

# M. Sc. Computer Application

CBCS Pattern (Implemented from 2019-20)

The master of science in Computer Application Program provides the students with knowledge, general competence, and analytical skills on an advanced level, needed in academics, industry, research.

## **Knowledge outcomes:**

Students will be able to

PO1: Apply computing knowledge and domain specific knowledge.

PO2: Identify, produce, and develop solutions to computational challenges through .

PO3: Understand professional, ethical, legal, security, and social issues and responsibilities for the computing profession.

PO4: Understand and apply computing management principles to manage multi disciplinary projects.

PO5: Design and develop computer programs/computer-based systems in the areas related to algorithms, networking, web design, cloud computing, Artificial Intelligence, Mobile applications and Internet Of Things.

## **Skill Outcomes:**

### **Students will**

PO6: Use software development tools, software systems, and modern computing platforms

PO7:be able to integrate several scientific and technical disciplines in the area of information technology.

PO8: be able to communicate and engage effectively with diverse stakeholders.

### General Competence:

PO9 : Understand how technological advances impact society and the social, legal, ethical and cultural ramifications of computer technology and their usage.

PO10 : be able to contribute to innovative thinking and innovation processes.

### Program Specific Outcomes

After completing M.Sc. Computer Application Program students will be able to:

PSO1. Communicate computer science concepts, designs, and solutions effectively and professionally

PSO2. Apply knowledge of computing to produce effective designs and solutions for specific problems

PSO3. Use software development tools, software systems, and modern computing platforms.

## M.Sc.(Computer Application ) Part I (Semester I)

After successfully completing this course, students will be able to

<b>Subject Code</b>	<b>Subject Name</b>	<b>Course Outcome</b>
CA-CCTP-1	Web Technology	CO1: Implement interactive web page(s) using HTML, CSS and JavaScript. CO2: Design a responsive web site using HTML5 and CSS3
CA-CCTP-2	Advance Databases	CO1: Explain and understand the concept of a transaction and how ACID properties are maintained when concurrent transaction occur in a database CO2: Create and populate a RDBMS for a real life application, with constraints and keys, using SQL CO3: Retrieve any type of information from a database by formulating complex queries in SQL.
CA-CCTP-3	Design and Analysis of Algorithm	CO1: Students will be able to select appropriate design techniques to solve real world problems. CO2: Students will be able to apply the dynamic programming technique to solve the problems. CO3: Students will be able to apply the greedy programming technique to solve the problems.
CA-CBOTP-1A	Object Oriented Programming with C++	CO1: Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of logic building activity. CO2: Demonstrates how to achieve reusability using inheritance, interfaces and packages and describes faster application development can be achieved. CO3: Identify classes, objects, members of a class and the

relationships among them needed for finding the solution to specific problems.

CA-CBOTP-1A	Object Oriented Programming with C++ Lab	CO1: Understand the difference between the top-down and bottom-up approach CO2: Describe the object-oriented programming approach in connection with C++
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M.Sc.(Computer Application ) Part I (Semester II)

After successfully completing this course, students will be able to

<b>Subject Code</b>	<b>Subject Name</b>	<b>Course Outcome</b>
CA-CCTP-4	Data Mining and Data Warehousing	CO1: Store voluminous data for online processing CO 2: Preprocess the data for mining applications CO3: Apply the association rules for mining the data
CA-CCTP-5	Operating systems	CO1: Identify basic components of the operating system. CO2: Conceptualize synchronization amongst various components of a typical operating system. CO3: Understand and simulate activities of various operating system components.

CO 4:Correlate basic concepts of operating system with an existing operating system.

CA-CCTP-6	Computer Networks	CO1: Understand the concepts of Data Communication. CO2: Study the functions of OSI Layers. CO3:Familiarise with the Transmission Media, Flow Control and Error Detection & Correction.
CA-CBOTP-2 A	Java Programming	CO1: Understand the knowledge of java programming and object oriented concepts CO2: the use of Java in a variety of technologies and on different platforms.
CA-CBOTP-2 A	JAVa Programming Lab	CO1:knowledge of the structure and model of the Java programming language, (knowledge) CO2:develop software in the Java programming language, (application)
CA-CCPP-2	Data Mining Data Warehousing Lab	CO1: get familiar with WEKA and R software for data mining and warehousing.

M.Sc.(Computer Application ) Part II (Semester III)

After successfully completing this course, students will be able to

Subject Code	Subject Name	Course Outcome
CA-CCTP-7	Mobile Application Development using Android	CO1: Gain knowledge about different mobile platform and Application development CO2: To know the programming using Android on IOS and Windows Platform CO3: to develop the mobile app.
CA-CCTP-8	Internet of Things	CO1: Develop small microcontroller based IOT application CO2: Apply theoretical knowledge in real world scenario
CA-CCTP-9	Artificial Intelligence	CO1: discuss the core concepts and algorithms of Advanced AI CO2: Apply the basic principles, models and algorithms of AI to recognise models and solve problems in the analysis and design of information systems.
CA-CBOTP-3 A	Python Programming	CO1: Express proficiency in the handling of strings and functions; CO2: Determine the methods to create and manipulate python programs by utilising the data structures like list, dictionaries, tuples and sets
CA-CBOTP-3 A	Python Programming Lab	CO1: understand the programming structures and implementation of different programming concepts in python
CA-CCPP-3	Android programming Lab	CO1: Develop an android based application for the real world.

M.Sc.(Computer Application ) Part II (Semester IV)

After successfully completing this course, students will be able to:

CO1	Learn the basic concepts of Project & Project Management.
CO2	Become capable of self-education and clearly understand the value of achieving Perfection in the respective Project work.
CO3	Plan, schedule and execute a project considering the risk management and apply quality attributes in software development life cycle
CO4	Understand basics of IT Project management