Central Hindu Military Education Society's.
Dr. Moonje Institute of Management & Computer Studies
(Affiliated to S.P. Pune University & Approved by AICTE New Delhi)
(Accredited by NAAC with B+ Grade)
Bhonsala Military College Campus Rambhoomi, Nashik – 422 005
☎ Ph. No. (0253) 2342840, 9175917050
PUN Code : IMMN017930, DTE Code : 5119, Exam Code : 0688
Email:office@moonjeinstitute.com Website:www.moonjeinstitute.com

MCA Programme Outcomes (POs):

PO1	Computing Knowledge	Apply knowledge of computing fundamentals, computing specialization, mathematics, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.
PO2	Problem Analysis	Identify, formulate, research literature, and solve complex Computing problems reaching substantiated conclusions using fundamental principles of Mathematics, Computing sciences, and relevant domain disciplines
PO3	Design & Development	Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
PO4	Research & Development	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions
PO5	Prompt Tool Usage	Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations
PO6	Ethical Practices	Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practice.
PO7	Life Long Learning	Recognize the need, and have the ability, to engage in independent learning for continual development as a Computing professional.
PO8	Professional Skills	Demonstrate knowledge and understanding of computing and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO9	Communication Skills	Communicate effectively with the computing community, and with society at large, about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.
PO10	Societal Contribution	Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.
PO11	Teamwork & Leadership	Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary environments
PO12	Innovation & Sustainability	Identify a timely opportunity and using innovation to pursue that opportunity to create value and wealth for the betterment of the individual and society at large.

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Program Specific Outcomes - MCA

PSO 1: To deliver latest programming language and tools to develop better and faster applications in the fields of Systems Designing, Application Software Development, Enterprise Resource Planning, Web Designing and Development, Database Administration, Cloud Computing etc .

PSO 2 : To impart all-inclusive knowledge, technical expertise, and hands-on experience in IT infrastructure and security management for implementing IT Infrastructure and security solutions to handle Industry Challenges

PSO 3 : To develop competent workforce in the field of Business Intelligence, Data Warehousing

,Data Mining Information Security Audits etc. which is important in any organization to take decisions, to prepare plans and to control activities.

PSO 4 : To develop basic and advanced skills in areas of Network Administration there by increasing the level of expertise in Computer Networks for career into Core Networking / Routing-n-Switching, System Administration etc .

PSO 5: To guide for Certifications like:

    a. Java Certifications
    b. .Net Certifications
    c. Certified Information Security Manager (CISM)
    d. ISACA Certifications
    e. Testing Certifications
    f. Red Hat Certified System Administrator (RHCSA)
    g. Red Hat Certified Engineer (RHCE)
    h. Microsoft certifications (MCSE)
    i. CCNA/CCNP Wireless Certification

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MCA I- Semester II

IT21: Java Programming

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Apply	Apply the concept of Object-Oriented Programming to map and solve simple real world problem
CO2	Apply	To design and develop robust, efficient, multithreaded and scalable Java applications using the collection framework, multithreading, and exception handling.
CO3	Apply	To develop Web application for solving real life problem using Servlet
CO4	Apply	To develop Web application for solving real life problem using JSP, JDBC
CO5	Apply	To develop robust web applications using Spring MVC

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MCA I- Semester II

MT21 : Optimization Techniques

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Apply	Understand and formulate linear programming models to solve optimization problems in various business contexts.
CO2	Apply	Apply sequential models to make informed decisions in dynamic and uncertain environments.
CO3	Apply	Utilize Markov chains and simulation techniques to model and solve complex inventory management problems.
CO4	Apply	Apply PERT/CPM techniques to plan, schedule, and control projects effectively, including managing replacement decisions.
CO5	Apply	Apply decision-making processes and strategic interactions using decision theory and game theory frameworks.

MCA I- Semester II

IT-22: Software Testing and Quality Assurance

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Understand	Understand the role of software quality assurance in contributing to the efficient delivery of software solutions
CO2	Understand	Understand specific software tests with well-defined objectives and targets.
CO3	Apply	Apply the software testing techniques in commercial environments
CO4	Analyze	Construct test strategies and plans for software testing.
CO5	Apply	Demonstrate the usage of software testing tools for test effectiveness, efficiency, and coverage

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MCA I- Semester II

RM21: Research Methodology

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Understand	Understand the basic concepts, purposes, and significance of research methodology in academic and professional contexts
CO2	Apply	Apply various research designs and their appropriateness for different types of research questions and objectives
CO3	Apply	Apply suitable data collection and sampling methods to gather reliable and valid data for research studies.
CO4	Apply	Use appropriate statistical tools and techniques to demonstrate research data and interpret the results effectively
CO5	Apply	Apply skills in writing clear, coherent, and well-structured research reports that effectively communicate research findings

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MCA I- Semester II

EC21-1: Cloud Computing Management and Security

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Understand	Understand and describe the fundamentals of Cloud Management, Security Concepts, Quality services.
CO2	Understand	Understand and explain the concept of Cloud Database and File System with Cloud Database Services.
CO3	Apply	Demonstrate Security Concepts in AWS and security services
CO4	Understand	Recognize the Cloud Backup and Disaster Recovery strategies
CO5	Apply	Use and understand the various Cloud Compute Services

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MCA I- Semester II

EC 21-2: JavaScript

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Apply	Utilize Basic JavaScript concepts for writing simple Java script program
CO2	Apply	Design and develop simple application using build-in objects and browser object Model
CO3	Apply	Implement the concepts of OOPs , event handling and Asynchronous JavaScript for developing simple real life problem solving web application
CO4	Create	Create interactive web page of application for problem solving
CO5	Apply	Demonstrate server-side and client-side aspects of web applications using Node.js and React.

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MCA I- Semester II

EC21-3: Machine Learning Techniques

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Understand	Describe the workflow of a machine learning project, including data pre-processing, model training, evaluation, and deployment
CO2	Apply	Apply the various algorithms of supervised and learning
CO3	Apply	Apply the various algorithms of unsupervised learning
CO4	Apply	Apply the fundamental algorithms in semi-supervised and reinforcement learning.
CO5	Apply	Apply real-world applications of supervised and unsupervised learning across diverse domains.

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MCA I- Semester II

EC21-4: Essentials of Cyber Security

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Understand	Understand the importance of cybersecurity practices, understand how to secure a network against intrusion tactics, understand types cyber-crime attacks
CO2	Understand	Understand how data is sent and received over a network, Incidence response, Disaster Recovery
CO3	Apply	Identify common risks, threats, and vulnerabilities, as well as techniques to mitigate them
CO4	Apply	Evaluate risk and identify security management tools, apply cyber security technologies
CO5	Understand	Understand digital forensics and its needs

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MCA I- Semester II

EC22-1: Essentials of Cloud Computing and Security

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Understand	Describe the concepts of Cloud Software Security Fundamentals
CO2	Understand	Discuss and Classify different Programming Environments
CO3	Understand	Define Emerging Trends in Cloud Computing
CO4	Understand	Discuss Resource pooling, Sharing and Provisioning
CO5	Apply	Demonstration of various applications in cloud computing

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EC22-2: Advance Web Development

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Apply	Implement a Web Server in Node
CO2	Apply	Apply TypeScript features such as decorators, generics, and modules for creating reusable and maintainable code
CO3	Apply	Implement concepts and methods of Angular
CO4	Apply	Implement Angular services, dependency injections and Asynchronous operations
CO5	Create	Develop website using Next.js

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MCA I- Semester II

EC22-3: Power BI

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Apply	Demonstrate the concepts and importance of data modelling, data source, data cleaning, data transformation in Power BI
CO2	Analyse	Analyse data relationships and model data using DAX
CO3	Analyse	Assess the interactivity of visualizations using slicers, filters, and drill through features.
CO4	Apply	Use M Queries to extract, transform, and load data from various sources
CO5	Analyse	Examine Power BI solutions that solve real-world business problems as outlined in case studies

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MCA I- Semester II

EC22-4: Essentials of Information Security

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Understand	Understand the fundamental concepts of cybersecurity, including its importance and various threats in cyberspace
CO2	Understand	Understand the vulnerable to threats in systems
CO3	Apply	Design and Apply the need for security architecture and its relevance to systems, service continuity and reliability
CO4	Understand	Ability to describe the various auditing tools that can be used in cybersecurity management
CO5	Apply	Identifies the needs of users in the field of developing information systems and building secure computer networks.

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MCA I- Semester II

IT21L: Practical

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Apply	Demonstrate fundamental concepts of Java
CO2	Create	Design and implement classes and objects in Java, applying principles of inheritance, polymorphism, encapsulation, and abstraction
CO3	Create	Establish database connectivity using JDBC, execute SQL queries, handle result sets, and manage database transactions from Java applications
CO4	Create	Develop dynamic web applications using Java Servlets and JSP
CO5	Create	Use spring MVC framework to build web application.

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MCA I- Semester II

IT21L: Mini Project

Course Outcomes:

CO#	Cognitive Domain	COURSE OUTCOMES
CO1	Apply	Apply knowledge of software engineering principles and methodologies in designing and implementing the project
CO2	Apply	Demonstrate the ability to develop a functioning software application or solution that meets specified requirements and objectives
CO3	Apply	Design comprehensive documentation that includes project requirements, design specifications, implementation details, testing strategies, and user manuals