

Marathwada Mitra Mandal College of Commerce

B.Sc. (Computer Science) 2024 NEP Pattern

Program Outcomes (PO)

PO1 Develop creative skills, critical thinking, analytical skills and research to address the real world problems using computational skills

PO2 Understand and apply mathematical foundation, computing and domain knowledge and develop computing models for defined problems

PO3 Understand software project management and computing principles with computing knowledge to manage projects in multidisciplinary environments

PO4 Illustrate the concepts of systems fundamentals, including architectures and organization, operating systems, networking and communication

PO5 Understand and apply the concepts of Digital Electronics, Computer Architecture, IoT etc.

PO6 Recognize the need for and develop the ability to engage in continuous learning as a Computing professional

PO7 Apply modern computing tools, skills and techniques necessary for innovative software solutions

PO8 Communicate effectively with the computing community as well as society by being able to comprehend effective documentations and presentations

PO9 Gain Self Discipline and commit Professional Ethics in global economic environment

PO10 Individual & Team Work: Ability to work as a member or leader in diverse teams in multidisciplinary environment

PO11 Identify opportunities, entrepreneurship vision and use innovative ideas to create value and wealth for the betterment of the individual and society

Course Outcomes :

Course Title :Problem Solving Using C Programming (Subject 1 Code : CS-101-T)

- Explore algorithmic approaches to problem solving.
- Control the sequence of the program and give logical outputs.
- Understand and manage Input /Output operations in 'C' program
- Develop modular programs using control structures and arrays in 'C'.

Course Title :Lab Course based on CS-101-T (Code : CS-102-P)

- Explore and develop the algorithmic approaches to problem solving.
- Understand and implement modular programs using control structures and arrays in 'C'.
- Implement programming logic and also test, debug and execute programs.
- Implement Control the sequence of the program and give logical outputs.

Course Title :Matrix Algebra (Code : MTC-101-T)

- Work with graphs and identify certain parameters and properties of the given graphs.
- Perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
- Solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
- Develop an appreciation for the literature on the subject and be able to read and present results from the literature.
- Write cohesive and comprehensive solutions to exercises and be able to defend their arguments.

Course Title: Principles of Analog Electronics (Code : ELC-101-T)

- Understand the concept of semiconductor diodes.
- Understand the different applications of FET, BJT and MOSFET.
- Understand the working principle of different sensors.
- Use Op-amp for different application

Course Title: Electronics Practical Course I (Code : ELC-102-P)

- Use different semiconductor diodes for various applications.

- Understand the different applications of FET, BJT and MOSFET.
- Use of different sensors for parameter measurement

Course Title :Office Automation I (Code : OE-101-CS-T)

- Prepare the professional word documents
- Explore various tools in the word processing software.
- Develop documents using word processing advanced tools.

Course Title : Introduction to Computers and Basics of Internet (Code : OE-102-CS-T)

- Use the computer peripherals effectively
- Use the internet for the day to day life
- Explore various applications available over the internet.

Course Title : Introduction to Google Apps I (Code : OE-103-CS-T)

- Use the google tools for the day to day life
- Explore various applications available in the google tools.
- Develop the skills to implement the skills available in the google tools.

Course Title : Fundamentals of Computers I (Code : OE-104-CS-T)

- Understand the concept of input and output devices of Computers
- Learn the functional units and classify types of computers
- Understand concept of software and working of operating system
- Learn basic Word processing, Spreadsheet and Presentation Graphics Software skills
- Study to use the Information Technology safely, legally, and responsibly
- Describe various uses of offices automation tools in accounting Operations

Course Title : Statistical Methods for Computer Science I (Code : SEC-101-CS-P)

- Present the complex data in tabular format.
- Use various diagrammatic and graphical techniques to represent statistical data and interpret the data.
- Compute various measures of central tendency, dispersion, skewness, and kurtosis using

MS-Excel and interpret the results

- Establish relation between variables and estimate response for given bivariate data using software and interpret the results.

Course Title :Advanced C Programming (Code : CS-151-T)

- Develop modular programs using control structures, function ,pointers, arrays, strings and structures
- Design and develop solutions to real world problems using C.
- Understand and repeat the sequence of instructions and points for a memory location.
- Identification, analyzation, development, verify and document the requirements for a computing environment.

Course Title :Lab Course based on CS-151-P (Code : CS-151-P)

- Develop modular programs using function, pointers, arrays, strings and structures
- Design and develop solutions to real world problems using Advanced C programming.

Course Title :Graph Theory (Code : MTC-151-T)

- Work with graphs and identify certain parameters and properties of the given graphs.
- Perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
- Solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
- Develop an appreciation for the literature on the subject and be able to read and present results from the literature.
- Write cohesive and comprehensive solutions to exercises and be able to defend their arguments.

Course Title :Mathematics Practical II (Code : MTC-152-P)

Course Title : Principles of Digital Electronics (Code : ELC-151-T)

- To learn different number system and their inter conversion.
- To understand logic gates and their applications.
- To study rules and laws of Boolean Algebra.

- To understand and design of combinational circuit and their different types..

Course Title : Electronics Practical Course II (Code : ELC-152-P)

- Understand the design and build of digital circuits using logic gates.
- Use breadboard / tag-board for building small electronic circuits.
- Design digital circuits for different applications.
- Validate observed outputs with expected theoretical outputs.

Course Title :Office Automation II (Code : OE-151-CS-T)

- Prepare the professional presentations
- Explore various tools in the powerpoint presentation software.
- Develop documents using powerpoint advanced tools.

Course Title : Computer Fundamentals (Code : OE-152-CS-T)

- Use the computers for the day to day life
- Learn the fundamental concepts of computer science
- Explore various applications available in the computers.
- Explain the needs of hardware and software required for a computation task.

Course Title : Introduction to Google Apps II(Code : OE-153-CS-T)

- Use the google tools for the day to day life
- Explore various applications available in the google tools.
- Develop the skills to implement the skills available in the google tools.

Course Title : Fundamentals of Computers II (Code : OE-154-CS-T)

- Understand the basic concepts of Networking and Cyber Security.
- Describe Cyber Security Laws and concepts of Digital Signature
- Identify the different types of Network devices and their functions within a Network.
- Elaborate the Internet Services and related terms of Internet.
- Evaluate information security threats.

Course Title : Statistical Methods for Computer Science II (Code : SEC-151-CS-P)

- Fit second-degree curve, and exponential curves.
- Estimate trends by using time series data.
- Understand concept of probability.
- Estimate probabilities of standard probability distributions
- Perform tests based on normal, Chi-Square, t and F distributions.

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