLP, Students can able to create an intelligent agents which responds user command as input and act upon the environment.	

Course Name: C406		Year of Study: 2017-2018
TROUBLESHOOTING LABORATORY		
C 406.1	Students identify various components present in the mother boards and also understand how the interconnection between the system components functions.	
C 406.2	Students know the operating systems installation procedures and hard disk partitioning and system Booting procedures.	
C 406.3	To understand the working functions of an individual units such as hardware and software together to perform various operation.	
C 406.4	Students must able check the continuity of the systems functionality and establish the communication between two PC's using RS232.	
C 406.5	Student will be able to understand the various issues and identify the troubleshooting problems in I/O, Network and to trace the circuits to know the working functions of individual units in system design	
C 406.6	Students must able understand the various functions involved in the individual components present in the systems and also having the knowledge of Trouble shooting the problems in the real time.	

Course Name: C407		Year of Study: 2017-2018
PLATFORM TECHNOLOGY LABORATORY		
C407.1	To Understanding the basic concept of .net framework	
C407.2	To implements Object oriented programming concepts using C# .net framework	
C407.3	To implement console application and windows application using C# .net framework	
C407.4	To study the database control in C# .net framework with SDI and MDI	
C407.5	To accessing data using data adapters and datasets in ado.net in C# and VB.net	
C407.6	Design and Developing Applications using VB .net and C# .net Software	

Course Name: C408		Year of Study: 2017-2018
PROJECT PHASE-I		
C408.1	Motivate the students to select application related projects.	
C408.2	Student study the reference papers from various domain and select the domain of their	
C408.3	Student have a detailed survey on the selected domain and identify the base paper and give the presentation on their survey	
C408.4	Student identified the problem formulation of their existing work and gave the	
C408.5	Student submitted phase I project work which was reviewed by a committee consisting	

C408.6	Student performed survey, identified the base paper, identified the problem formulation and gave the presentation
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Course Name: C409 Year of Study: 2017-2018 ENGINEERING ECONOMICS & MANAGEMENT	
C409.1	An ability to explain the basic economic principles like demand, supply, cost& inflation and to apply the principles in business organization& engineering firms.
C409.2	Educate the students with the production process of the firm making the students to integrate the concept in international settings. Students understand the core concepts and the role of marketing in business society.
C409.3	An ability to understand the various sources available to raise funds and to prepare profit and loss account, balance sheet and to employ this tool to make production decisions
C409.4	Students will be able to understand the concept of depreciation and know how to calculate depreciation values by using different methods of depreciation.
C409.5	An ability to understand the techniques such as Present worth method, Rate of return, future worth method and use these figures of merits to determine the most profitable alternative
C409.6	Student will understand about the different organization process and financial concepts.

Course Name: C410 Year of Study: 2017-2018 INFORMATION SECURITY	
C410.1	Students will gain fundamental knowledge about Security SDLC, Providing security to components and to make a perfect balance between security & access
C410.2	Ability to apply their basic knowledge to handle the threats, attacks, and the legal professional issues while implementing security.
C410.3	Students can able to analysis and assess the impact of risk and they can make remedial measures to control the risk on any organization.
C410.4	Understanding the process involved in information security cycle and studying the Security standard procedures.
C410.5	Understanding the study of security technology and implementing Cryptography algorithms.
C410.6	To master of information security governance, and related legal and regulatory issues and understanding external and internal threats to an organization.

Course Name: C411 Year of Study: 2017-2018 MOBILE COMPUTING	
C411.1	To Understand the basic concepts of Wireless and Mobile Communications
C411.2	To Understand the state of art industry standards in wireless networking and their

C411.3	To Understand the various facilities available for mobile communication including the protocol and security mechanisms
C411.4	To understand the various transaction models associated with mobile data management in mobile computing
C411.5	To understand the widely used mobile computing models
C411.6	To Understand the Fundamentals of mobile computing with relevance to state of art wireless standards with their Transactions and Operational models.

Course Name: C412		Year of Study: 2017-2018
GRID COMPUTING		
C412.1	To understand the components of Grid Computing along with each of its working principles; in addition with other existing computing technologies like parallel computing, distributed computing and cluster computing.	
C412.2	To understand the frameworks associated with the Grid architecture along with various related aspects like Services, Protocol, Monitoring and Security.	
C412.3	To Understand how datum are collected, managed and services related to it in data grids and how knowledge is represented, processed and managed in knowledge grids.	
C412.4	To understand the support offered through grid middleware such as Globus Toolkit 3 for Grid Computing.	
C412.5	To understand the widely used grid computing application scenarios with relevant details including tools, technologies and the impact on applying grid computing.	
C412.6	To Understand the fundamentals of grid computing in accordance with the existing technologies like Web Services.	

Course Name: C413		Year of Study: 2017-2018
SEMINAR		
C 413.1	Analyze critically chosen seminar topic for substantiated conclusions	
C 413.2	Apply the concepts of design and modelling learnt to be seminar topic chosen and explore possible new ideas.	
C 413.3	Use the appropriate techniques, resources and modern engineering tools necessary for conducting seminar work.	
C 413.4	Explore possible avenues where computer science and engineering solutions may yield social benefit.	
C 413.5	Communicate clearly, fluently, and cogently both in written and spoke contexts.	
C 413	Analyze critically chosen seminar topic for substantiated conclusions	



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