B.Com. Computer Applications (Major)

Paper	Paper Name	Outcomes After completion of the course the student should be able to
SEMESTER I		
COURSE 1	**ESSENTIALS AND APPLICATIONS OF MATHEMATICAL, PHYSICAL AND CHEMICAL SCIENCES**	**CO 1 :Apply critical thinking skills to solve complex problems involving complex numbers, trigonometric ratios, vectors, and statistical measures.** **CO 2 : To Explain the basic principles and concepts underlying a broad range of fundamental areas of physics and to Connect their knowledge of physics to everyday situations** **CO 3 : To Explain the basic principles and concepts underlying a broad range of fundamental areas of chemistry and to Connect their knowledge of chemistry to daily life.** **CO 4 :Understand the interplay and connections between mathematics, physics, and chemistry in various applications. Recognize how mathematical models and physical and chemical principles can be used to explain and predict phenomena in different contexts.** **CO 5 : To explore the history and evolution of the Internet and to gain an understanding of network security concepts, including threats, vulnerabilities, and countermeasures.**
COURSE 2	**ADVANCES IN MATHEMATICAL, PHYSICALAND CHEMICAL SCIENCES**	**CO 1:Explore the applications of mathematics in various fields of physics and chemistry, to understand how mathematical concepts are used to model and solve real-world problems.** **CO 2:To Explain the basic principles and concepts underlying a broad range of fundamental areas of physics and to Connect their knowledge of physics to everyday situations. 3. Understand the different sources of renewable energy and their generation processes and advances in nanomaterials and their properties, with a focus on quantum dots. To study the emerging field of quantum communication and its potential applications. To gain an understanding of the principles of biophysics in studying biological systems.** **CO 3:Understand the principles and techniques used in computer-aided drug design and drug delivery systems, to understand the fabrication techniques and working principles of nanosensors. Explore the effects of chemical pollutants on ecosystems and human health.** **CO 4: Understand the interplay and connections between mathematics, physics, and chemistry in various advanced applications. Recognize how mathematical models and physical and chemical principles can be used to explain and predict phenomena in different contexts.** **CO 5:Understand and convert between different number systems, such as binary, octal, decimal, and hexadecimal. Differentiate between analog and digital signals and understand their characteristics. Gain knowledge of different types of transmission media, such as wired (e.g., copper cables, fiber optics) and wireless (e.g., radio waves, microwave, satellite).**

SEMESTER II		
COURSE 4	OFFICE AUTOMATION TOOLS	CO 1 : Applying basic formatting functions to create professional documents CO 2 :Demonstrating basic knowledge of the Microsoft Office Ribbon Interface CO 3 :Creating Word documents for office use CO 4 :Creating and designing spreadsheets for office use, and demonstrating basic functions and formulas CO 5 : Creating PowerPoint presentations, and demonstrating how to use clip art and integrate information from other Microsoft programs .
SEMESTER III		
COURSE 7	E COMMERCE AND WEB DESIGNING	CO 1:Design and develop visually appealing and user-friendly e-commerce websites. CO 2:Implement necessary functionalities for online shopping experiences. CO 3:Understand and integrate e-commerce payment gateways and security protocols. CO 4:Analyze user behavior and optimize website design accordingly. CO 5:Stay updated with the latest trends and technologies in web development and e-commerce.
SEMESTER IV		
COURSE 11	DATABASE MANAGEMENT SYSTEM WITH ORACLE	CO 1 : Differentiate between database systems and file based systems CO 2 : Design a database using ER model CO 3 : Use relational model in database design CO 4 : Use SQL commands for creating and manipulating data stored in databases. CO 5 : Write PL/SQL programs to work with databases.
SEMESTER V		
COURSE 15	MOBILE APPLICATON DEVELOPMENT USING ANDROID	Co 1 : Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces Co 2 : Program mobile applications for the Android operating system that use basic and advanced phone features Co 3 : Experiment with the method of storing, sharing and retrieving the data in Android Applications. Co 4 : Responsive user interface across wide range of devices Co 5 : Create a mobile Application by using various components like activity, views, services, content providers and receivers.