## SEMESTER WISE COURSE STRCTURE

| | **Semester I** | **Credits** | **Hours/Week** | | | **IA Marks** | **EoTE Marks** |
|---|---|---|---|---|---|---|---|
| | | | L | T | P | | |
| 101 | Applied Database Management Systems | 4 | 3 | 1 | - | 40 | 60 |
| 102 | Computer Networks | 4 | 3 | 1 | - | 40 | 60 |
| 103 | Java Programming | 4 | 3 | 1 | - | 40 | 60 |
| 104 | Computational Statistics | 4 | 3 | 1 | - | 40 | 60 |
| 105 | Management Concepts and Applications | 4 | 3 | 1 | - | 40 | 60 |
| 106 | Lab on Applied Database Management Systems | 3 | 1 | 0 | 4 | 40 | 60 |
| 107 | Lab on Java Programming | 3 | 0 | 0 | 6 | 40 | 60 |
| 108 | MOOCS Based General Course 1 (Soft Sills) (GE-1) | 2 | 0 | - | - | 50 | 00 |
| | | **28** | **16** | **05** | **10** | **330** | **420** |

| | **Semester II** | **Credits** | **Hours/Week** | | | **IA Marks** | **EoTE Marks** |
|---|---|---|---|---|---|---|---|
| | | | L | T | P | | |
| 201 | Object Oriented Software Engineering | 4 | 3 | 1 | - | 40 | 60 |
| 202 | Cloud Computing Concepts | 4 | 3 | 1 | - | 40 | 60 |
| 203 | Data structures using Python | 4 | 3 | 1 | - | 40 | 60 |
| 204 | Data Warehousing and Data Mining | 4 | 3 | 1 | - | 40 | 60 |
| 205 | Web Supporting Technologies | 4 | 2 | 1 | 4 | 40 | 60 |
| 206 | Lab on Data Structures using Python | 3 | 0 | 0 | 6 | 40 | 60 |
| 207 | Minor Project – 1 | 3 | 3 | - | - | 00 | 100 |
| 208 | MOOCS Based General Course 2 (GE-2) | 2 | 0 | - | - | 50 | 00 |
| | | **28** | **17** | **05** | **10** | **290** | **460** |

| | Semester III | Credits | Hours/Week | | | IA Marks | EoTE Marks |
|---|---|---|---|---|---|---|---|
| | | | L | T | P | | |
| 301 | Software Design Patterns | 4 | 3 | 1 | - | 40 | 60 |
| 302 | Artificial Intelligence | 4 | 3 | 1 | - | 40 | 60 |
| 303 | Information Security | 4 | 3 | 1 | - | 40 | 60 |
| 304 | EL-GRP-1 (A) | 3 | 2 | 1 | - | 100 | - |
| 305 | EL-GRP-2 (A) | 3 | 2 | 1 | - | 100 | - |
| 306 | Lab on Software Testing | 3 | 1 | 0 | 4 | 40 | 60 |
| 307 | Minor Project – 2 | 3 | 3 | - | - | 00 | 100 |
| 308 | MOOCS Based General Course 3 (GE-3) | 2 | 0 | - | - | 50 | 00 |
| | | **26** | **17** | **05** | **04** | **410** | **340** |

| | Semester IV | Credits | Hours/Week | | | IA Marks | EoTE Marks |
|---|---|---|---|---|---|---|---|
| | | | L | T | P | | |
| 401 | Seminar on Recent Trends in IT[#] | 4 | - | - | - | | 100 |
| 402 | El-GRP - 1 (B) | 3 | 2 | 1 | - | 100 | - |
| 403 | El-GRP –2 (B) | 3 | 2 | 1 | - | 100 | - |
| 404 | Major Internship Project | 10 | - | - | - | - | 100 |
| | | **20** | **04** | **02** | **-** | **200** | **200** |

**List of Elective Groups:**

| Elective Code | Elective Group | Subject Code | Subjects |
|---|---|---|---|
| 01 | Cloud Computing | A | Virtualization |
| | | B | AWS |
| 02 | Data Science | A | Statistical Programming in R |
| | | B | Introduction to Data Science |
| 03 | Linux | A | Linux Desktop Environment, Shell Programming and System Administration |
| | | B | Linux Internals and Network Administration |
| 04 | Open Source Technologies | A | Perl Scripting |
| | | B | Ruby |
| 05 | Mobile Computing | A | Java Script |
| | | B | Android |

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|---|---|---|---|
| 06 | Dot Net Technologies | A | C# Programming and Applications |
| | | B | ASP Dot Net with MVC |
| 07 | Net Centric Technologies | A | HTML 5 |
| | | B | AJAX Programming |
| 08 | Information Systems | A | Recommender System |
| | | B | Knowledge Management |
| 09 | IOT | A | IoT Architecture Sensors and Fundamentals with Hands-on lab |
| | | B | Internet Of Things: Sensing And Actuator Devices and Smart city use case |
| 10 | Big Data | A | Introduction to Big Data |
| | | B | Business Intelligence Tools With Hadoop |
| 11 | Cyber Security | A | Introduction to Information Security |
| | | B | Information Security Threats and Mitigation Strategies |