SECOND YEAR	
COURSE : 201	**TECHNICAL COMMUNICATION**
1	Understand the concept, style and methodology used in technical communication
2	Develop understanding of English language and design of technical text
3	Apply knowledge of technical communication in professional life
4	Develop knowledge of writing text such as reports proposals etc.
5	Be competent in all forms of technical communication.
COURSE : 202	**DATA STRUCTURE AND ALGORITHMS**
1	Apply basic data structures' operations to solve engineering problems. {Related to Stack, Queue, Linked List, Trees and Graphs}
2	Provide solutions for complex engineering problems. {Related to Stack, Queue, Linked List, Trees, Graphs and Sorting and searching techniques}
3	Analyze various searching and sorting techniques to utilize them in different cases.
4	Evaluate the complexity to provide justification of the use of various searching and sorting techniques
5	Review various real time scenarios to provide valid conclusions.
COURSE : 203	**DIGITAL ELECTRONICS**
1	Understanding basic principles of digital circuits and different number systems.
2	Analyze logic expressions and circuits using Boolean laws and K-map.
3	Evaluate digital electronic circuit using various mapping and logical tools and know the techniques to prepare the most simplified circuit using various mapping and mathematical methods.
4	Design various types of without memory element digital electronic circuits for particular operation within the realm of economic, performance, efficiency, user friendly and environmental constraints.
5	Design various types of with memory element digital electronic circuits for particular operation within the realm of economic, performance, efficiency, user friendly and environmental constraints.
COURSE : 204	**SOFTWARE ENGINEERING**
1	Analyze different software life cycle models and testing techniques to develop real time projects.
2	Evaluate cost estimation and risk analysis in project management.
3	Identify and outline the engineering process of software requirement analysis.
4	Apply procedural design methods to architect software systems.
5	Apply the concept of object oriented analysis and design in software development process.

COURSE : 205	OBJECT ORIENTED PROGRAMMING
1	Understand basic knowledge of object oriented programming language constructs.
2	Apply memory allocation techniques and various inbuilt functions in different problems..
3	Apply inheritance and its the types in real time problems.
4	Implement concept of polymorphism to perform different types of bindings.
5	Create application using I/O and file handling with exception handling.
COURSE : 206	ADVANCED ENGINEERING MATHEMATICS
1	Apply the knowledge of probability and random variable to the real world problems.
2	Analyze the various method of numerical solutions of Normal, Poisson and Binomial probability distribution.
3	Formulation and solution of engineering problems in Linear programming problem.
4	Formulate and solve Non-linear programming problem.
5	Optimize the transportation, assignment and linear programming problem.
COURSE : 207	SOFTWARE ENGINEERING LAB
1	Develop the requirements specification, function oriented design using Software Analysis and Software Design of given project and understand the use of appropriate CASE tools and other tools in the software life cycle.
2	Develop Software Requirements Specification (SRS) for a given problem in IEEE template.
3	Design DFD model (level-0, level-1 DFD and Data dictionary) of the project.
4	Create all Structure and Behavior UML diagram of the given project.
5	Implement "ProjectLibre" a project management software tool to manage files.
COURSE : 208	DATA STRUCTURES LAB
1	Implement basic operations of Stack and Queue to solve various engineering problems.
2	Apply the concept of Linked List to provide solutions of computer-based problems.
3	Analyze various searching and sorting techniques to justify and utilize them in different cases.
4	Apply various operations on Non-Linear Data Structures like Tree and Graphs.
5	Design a solution of a given engineering problem using Stack, Queue, Linked List, Tree, Sorting and
COURSE : 209	DIGITAL ELECTRONICS LAB
1	Implement the basics of logic gates

2	Implement basic combinational circuits and verify their functionalities
3	Apply the design procedures to design basic sequential circuits
4	Implement different types of counter
5	Analyze the different types of shift register
COURSE : 210	**OBJECT ORIENTED PROGRAMMING LAB**
1	Implement the knowledge of C++ programming language constructs and evaluate different access specifiers to define member function.
2	Implement memory allocation techniques and various inbuilt functions.
3	Student will be able to implement inheritance and analyze the types of inheritance.
4	Student will be able to implement concept of polymorphism to perform different types of bindings.
5	Student will be able to implement application using I/O and file handling with exception handling.
COURSE : 211	**DISCRETE MATHEMATICAL STRUCTURES**
1	Solve problems involving functions, using the fundamental definitions of sets, set operators, and set identities
2	Apply the concept of mathematical logic(sets and functions) in Computer Engineering
3	Evaluate algorithmic correctness using various proof methods.
4	Solve problems involving graphs, paths, circuits, graph colouring, directed graphs, shortest path algorithms.
5	Apply the knowledge of groups, ring and field and solve the complex engineering problems and also design a test cases to analyze various elements in a set.
COURSE : 212	**MANAGERIAL ECONOMICS & FINANCIAL ACCOUNTING**
1	Apply the basic knowledge of economics related to demand and supply.
2	Demonstrate the methods like deductive and inductive methods in economics and research areas.
3	Evaluate the pricing policies of various market structures.
4	Demonstrate the balance sheet, profit and loss statements.
5	Determine the cost in the market and the concepts related to production function.
COURSE : 213	**MICROPROCESSORS & INTERFACES**
1	Assess basic binary math operations using the microprocessor and learn the microprocessor's and Microcontroller's internal architecture and its operation within the area of manufacturing and performance.
2	Demonstrate programming proficiency using the various addressing modes and data transfer instructions of the target microprocessor and microcontroller.

3	Apply practical hands on experience with Assembly Language Programming.
4	Analyze the interfacing circuits of various devices with the microprocessor.
5	Evaluate programming logic and concepts of 8085 microprocessor.
COURSE : 214	**DATABASE MANAGEMENT SYSTEM**
1	Design Database System with the help of Entity relationship Diagram for Real World Application
2	Deduct data using query language from any Database
3	Apply normal forms for database schema refinement
4	Design transaction with different types of schedule
5	Evaluate concurrency control mechanism and Recovery system
COURSE : 215	**THEORY OF COMPUTATION**
1	Apply the knowledge of different types of grammar, along with the relationship among them.
2	Analyze the concept of regular expression and finite automaton
3	Generate the Context free grammar and Pushdown Automaton for evaluating the CFG.
4	Design Turing Machine in reference of Type-0 grammar
5	Apply the knowledge of Pumping Lemma Theorem
COURSE : 216	**DATA COMMUNICATION AND COMPUTER NETWORKS**
1	Analyze the principles of a layered protocol architecture
2	Solve mathematical problems for data-link and network protocols.
3	Analyze network layer protocols and calculate number of subnets required for a network.
4	Evaluate the reliability of data transfer over transport layer by lossy channel bit errors problem.
5	Demonstrate common services, system services, such as name and address lookups, and communications applications.
COURSE : 217	**MICROPROCESSOR AND INTERFACE LAB**
1	Apply the fundamentals of assembly level programming.
2	Create interfacing between input and output device
3	Demonstrate the interfacing between motor and processor
4	Implement advance Assembly Language Programming tools
5	Implement standard microprocessor real time interfaces including digital-to-analog converters and analog-to-digital converters
COURSE : 218	**DATA BASE MANAGEMENT SYSTEM LAB**
1	Design a database schema for a given problem Domain.

2	Apply Integrity Constraints on a database using RDBMS.
3	Design and Build a GUI application using 4GL.
4	Implement advanced concepts of pl/sql including stored procedures , stored functions , cursors packages.
5	Implement SQL and Procedural interfaces
COURSE : 219	**NETWORK PROGRAMMING LAB**
1	Analyze the functioning of various networking equipments
2	Analyze LAN Installation and Configurations techniques
3	Implement various Error correcting techniques and framing methods
4	Develop the programs for client and server involving UDP/TCP sockets using socket programming.
5	Evaluate the communication between client and server using Network Simulator.
COURSE : 220	**LINUX SHELL PROGRAMMING LAB**
1	Implement concepts and commands in shell programming.
2	Design the directory layout of a typical UNIX system , maintain, secure UNIX directories and files.
3	Demonstrate the knowledge of engineering to use the various shell quoting mechanism appropriately
4	Create simple regular expressions using filters to define patterns with various commands.
5	Formulate simple scripts to enhance basic command output
COURSE : 221	**JAVA LAB**
1	Understand fundamentals of java,and tools for program designing environments.
2	Apply concept of overloading, inheritance and access controls to class.
3	Apply the concept of interfaces and importing the packages in java.
4	Design the application by handling files,Exceptions and threads.
5	Develop the applications using applets and design some polygons.