Visvesvaraya Technological University, Belagavi
Centre for Online Education, Mysuru (VTU-COE)
Interactive Live Lecture Schudule for MCA

Programme Name : Master of Computer Applications (MCA in Artificial Intelligence and Data Science & MCA in Cyber Security & Cloud Computing

Date	Time	Course Name & Course Code	Module	Topics to be Covered	Name of the Course Expert
24-11-2023	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-1	**MATRICES** Definition, Types of Matrices, Addition, Subtraction, Scalar Multiplication and Multiplication of Matrices, Adjoint, Inverse, Eigen values and Eigen Vectors of a Matrix	**Dr. K S Basavarajappa,** Professsor, Dept. of Mathematics, BIET, Davanagere
25-11-2023	7:00 - 8:00 pm	**Operating System OMCA102**	Module-1	Introduction to operating systems [OS]: What operating systems do; Computer System organization; Computer System architecture; Operating System operations; Resource Management; Security and Protection; Virtualization; Distributed system; Computing environments.	**Dr. Maya,** Assistant Professor, Dept. Of CSE, BIT, Bengaluru
26-11-2023	6:00 - 7:00 pm	**Database Management System OMCA103**	Module-1	Introduction: Characteristics of Database approach, Actors on the Scene, Workers behind the scene, Advantages of using DBMS approach, Data models, schemas and instances, Three -schema architecture and data independence	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
26-11-2023	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-1	Introduction to C: Structure of C Program, Compiling and executing C programs, Variables, Constants, IO statements in C, Operators in C	**Dr.Kumar P K,** Assistant Professor, Dept. Of CSE, VTU CPGS Mysuru
27-11-2023	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-1	Caley-Hamilton Theorem (Statement only) Rank of a matrix, Row reduced echelon form and normal form Solution of homogeneous and non homogeneous system of linear equations.	**Dr. K S Basavarajappa,** Professsor, Dept. of Mathematics, BIET, Davanagere
28-11-2023	7:00 - 8:00 pm	**Operating System OMCA102**	Module-1	Operating System Structures: Operating Services; User and Operating System interface; System calls; System Services; System programs; Operating system design and implementation; Operating System structure; System Building and Booting; Why Applications Are Operating-System Specific	**Dr. Maya,** Assistant Professor, Dept. Of CSE, BIT, Bengaluru
29-11-2023	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-1	Database languages and interfaces, the database system environment, Centralized and client -server architectures, Classification of Database Management systems, Entity-Relationship Model: Conceptual Database using high level conceptual data models for Database Design	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
30-11-2023	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-2	Decision control and Looping statements: Introduction to decision control, Conditional branching statements	**Dr.Kumar P K,** Assistant Professor, Dept. Of CSE, VTU CPGS Mysuru

Date	Time	Subject	Module	Topic	Faculty
04-12-2023	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-2	SETS: Sets, Subsets, Types of Sets, Operation on Sets, Cartesian product, Cardinality of sets and applications.	**Dr. K S Basavarajappa,** Professsor, Dept. of Mathematics, BIET, Davanagere
05-12-2023	7:00 - 8:00 pm	**Operating System OMCA102**	Module-1	Process Management: Process concept; Process scheduling; Operations on processes; Inter process communication [IPC]; IPC Systems	**Dr. Maya,** Assistant Professor, Dept. Of CSE, BIT, Bengaluru
06-12-2023	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-1	A Sample Database Application, Entity types, Entity sets Attributes and Keys Relationship types, Relationship Sets, Roles and Structural Constraints Weak Entity Types.	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
07-12-2023	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-2	Interative statements, nested loops, break and continue statements, goto statement.	**Dr.Divya C D**, Associate Professor, Dept. Of CSE, VVCE, Mysuru
11-12-2023	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-3	RELATIONS AND FUNCTIONS: RELATIONS: Definition with illustrations, Representation of relations to Zero-one matrix and digraphs	**Dr. K S Basavarajappa,** Professsor, Dept. of Mathematics, BIET, Davanagere
12-12-2023	7:00 - 8:00 pm	**Operating System OMCA102**	Module-2	Threads and Concurrency: Multicore Programming, Multithreading models; Thread Libraries; Implicit Threading; Threading issues; OS-Threading examples.	**Dr. Maya,** Assistant Professor, Dept. Of CSE, BIT, Bengaluru
13-12-2023	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-2	Relational Model Relational Model and Relational Algebra: Relational Model Concepts, Relational Model Constraints and Relational Database Schema Update Operations, Transactions and Dealing with Constraint violations, Unary Relational operations	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
14-12-2023	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-3	Arrays: Declaration of arrays, accessing and storing of values in array, Operations on arrays, 2-D arrays, operations on two-dimensional arrays, multidimensional arrays, applications of arrays	**Dr.Divya C D**, Associate Professor, Dept. Of CSE, VVCE, Mysuru
18-12-2023	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-3	FUNCTIONS: Definition, Domain and Range of function, Types of functions with illustrations.	**Dr. K S Basavarajappa,** Professsor, Dept. of Mathematics, BIET, Davanagere
19-12-2023	7:00 - 8:00 pm	**Operating System OMCA102**	Module-2	CPU Scheduling: Basic concepts; Scheduling Criteria; Scheduling Algorithms; Multiple-processor scheduling; Thread scheduling; Multi-Processor Scheduling, Real-Time CPU Scheduling; OS CPU scheduling examples and Algorithm Evaluation	**Dr. Maya**, Assistant Professor, Dept. Of CSE, BIT, Bengaluru
20-12-2023	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-2	Relational Algebra Operations from Set Theory, Binary Relational Operations, JOIN and DIVISION, Additional Relational Operations, Examples of Queries in Relational Algebra Relational Database Design Using ER-to Relational Mapping	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
21-12-2023	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-3	Functions: Introduction using functions, Function definition & declaration, function call, return statement, passing parameters to functions	**Dr.Divya C D**, Associate Professor, Dept. Of CSE, VVCE, Mysuru

Date	Time	Subject	Module	Topic	Faculty
26-12-2023	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-4	Random variable and probability distribution: Concept of random variable	**Dr. K S Basavarajappa,** Professsor, Dept. of Mathematics, BIET, Davanagere
27-12-2023	7:00 - 8:00 pm	**Operating System OMCA102**	Module-2	Process Synchronization: Background; The critical section problem; Peterson's solution;	**Dr. Maya,** Assistant Professor, Dept. Of CSE, BIT, Bengaluru
28-12-2023	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-3	Introduction to SQL: Overview of the SQL Query Language, SQL Data Definition, Basic structure of SQL Queries, Additional Basic Operations	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
29-12-2023	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-3	Passing arrays to functions, scope of variables, storage classes, recursive functions.	**Dr.Divya C D,** Associate Professor, Dept. Of CSE, VVCE, Mysuru
02.01.2024	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-4	Discrete probability distributions, continuous probability distributions	**Dr. K S Basavarajappa,** Professsor, Dept. of Mathematics, BIET, Davanagere
03.01.2024	7:00 - 8:00 pm	**Operating System OMCA102**	Module-2	Hardware Support for Synchronization; Mutex Locks; Semaphores; Monitors; Classical problems of synchronization.	**Dr. Maya,** Assistant Professor, Dept. Of CSE, BIT, Bengaluru
04.01.2024	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-3	Null values, Aggregate Functions, nested Sub queries, Modification of the Database, Join Expressions, Views	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
05.01.2024	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-4	Strings: Introduction to strings, operations on strings, arrays of strings.	**Dr.Divya C D,** Associate Professor, Dept. Of CSE, VVCE, Mysuru
08.01.2024	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-4	Mean, variance and co-variance and co-variance of random variables. Binomial and normal distribution	**Dr. K S Basavarajappa,** Professsor, Dept. of Mathematics, BIET, Davanagere
09.01.2024	7:00 - 8:00 pm	**Operating System OMCA102**	Module-3	Deadlocks: System model; Deadlock in Multithreaded Applications; Deadlock characterization; Methods for handling deadlocks; Deadlock Prevention; Deadlock Avoidance; Deadlock detection and Recovery from Deadlock.	**Dr. Maya,** Assistant Professor, Dept. Of CSE, BIT, Bengaluru
10.01.2024	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-3	Transactions, Integrity Constraints, SQL Data Types and Schemas, Authorization	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
11.01.2024	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-4	Pointers: Introduction to pointers, declaring pointer variables.	**Dr.Divya C D,** Associate Professor, Dept. Of CSE, VVCE, Mysuru

15.01.2024	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-4	Exponential and normal distribution with mean and variables and problems	**Dr. K S Basavarajappa**, Professsor, Dept. of Mathematics, BIET, Davanagere
16.01.2024	7:00 - 8:00 pm	**Operating System OMCA102**	Module-3	Memory Management: Background; Contiguous memory allocation; Paging; Structure of page table; swapping; Example: Intel 32- and 64-bit Architectures.Virtual Memory Management: Background; Demand paging; Copy-on-write; Page replacement; Allocation of frames; Thrashing.	**Dr. Maya**, Assistant Professor, Dept. Of CSE, BIT, Bengaluru
17.01.2024	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-4	Database Design: Informal Design Guidelines for Relation Schemas, Functional Dependencies, Normal Forms based on Primary Keys,	**Dr. Soumyasri S.M**, Associate Professor, Dept. Of MCA, NIE Mysuru
18.01.2024	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-4	Types of pointers, Passing arguments to functions using pointers.	**Dr.Divya C D**, Associate Professor, Dept. Of CSE, VVCE, Mysuru
22.01.2024	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-5	Graph Theory: Graphs and Graphs models, Graph Terminology and Special Types of Graphs	**Dr. K S Basavarajappa**, Professsor, Dept. of Mathematics, BIET, Davanagere
23.01.2024	7:00 - 8:00 pm	**Operating System OMCA102**	Module-4	Mass-Storage Structure: Overview of Mass-Storage Structure; HDD Scheduling; NVM Scheduling; Storage Device Management; Swap-Space Management; Storage Attachment; RAID Structure.File System: File concept; Access methods; Directory structure; Protection; File system structure; File system operation; Directory implementation;	**Dr. Maya**, Assistant Professor, Dept. Of CSE, BIT, Bengaluru
24.01.2024	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-4	General Definitions of 2nd and 3rd Normal Forms, Boyce Codd Normal Forms, Stored Procedures and functions, Triggers.	**Dr. Soumyasri S.M**, Associate Professor, Dept. Of MCA, NIE Mysuru
25.01.2024	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-5	Structure and Union: Introduction, structures and functions	**Dr.Divya C D**, Associate Professor, Dept. Of CSE, VVCE, Mysuru
29.01.2024	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-5	Representing Graphs and Graph Isomorphism, Connectivity, Euler and Hamilton Paths	**Dr. K S Basavarajappa**, Professsor, Dept. of Mathematics, BIET, Davanagere
30.01.2024	7:00 - 8:00 pm	**Operating System OMCA102**	Module-4 & Module-5	Allocation methods; Free space management. File system mounting; File sharing. Protection: Goals of protection, Principles of protection, Protection Rings; Domain of protection, Access matrix, Implementation of access matrix	**Dr. Maya**, Assistant Professor, Dept. Of CSE, BIT, Bengaluru
31.01.2024	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-5	Transaction Management: Transaction Concept, A Simple Transaction Model, Transaction Atomicity and Durability, Serializability, Transaction Isolation and Atomicity	**Dr. Soumyasri S.M**, Associate Professor, Dept. Of MCA, NIE Mysuru
01.02.2024	7:00 - 8:00 pm	**Programming Using C 23OMCA104**	Module-5	Unions, unions inside structures.	**Dr.Divya C D**, Associate Professor, Dept. Of CSE, VVCE, Mysuru

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05.02.2024	7:00 - 8:00 pm	**Mathematical Foundation for Computer Application OMCA101**	Module-5	Shortest-Path Problems, Planar Graphs, Graph Colouring	**Dr. K S Basavarajappa**, Professsor, Dept. of Mathematics, BIET, Davanagere
06.02.2024	7:00 - 8:00 pm	**Operating System OMCA102**	Module-4 & Module-5	Access control, Revocation of access rights, Capability- Based systems. Case Study: The Linux Operating System: Linux history; Design principles; Kernel modules; Process management; Scheduling; Memory Management; File systems, Input and output; Inter-process communication; Network Structure; Security	**Dr. Maya,** Assistant Professor, Dept. Of CSE, BIT, Bengaluru
07.02.2024	7:00 - 8:00 pm	**Database Management System OMCA103**	Module-5	Transaction Isolation Levels, Implementation of Isolation Levels. Concurrency Control: Lock Based Protocols, Deadlock Handling. Recovery System: Failure Classification, Storage, Recovery and Atomicity, Recovery Algorithm.	**Dr. Soumyasri S.M,** Associate Professor, Dept. Of MCA, NIE Mysuru
08.02.2024	7:00 - 8:00 pm	**Programming Using C OMCA104**	Module-5	Files: Introduction to files, Operation of Files.	**Dr.Divya C D,** Associate Professor, Dept. Of CSE, VVCE, Mysuru