Subject:	Discrete Mathematics		Subject Code:	210241
CO1	201.1	Design and analyze real world engineering problems by applying set theory, propositional logic and mathematical induction		
CO2	201.2	Develop skills to manipulate and apply mathematical properties of relation and function to solve new problem		
CO3	201.3	Identify number of logical possibilities of events to design professional engineering Solutions and analyze the computational process using combinatorics.		
CO4	201.4	Model and solve computing problem using graph also solve problems using appropriate algorithm.		
CO5	201.5	Apply appropriate algorithm to solve problems using tree in both familiar and unfamiliar situation of real life context.		
CO6	201.6	Analyze the properties of binary operations and evaluate algebraic structure.		

Subject:	Fundamentals of Data Structures		Subject Code:	210242
CO1	202.1	Solve Boolean functions for designing digital circuits using K map and Quine Mc-Clusky method.		
CO2	202.2	Design and Implement different types of Sequential digital circuits and Combinational Circuits as per specifications.		
CO3	202.3	Develop simple Digital systems using Algorithmic State Machines and VHDL		
CO4	202.4	Differentiate types of PLDs and Design Combinational Digital Circuits using		

		PLDs.
CO5	202.5	Compare and Choose appropriate Logic Families IC Packages as per given specifications.
CO6	202.6	Describe Microcontroller 8051 and compare Microprocessor and Microcontroller.

Subject:	Object Oriented Programming(OOP)	Subject Code:	210243
CO1	203.1	Apply constructs- sequence, selection and iteration; classes and objects, inheritance, use of predefined classes from libraries while developing software.	
CO2	203.2	Design object-oriented solutions for small systems involving multiple objects.	
CO3	203.3	Use virtual and pure virtual function and complex programming situations.	
CO4	203.4	Apply object-oriented software principles in problem solving.	
CO5	203.5	Analyze the strengths of object-oriented programming.	
CO6	203.6	Develop the application using object oriented programming language(C++).	

Subject:	Computer Graphics	Subject Code:	210244
CO1	204.1	Identify the basic terminologies of Computer Graphics and interpret the mathematical foundation of the concepts of computer graphics and various drawing algorithms.	

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Course Outcomes
Syllabus: SE_Sem-I(2019 Pattern)
Department : Computer Engineering

CO2	204.2	Illustrate the concepts of windowing and clipping and apply various algorithms to fill and clip polygons.
CO3	204.3	Understand and apply the core concepts of computer graphics, including transformation in two and three dimensions, viewing and projection.
CO4	204.4	Understand and apply the concepts of color models, lighting, shading models and hidden surface elimination algorithms.
CO5	204.5	Create effective programs using concepts of curves and fractals.
CO6	204.6	Create effective programs using concepts of animation and gaming.

Subject:	**Digital Electronics and Logic Design**	**Subject Code:**	**210245**
CO1	205.1	Simplify Boolean expressions using K-map & Quine Mc cluskey	
CO2	205.2	Design & Implement Combinational circuits	
CO3	205.3	Design & Implement Sequential circuits	
CO4	205.4	Develop simple real world application using ASM & PLD	
CO5	205.5	Differentiate & Choose appropriate logic families IC packages as per given design specifications	
CO6	205.6	Explain organization & architecture of computer system.	

Course Outcomes
Syllabus: SE_Sem-I(2019 Pattern)
Department : Computer Engineering

Subject:	**Data Structures Laboratory**		**Subject Code:**	**210246**
CO1	206.1	Use algorithms on various linear data structure using sequential organization to solve real life problems.		
CO2	206.2	Analyze problems to apply suitable searching and sorting algorithm to various applications.		
CO3	206.3	Analyze problems to use variants of linked list and solve various real life problems.		
CO4	206.4	Designing and implement data structures and algorithms for solving different kinds of problems.		

Subject:	**OOP and Computer Graphics Laboratory**		**Subject Code:**	**210247**
CO1	207.1	Analyze and apply the concepts like inheritance, polymorphism, exception handling and generic structures for implementing reusable programming codes.		
CO2	207.2	Analyze the concept of file and apply it while storing and retrieving the data from secondary storages.		
CO3	207.3	Design & implement computer graphics algorithms for line-circle drawing, scan conversion, fill and clip polygons with the help of object oriented programming concepts.		
CO4	207.4	Design & Apply logic to implement curves, fractals, animation and gaming programs.		

Subject:	Digital Electronics Laboratory		Subject Code:	210248
CO1	208.1	Understand working of digital electronic circuits		
CO2	208.2	Apply the knowledge to appropriate IC as per design specifications		
CO3	208.3	Design & Implement sequential and combinational digital circuits as per the specifications.		
CO4	208.4	Design & understand Algorithmic State Machine chart		

Subject:	Business Communication Skills		Subject Code:	210249
CO1	209.1	Express effectively through verbal/oral communication and improve listening skills		
CO2	209.2	Write precise briefs or reports and technical documents.		
CO3	209.3	Prepare for group discussion / meetings / interviews and presentations.		
CO4	209.4	Explore goal/target setting, self-motivation and practicing creative thinking.		
CO5	209.5	Operate effectively in multi-disciplinary and heterogeneous teams through the knowledge of team work, Inter-personal relationships, conflict management and leadership qualities.		

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Course Outcomes
Syllabus: SE_Sem-I(2019 Pattern)
Department : Computer Engineering

Subject:	**Humanity and Social Science**		**Subject Code:**	**210250**
CO1	2010.1	Aware of the various issues concerning humans and society.		
CO2	2010.2	Aware about their responsibilities towards society.		
CO3	2010.3	Sensitized about broader issues regarding the social, cultural, economic and human aspects, involved in social changes.		
CO4	2010.4	Able to understand the nature of the individual and the relationship between self and the community.		
CO5	2010.5	Able to understand major ideas, values, beliefs, and experiences that have shaped human history and cultures.		