

**Master of Computer Science (M.C.A.)**  
**( Three Years Full Time Master Degree )**  
**Computer Department , Hem. North Gujarat University,**  
**Patan-384265, Gujarat State**

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**Semester - I**

MCA11 Mathematics - I  
MCA12 Financial Accounting & Management  
MCA13 Introduction to Programming Language  
MCA14 Internet & Web - I  
MCA15 Database Management System

**Semester - II**

MCA21 Computer Oriented Numerical & Statistical Methods  
MCA22 Software Engineering  
MCA23 Operating System & UNIX  
MCA24 Object Technology - I  
MCA25 Advance Database Architecture

**Semester - III**

MCA31 Data Structure  
MCA32 System Programming  
MCA33 Object Technology - II  
MCA34 Operation Research  
MCA35 Software Engineering  
MCA36 Operating System

**Semester - IV**

MCA41 Computer Graphics & Multimedia  
MCA42 Advanced Technology - I  
MCA43 Embedded Systems  
MCA44 Networking - II  
MCA45 Data Warehousing and Data Mining  
MCA46 Computer based Management System  
MCA47 Industrial Project - I

**Semester - V**

MCA51 Object Oriented analysis & Design With UML  
MCA52 Artificial Intelligence  
MCA53 Advanced Web Technology - II  
MCA54 Elective - I  
MCA55 Elective - II

**Semester - VI**

MCA6 System Development Project - II

## **Elective Subject**

EL-1 Geographic Information System

EL-2 Digital Image Processing

EL-3 Bio-Informatics

EL-4 Enterprise Resource Planning

EL-5 Project Management Practices and Evaluation

EL-6 Web Development using PHP

EL-7 Embedded Systems

EL-8 Personality Development & Aptitude Test