

MCA (Master of Computer Applications)

Duration: 2 Years (4 Semesters)

Semester I

Subject Code	Subject Name
MCA101	Advanced Programming in C
MCA102	Data Structures
MCA103	Computer Organization
MCA104	Discrete Mathematics
MCA105	Communication Skills
MCA106	Programming Lab (C & DS)

Course Details:

- Advanced C programming concepts
 - Data structures (stack, queue, linked list)
 - Computer system architecture basics
 - Mathematical logic & discrete structures
 - Professional communication skills
 - Lab-based programming practice
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Semester II

Subject Code	Subject Name
MCA201	Object Oriented Programming (C++)
MCA202	Database Management System

Subject Code	Subject Name
MCA203	Operating System
MCA204	Software Engineering
MCA205	Web Technologies
MCA206	Lab (DBMS & Web Tech)

Course Details:

- OOP concepts using C++
- Database design, SQL queries
- OS concepts (process, memory, scheduling)
- Software development lifecycle
- HTML, CSS, JavaScript development
- Practical implementation

Semester III

Subject Code	Subject Name
MCA301	Java Programming
MCA302	Computer Networks
MCA303	Python Programming
MCA304	Mobile Application Development
MCA305	Cloud Computing
MCA306	Lab (Java & Python)

Course Details:

- Java programming & OOP
- Networking concepts (TCP/IP, protocols)
- Python programming & libraries
- Android/mobile app development

- Cloud computing basics
 - Practical lab work
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Semester IV

Subject Code	Subject Name
MCA401	Artificial Intelligence
MCA402	Cyber Security
MCA403	Project Work
MCA404	Internship
MCA405	Viva Voce

Course Details:

- AI concepts & applications
- Cyber security threats & protection
- Final year project development
- Industry internship
- Viva & presentation