

KCES's Institute of Management and Research, Jalgaon			
MCA Integrated 2024-25			
Course Outcomes			
Course	Semester	Subject Code	CO's
		IMCA-DSC-111 Programming in C	CO1 Recall fundamental concepts of C programming, including syntax, data types, operators. CO2 Apply appropriate control structures to solve problems such as decision making and repetitive tasks. CO3 Analyze the concept of function scope, recursion, and the importance of modular programming. CO4 Evaluate the effectiveness of different data handling techniques (e.g., arrays, pointers, string) in solving particular problems. CO5 Explain the difference between structures and unions and their memory allocation. CO6 Design and implement complex C programs that integrate multiple concepts, such as file handling.
		IMCA-DSC-112 Lab on Programming in C	CO1 Understand fundamental concepts of C programming, including syntax, data types, operators. CO2 Develop C programs using control structures for decision-making and iteration. CO3 Analyze the concept of function scope, recursion, and the importance of modular programming. CO4 Evaluate the effectiveness of different data handling techniques (e.g., arrays, pointers, string) in solving particular problems. CO5 Describe the memory allocation differences between structures and unions. CO6 Create and execute intricate C programs that combine several ideas, such as file handling.
		IMCA-OE-113-A Principles of Management	CO1 Students will be able to define and describe the nature, features, and functions of management, and critically assess whether management is a science, art, or profession. CO2 Students will demonstrate the ability to effectively forecast, plan, and organize by applying the principles and processes learned to real-world management scenarios. CO3 Students will develop the ability to coordinate activities and make informed decisions within an organizational context, ensuring alignment with strategic goals and efficient management operations.
		IMCA-OE-113-B Principles of Accounting-I	CO1 Demonstrate an understanding of the importance of accounting and evaluate the role and benefits of book-keeping, including knowledge of the latest accounting standards. CO2 Comprehend and apply fundamental concepts of financial accounting. CO3 Develop and analyze accounting documents, assess the impact of transactions, accurately prepare journal entries, and calculate GST on the purchase and sale of goods.
		IMCA-OE-114-A - Digital Marketing-I	CO1 Understand the core principles of digital marketing. CO2 TO Gain insights into various digital marketing tools and techniques. CO3 To Develop skills to analyze digital marketing performance and optimize strategies.

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IMCA-OE-114-B Personal Financial Planning-I	CO1 Understand the fundamental concepts of Personal financial planning. CO2 Analyze and apply knowledge and theories of financial planning. CO3 Apply skills for effective decision-making in financial planning
IMCA-VSC-115 Web Technology-I	CO1 Create and style responsive, semantic web pages using HTML, CSS, LESS, and Sass, employing advanced techniques for modern web design. CO2 Utilize LESS and Sass to write efficient, modular, and maintainable CSS, integrating them effectively into web development workflows. CO3 Debug, optimize, and apply best practices in web design and development to produce high-quality, performant, and accessible websites.
IMCA-SEC-116- Computer Fundamentals	CO1 Understand the basics of computer & Data representation. CO2 Describe concepts different input, output devices and memory & Analyse Algorithms & flowchart. CO3 Describe concepts of basic Computer Network
IMCA-AEC-117 Mathematics for Computer Application- I	CO1 Understand mathematical logic to solve problems and apply operations on sets and algebraic structures. CO2 Analyse the matrix and determinants. CO3 Apply the mathematical concepts such as relations and functions.
VEC-101 Environment Science and Sustainability	sustainability. CO2 Evaluate the environmental impacts of human activities and propose sustainable solutions. CO3 Apply sustainability principles in business practices to promote
IKS-102 Indian Knowledge System	CO1 Understand the foundational concepts and scope of Indian Knowledge Systems (IKS) and their influence on various dynasties and texts. CO2 Analyze the ethical and philosophical underpinnings from texts like Vedanta, Buddhism, Jainism, and their application to contemporary leadership. CO3 Apply leadership lessons from Indian epics such as the Mahabharata and Ramayana to modern management practices. CO4 Evaluate the teachings of Kautilya's Arthashastra and their strategic importance in contemporary organizational settings. CO5 Understand and appreciate the contributions of ancient Indian arts, such as Bharata's Natyashastra, sculpture, and Indian music to cultural heritage. CO6 Analyze the development of trade and commerce in ancient India, with a focus on industries such as textiles, metallurgy, and maritime trade.
CC-100 A) NSS	● Understand social responsibility. ● Awareness about social issues.
CC-100 B) Sports	● Increase in the physical and mental fitness of students through sports. ● The student may develop better grasping power. ● Development of student's personality through sports. ● The students be encouraged for better competition in sports.

CC-100 C) Cultural Activities	• विद्याथरश ा ा ां ना स्वागत गीताचेस्वरूप समजून येईल. • विद्याथरश ा ा ां ना भितीपत्रकाचेस्वरूप समजून येईल • विद्याथरश ा ा ां ना अितथी परिचय कसा भकतात तेलक्षात येईल • विद्याथरश ा ा ां ना भ ाभ प्रदर्शनाचेप्रयोजन व स्वरूप समजून घेता येईल • विद्याथरश ा ा ां ना भ चना,(भिझार्िनाांग) चेकौर्ल्शप्राप्त होईल • विद्याथरश ा ा ां ना वतर्मानपत्रातील लेखनाचेस्वरूप प्रकाभ समजून येईल • विद्याथरश ा ा ां ना वािर्षर्काााांचेस्वरूप व प्रयोजन लक्षात येईल
IMCA-DSC-121 Object Oriented Programming Concepts using C++	CO1 Understanding the Object-Oriented Paradigm. CO2 Understanding in C++ Controls, Pointers, and Functions. CO3 Demonstration Classes and Objects in C++. CO4 Apply inheritance concepts to solve programming problems. CO5 Explain and apply polymorphism in C++ to enhance code flexibility and functionality. CO6 Demonstrate the use of Templates & Exception Handling and file handling in C++.
IMCA-DSC-122 Lab on OOPS Concepts using C++	CO1 Understand the basic programming skills including variables, control structures, functions, and arithmetic operations etc. CO2 Understand and apply OOP principles like encapsulation, inheritance, and polymorphism, including implementing classes with constructors/destructors, function overloading, and operator overloading. CO3 Learn advanced techniques including dynamic memory management, exception handling, and file operations, enabling effective memory management and error handling. CO4 Understand basic data structures such as arrays and strings. CO5 Understand Pointer and Memory Management
IMCA-MIN-123 System Analysis and Design	CO1 Understand systems and their development through the System Development Life Cycle (SDLC). CO2 Develop various system models, including DFDs, ERDs, and Use Case Diagrams. CO3 Design efficient systems with robust testing and maintenance.
IMCA-OE-124-A- Marketing Management	CO1 Define the fundamental concepts of marketing, including its definition, nature, scope, process and importance (Remember). CO2 Explain the concept of the marketing environment, segmentation, targeting and positioning (Understand). CO3 Explain the concept of the marketing mix and its components, commonly referred to as the 4Ps (Product, Price, Place, and Promotion). (Understand).
IMCA-OE-124-B- Principles of Accounting-II	CO1 Understand to post recording from Books of original entries to Ledger. Balancing of various ledger accounts, prepare Trial Balance, meaning and need of Subsidiary Books, prepare and balance different types of Cash Book. CO2 Understand effects of Rectification of Errors, detect the errors and rectify them, meaning and need of Suspense A/c. CO3 Understand Meaning, Objective and Importance of Final Accounts, effects of adjustments and Prepare Trading A/c, Profit and Loss A/c and Balance sheet with competency.

IMCA-OE-125-A Digital Marketing-II	CO1 Understand the strategic role of content in digital marketing and how it influences customer engagement and brand visibility. CO2 Understand and apply mobile marketing strategies to reach and engage mobile users effectively. CO3 Develop proficiency in using digital marketing analytics to track and measure campaign performance.
IMCA-OE-125-B Personal Financial Planning-II	CO1 Understand the fundamental concepts of Personal financial planning. CO2 Analyse and apply knowledge and theories of financial planning. CO3 Apply skills for effective decision-making in financial planning
IMCA-VSC-126 Web Technology-II	CO1 Develop interactive and dynamic web applications using JavaScript for frontend functionality. CO2 Create and manage server-side applications with Node.js and Express.js for robust backend solutions. CO3 Design responsive and visually appealing web pages using Bootstrap, ensuring cross-device compatibility.
IMCA-SEC-127 Operating System Concepts with Linux Lab	CO1 To recall the basic concepts of Operating System like it's definition, types etc. CO2 To Understand Components of OS and its architecture, Process state and learn basic Linux commands. CO3 To Apply the Linux commands to implement the Shell Programming applications.
IMCA-AEC-128 Mathematics for Computer Application-II	CO1 Solve applications involving permutations and combinations. CO2 Analyse statistical data using measures of central tendency, dispersion and location. CO3 Apply and Develop problem-solving techniques needed to accurately calculate probabilities.
VEC-201 Indian Constitution	CO1 Understand the background and features of Indian Constitution. CO2 Understand the philosophy of fundamental rights and duties of Indian Citizens. CO3 Describe the structure, powers, and functions of the organs of governance
CC-200 A) NSS	- Understand social responsibility. - Awareness about social issues.
CC-200 B) Sports	- Increase in the physical and mental fitness of students through sports. - The student may develop better grasping power. - Development of student's personality through sports. - The students be encouraged for better competition in sports.
CC-200 C) Cultural Activities	- विद्यार्थ्यां न किंवदन्ता तथा निम्नलिखिता वाङ्मय प्रकाशने प्रकाशने स्वरूप प्रयोजन समजून येईल - विद्यार्थ्यां न सांस्कृतिकते स्वरूप समजून घेतील - विद्यार्थ्यां न सांस्कृतिक उपक्रमांच्या स्वरूपाचा प्रकाशने परिचय येईल - विद्यार्थ्यां न भौतिक स्वरूप प्रयोजन समजून येईल - विविध सांस्कृतिक महत्वाच्या दिनांकांचे महत्त्व विद्यार्थ्यां न लक्षात येईल Course Content (अभ्यासक्रम मध्ये)
IMCA-DSC-231 - Data & File Structure	CO1 Demonstrate understanding of fundamental data structures and algorithm design techniques, Sorting and Searching. CO2 Implement and apply linear data structures such as stacks, queues, and linked lists in solving computational problems. CO3 Analyze and implement non-linear data structures like trees and graphs, along with their associated algorithms and real-world applications.

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IMCA-DSC-232 – Lab on Data & File Structures	CO1 Demonstrate understanding of fundamental data structures and algorithm design techniques, Sorting and Searching. CO2 Implement and apply linear data structures such as stacks, queues, and linked lists in solving computational problems. CO3 Analyze and implement non-linear data structures like trees and graphs, along with their associated algorithms and real-world applications.
IMCA-DSC-233- Computer Networks	CO1 Understand the fundamental concepts, transmission modes, signals, and models of computer networks. CO2 Analyze the characteristics of physical transmission media, switching techniques, and signal encoding. CO3 Apply error detection and correction techniques to ensure reliable data communication. CO4 Compare OSI and TCP/IP models and explain the roles and functions of each layer and associated protocols. CO5 Identify and evaluate network topologies, addressing schemes, and key network devices. CO6 Explore application layer protocols and apply basic network security mechanisms for secure communication.
IMCA-MIN-234- Management Information System	CO1 Describe the basic concepts of MIS and its significance in business organizations. CO2 Explain the structure and components of information systems and their classifications. CO3 Apply MIS knowledge to enhance decision-making in various business functions. CO4 Understand the strategic role of IT in creating virtual and knowledge-driven companies. CO5 Understand CRM concepts, phases, benefits, challenges, failures, and trends. CO6 Understand ERP systems, benefits, challenges, costs, failures, and trends.
IMCA-OE-235-A Entrepreneurship Development	CO1 Understand the concept, evolution, characteristics, and types of entrepreneurs and differentiate them from managers. CO2 Evaluate the role, growth, and problems faced by women entrepreneurs in India and globally. CO3 Analyze registration processes, advantages, and challenges of Small Scale Industries (SSIs)
IMCA-OE-235-B Ecommerce & M- Commerce	CO1 Analyse the impact of E-commerce on business models and strategy. CO2 Capable to evaluate the effectiveness of e-commerce strategies. CO3 Implement marketing strategies for e-commerce businesses.
IMCA-VSC-236 Web Technology-III	CO1 Understand the fundamentals of React.js for building dynamic and component- based front-end web applications. CO2 Develop and manage stateful and reusable components using React features such as props, state, hooks, and routing. CO3 Design and build RESTful APIs using Node.js and Express, integrating MongoDB as a backend database via the Mongoose library.
IMCA-AEC- 237Office Automation Tools	CO1 Apply word processing tools and AI-based writing assistants (e.g., Grammarly, Notion AI) to create and enhance professional documents. CO2 Analyze and interpret data using spreadsheet functions, charts, and AI-based tools like Cognii or Yippity to generate automated insights. CO3 Create engaging multimedia presentations and evaluate the use of AI tools like Tome and GitHub Copilot for automating presentation tasks..

IMCA-FP-238 Minor Field Project using GitHub	CO1 Students will be able to critically analyse and assess existing IT systems in real world settings. CO2 Students will gain hands-on experience in collecting, analysing, and interpreting primary data using different tools. CO3 Students will enhance their report writing, presentation, and communication skills through structured documentation and viva voce.
CC-300 A) NSS	• Understand social responsibility. • Awareness about social issues.
CC-300 B) Sports	• Increase in the physical and mental fitness of students through sports. • The student may develop better grasping power. • Development of student's personality through sports. • The students be encouraged for better competition in sports.
CC-300 C) Cultural Activities	• नृत्य, नकला, पाककला, मेहंदी रेखाटन, कथाकथन, काव्य सादरीकरण, वक्तृत्व, चित्रकला, फलक रेखाटन, सूत्रसंिालन, वादन, एकपात्री, वाचदववाद, अचिवािान इत्यादी कलांिाेेस्वरूप, प्रकार, प्रयोजन चेवद्याथयांना समजून येईल • फॅ शन शो चेचविव लोककला, सांस्कृ चिक स्ेेा, सजावट, साचेहत्य संमेलन इत्यादींिाेेे स्वरूप प्रकार, प्रयोजन चेवद्याथयांना लक्षांिा येईल
IMCA-DSC-241 Database Management System	CO1 Understand DBMS architecture, users, and ACID properties of transactions. CO2 Design ER models and normalize relational schemas up to 4NF. CO3 Write SQL queries and apply relational algebra for data manipulation and control.
IMCA-DSC-242 Lab on Database Management System	CO1 Execute DDL,DML commands and implement integrity constraints. CO2 Apply SQL clauses, Aggregate functions, string and date time functions. CO3 Create Procedure, apply joins and perform set based operations
IMCA-DSC-243 Java Programming	CO1 Apply Java programming fundamentals, including data types, control structures, arrays, and string handling, to develop basic programs. CO2 Design and implement Java applications using core OOP concepts such as classes, objects, inheritance, polymorphism, and interfaces. CO3 Implement exception handling techniques and wrapper classes to write robust and error-resistant Java code.
IMCA-DSC-244 Lab on Java Programming	CO1 Apply Java programming fundamentals, including data types, control structures, arrays, and string handling, to develop basic programs. CO2 Design and implement Java applications using core OOP concepts such as classes, objects, inheritance, polymorphism, and interfaces. CO3 Implement exception handling techniques and wrapper classes to write robust and error-resistant Java code.
IMCA-MIN-245 Software Engineering	CO1 To introduce the fundamental principles, components, and types of systems essential to system engineering. CO2 To explain the nature, characteristics, and domains of software, and the need for systematic software engineering practices. CO3 To familiarize students with software development processes and models, including SDLC phases and various process frameworks. CO4 To enable students to perform structured analysis and design using tools like decision trees, DFDs, data dictionaries, and pseudo code. CO5 To provide insights into software testing principles, types of testing, and the concept of changeover in software systems. CO6 To explore agile methodologies, principles, and models such as Scrum, XP, and DSDM for adaptive and efficient software development.

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IMCA-OE-246-A-Basics of Tally	CO2 Create Ledger & Groups in Tally Prime Software. CO3 Compile Stock & Pass Voucher Entries in Tally Prime Software
IMCA-OE-246-B Advanced Excel	CO1 Apply advanced Excel functions (e.g., IF, VLOOKUP, TEXT functions) to manipulate data, automate calculations, and streamline decision-making processes. CO2 Utilize PivotTables, charts, and What-If tools to analyze large datasets, create dynamic reports, and visualize data effectively for decision support. CO3 Automate repetitive tasks with Macros, secure Excel files with password protection, and clean/combine data using Power Query to improve workflow efficiency and data integrity.
IMCA-SEC-247 Cyber Security	CO1 Understand the foundational concepts of information security and the nature of modern threats. CO2 Apply cryptographic methods and system security principles to protect data and networks. CO3 Demonstrate knowledge of OS security mechanisms and interpret cybersecurity laws and standards.
IMCA-AEC-248 Personality Development	CO1 Understand the foundations of personality development, including ethics, values, leadership, and communication skills. CO2 Develop strong character traits and build effective public and human relations through self-awareness and empathy. CO3 Apply conflict and stress management strategies, plan careers with realistic goals, and prepare effectively for interviews and aptitude tests.
CEP-401 Community Engagement and Service	CO1 Understand the foundational concepts and importance of community engagement. CO2 Analyse and identify prevalent social issues through real-life case examples. CO3 Plan and execute community service initiatives with collaborative effort and appropriate engagement methods. CO4 Critically reflect on service experiences through documentation, assess impact.
CC-400 A) NSS	● Understand social responsibility. ● Awareness about social issues.
CC-400 B) Sports	● Increase in the physical and mental fitness of students through sports. ● The student may develop better grasping power. ● Development of student's personality through sports. ● The students be encouraged for better competition in sports.
CC-400 C) Cultural Activities	● नृत्य, नकला, पाककला, मेहंदी, रेखाटन, कथाकथन, काव्यसादरीकरण, वक्तृत्व, चित्रकला, फलन, रेखाटन, सूत्रसंस्कारालन, वादन, एकपात्री, नायचिनय, वाचदववाद, अचिवांन इत्यादी कलेांेस्वरूप, प्रकार, प्रयोजन चवद्याथयांना समजून येईल ● फॅशन शो, चेचविव लोककला, सांस्कृ चिक सेांेा, सजावट, साचेहत्य संमेलन, इत्यादीांेे स्वरूप प्रकार प्रयोजन चवद्याथयांच्या लक्षाांे येईल