

North Maharashtra University, Jalgaon

Syllabus for

Dual Degree

Master in Computer Application

(With Effect from June – 2014)

Duration of the Course	: Five Years
Pattern	: Semester Pattern
Examination Pattern	: 75 (External) + 25 (Internal)

Career Opportunities :-

The career opportunities after completing Dual Degree in MCA are quite huge. Many major national / multinational firms take in aspirants who have accomplished their graduation in these fields. Leading MNC's offer attractive packages to the aspirants. Candidates who have successfully completed Dual Degree in MCA can get job in Government organizations, Banks, Multinational / National firms, Education Institutions, Research Organization and Organizations where ICT has become mandatory. Candidates can play various roles as per their competence like software Engineer, Application Developer, Web Designer, Database Administrator, System Analyst, System Administrator, Data Center Administrator, Software Quality Assurance Engineer etc.

Semester- I

- CA-1.1 Computer Fundamentals & Office Automation
- CA-1.2 Basics of Accounting
- CA-1.3 Programming Using C
- CA-1.4 Mathematical Foundation
- CA-1.5 Essentials of Web Designing
- CA-Lab- 1 Lab on C
- CA-Lab- 2 Lab on Web Designing

Semester- II

- CA-2.1 Linux Operating System
- CA-2.2 Discrete Mathematics
- CA-2.3 System Programming
- CA-2.4 OOAD
- CA-2.5 Programming Using C++
- CA-Lab- 3 Lab on Linux OS
- CA-Lab- 4 Lab on C++

Semester- III

- CA-3.1 System Analysis and Design
- CA-3.2 DBMS
- CA-3.3 Data Structures
- CA-3.4 Computer Network
- CA-3.5 Operating System
- CA-Lab- 5 Lab on DBMS
- CA-Lab- 6 Lab on DS

Semester- IV

- CA-4.1 E-Commerce
- CA-4.2 Java Programming
- CA-4.3 Management Information System
- CA-4.4 VB.Net
- CA-4.5 Computer Organization & Architecture
- CA-Lab- 7 Lab on Java Programming
- CA-Lab- 8 Lab on VB.NET

Semester- V

- CA-5.1 Web User Interface Design
- CA-5.2 Theoretical Computer Science
- CA-5.3 Software Engineering
- CA-5.4 Computer Graphics
- CA-5.5 Computer Animation
- CA-Lab- 9 Lab on Web UI Design
- CA-Lab- 10 Lab on Computer Graphics and Animation

Semester- VI

CA-6.1 ERP & SAP
CA-6.2 PHP & MY-SQL
CA-6.3 Software Testing
CA-6.4 Data Warehousing and Mining
CA-6.5 Cyber Security
CA-Lab-11 Lab on PHP & MY-SQL
CA-Lab-12 Project & Viva Voce

Semester- VII

CA-7.1 Design and Analysis of Algorithms CA-7.2 Automata Theory and Computability CA-7.3 Artificial Intelligence
CA-7.4 Advanced Java Programming CA-7.5 ADBMS
CA-Lab-13 Lab on Design and Analysis of Algorithms CA-Lab-14 Lab on Advanced Java Programming

Semester- VIII

CA-8.1 Software Project Management CA-8.2 Internet Computing
CA-8.3 Network Programming CA-8.4 Advanced Computer Graphics
CA-8.5 Optimization Algorithms
CA-Lab-15 Lab on Internet Computing & Computer Graphics CA-Lab-16 Lab on Network Programming

Semester- IX

CA-9.1 Compiler Construction CA-9.2 Cloud Computing
CA-9.3 Mobile Computing (Android) CA-9.4 Visual C++ (MFC)
CA-9.5 Natural Language Processing CA-Lab-17 Lab on Mobile Computing (Android) CA-Lab-18 Lab on Visual C++

Semester- X

CA-10.1 Full Time Industrial Training