

## **B.Sc. (Cyber and Digital Science)**

### **Program Outcome:**

- To prepare students for professional work in business and industry as well as government and law enforcement.
- To develop a logical understanding of the subject.
- To strengthen the basics of the subject useful in selecting various career options.
- To make students aware of cyber crime and learn ways to handle them.
- To produce entrepreneurs who can work in the area of Cyber and Digital Forensics.
- To make students competent to apply their knowledge and skills to succeed in their career/ professional development and/or postgraduate education to pursue flexible career paths amidst future technological changes.

### **Program Specific Outcome:**

- Students will apply basic principles and practices of computing grounded in Cyber Security and Digital Science.
- Students will demonstrate a sense of societal and ethical responsibility in their professional endeavors, and will remain informed and involved as full participants in our profession and our society.
- Our graduates will demonstrate strong communication skills and the ability to function effectively in multi-disciplinary teams.
- Our graduates will demonstrate strong bonding in team and display distinct leadership traits.

## **Semester-I**

### **Course Title:CDS-111: Introduction to Computers and Problem Solving**

#### **Course Outcomes:-**

- Learn the fundamental concepts of Problem Solving.
- Develop the logic of problem-solving.
- Ability to analyze a problem and devise an algorithm to solve it.
- Able to formulate algorithms, pseudo-codes, and flowcharts for arithmetic and logical problems.

### **Course Title:CDS-112: Python Programming**

#### **Course Outcomes:**

- Able to use python programming elements to solve and debug simple logical problems.
- Ability to code with the various control statements in Python.
- Develop Python programs using functions and strings.
- Develop python programs to implement various file operations and exception handling.

**Course Title: CDS-113: Basic Mathematical Techniques**

**Course Outcomes:**

- Express mathematical properties via the formal language of propositional logic.
- Acquire the ability to describe computer programs in a formal mathematical manner.
- Apply basic counting techniques to solve combinatorial problems.
- Apply a variety of methods for explaining, summarizing and presenting data, and interpreting results.
- Apply concepts of graphs and trees to tackle real situations such as connectivity and constraint satisfaction.

**Course Title: - CDS-114: Basic Statistical Techniques for Computer Science**

**Course Outcomes:**

- To compute and interpret various summary statistics.
- To compute the correlation coefficient and regression coefficients and interpret them.
- To interpret the nature of different types of probability distributions.
- To use probability distributions for understanding the nature of a given data.
- To statistically test various hypotheses and make decisions.

**Course Title: CDS-115: Lab Course on Introduction to Computers and Problem-Solving**

**Course Outcomes:-**

- Able to understand and apply the steps for installing Windows and Linux Operating Systems.
- Basic Understanding of DOS and Networking Commands.
- Able to connect network devices with proper settings.

**Course Title: CDS-116 Lab Course on Python Programming**

**Course Outcomes:**

- Develop and implement programs by making use of built-in data structures.
- Design and implement programs to solve real-world problems.
- Able to handle File and its related operations.

**Course Title: CDS-117 Lab Course on Basic Mathematical Techniques**

**Course Outcomes:-**

- Able to develop foundational mathematical concepts.
- Able to understand different algorithms.
- Able to understand Graph Theory.
- To formulate problems precisely and solve the problems.
- To test various hypotheses of significance.

**Course Title: CDS-118: Lab Course on Basic Statistical Techniques For Computer Science**

**Course Outcomes:-**

- Ability to understand the basic concepts of probability.
- Able to understand the concept of linear and Non-linear Regression.
- To introduce to the students some of the probability distributions, their shapes, properties, and applications in real life.