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| **DEPARTMENT OF COMPUTER SCIENCES** |
| **Master of Computer Applications (MCA)** |
| **Course Outline for 2015 Batch (R) and 2016 (LE)** |

**Total Credits: 126 (Regular)/ 81 (Lateral Entry)**

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| **First Semester** | |  |  |
| **Sl. No.** | **Paper** | **Subject Code** | **Credits** |
| 1 | Computer Organization & Architecture | MCA501 | 4 |
| 2 | Concepts of Algorithm and Programming (CAP) | MCA502 | 3 |
| 3 | CAP -Practical | MCA503 | 3 |
| 4 | Web Designing-Practical | MCA504 | 3 |
| 5 | PC Software and Hardware-Practical | MCA505 | 3 |
| 6 | Discrete Mathematics | MATH501 | 3 |
| 7 | English and Communication-I | ENGL501 | 3 |
|  | **Total Credits** |  | **22** |
| **Second Semester** | |  |  |
| **Sl. No.** | **Paper** | **Subject Code** | **Credits** |
| 1 | Operating Systems | MCA511 | 4 |
| 2 | Fundamentals of Networking | MCA512 | 4 |
| 3 | Visual Programming | MCA513 | 3 |
| 4 | Data Structures using C++ | MCA514 | 3 |
| 5 | Data Structure using C++ -Practical | MCA515 | 3 |
| 6 | Statistics and Probability | MATH511 | 3 |
| 7 | English and Communication-II | ENGL511 | 3 |
|  | **Total Credits** |  | **23** |
| **Third Semester** | |  |  |
| **Sl. No.** | **Paper** | **Subject Code** | **Credits** |
| 1 | Advanced Java Programming | MCA601 | 3 |
| 2 | Advanced Java Programming-Practical | MCA602 | 3 |
| 3 | Analysis and Design of Algorithms | MCA603 | 4 |
| 4 | Advanced Database Management System (ADBMS) | MCA604 | 3 |
| 5 | ADBMS-Practical | MCA605 | 3 |
| 6 | Financial Accounting | MCA606 | 4 |
| 7 | English and Communication-III | ENGL601 | 2 |
|  | **Total Credits** |  | **22** |
| **Fourth Semester** | |  |  |
| **Sl. No.** | **Paper** | **Subject Code** | **Credits** |
| 1 | Specialization I (Theory) |  | 3 |
|  | 1. PHP Technology | MCAS650 |
|  | 1. .Net Technology | MCAS652 |
|  | 1. J2EE Technology | MCAS654 |
| 2 | Specialization I -Practical |  | 3 |
|  | 1. PHP Technology Practical | MCAS651 |
|  | 1. .Net Technology Practical | MCAS653 |
|  | 1. J2EE Technology Practical | MCAS655 |
| 3 | Advanced Computer Networks | MCA650 | 4 |
| 4 | Theory Of Computation | MCA651 | 4 |
| 5 | Linux Shell Programming-Practical | MCA652 | 3 |
| 6 | Entrepreneurship Development | ENV650 | 3 |
| 7 | English and Communication-IV | ENGL650 | 2 |
|  | **Total Credits** |  | **22** |
| **Fifth Semester** | |  |  |
| **Sl. No.** | **Paper** | **Subject Code** | **Credits** |
| 1 | Software Project Management | MCA700 | 4 |
| 2 | Elective I |  | 4 |
|  | 1. Data Mining & Data Warehousing | MCAE700 |
|  | 1. Distributed Database System | MCAE701 |
|  | 1. Cloud Computing | MCAE702 |
| 3 | Elective II |  | 4 |
|  | 1. Client Server Architecture | MCAE703 |
|  | 1. Computer Graphics | MCAE704 |
|  | 1. Artificial Intelligence | MCAE705 |
| 4 | Specialization II |  | 3 |
|  | 1. Advanced PHP Technology | MCAS700 |
|  | 1. Advanced .Net Technology | MCAS702 |
|  | 1. Advanced J2EE Technology | MCAS704 |
| 5 | Specialization II- Practical |  | 3 |
|  | 1. Advanced PHP Technology Practical | MCAS701 |
|  | 1. Advanced .Net Technology Practical | MCAS703 |
|  | 1. Advanced J2EE Technology Practical | MCAS705 |
| 6 | Project Work | MCA701 | 6 |
| 7 | **Human Values** | HNVL700 | 1 |
|  | **Total Credits** |  | **25** |
| **Sixth Semester** | |  |  |
| **Sl. No.** | **Paper** | **Subject Code** | **Credits** |
| 1 | Real Time Implementation Project | MCA750 | 12 |
|  | **Total Credits** |  | **12** |