|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ADAMAS UNIVERSITY**  **SCHOOL OF ENGINEERING & TECHNOLOGY**  **PG PROGRAM: Master of Computer Application (MCA)**  **SEMESTER I** | | | | | | | | |
| **Sl. No** | **Type of Course** | **Course Code** | **Course Title** | **L** | **T** | **P** | **Contact**  **Hrs./Wk.** | **Credits** |
| 1 | Theory | SMA51141 | Numerical & Statistical Methods | 3 | 1 | 0 | 4 | 4 |
| 2 | Theory | ECS51101 | Computer Programming | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | ECS51103 | Computer Organization & Architecture | 3 | 0 | 0 | 3 | 3 |
| 4 | Theory | ECS51105 | Fundamentals of Computer Algorithms | 3 | 0 | 0 | 3 | 3 |
| 5 | Theory | ECS51107 | Data Structures | 3 | 1 | 0 | 4 | 4 |
| 6 | Theory | HEN41117 | HSS –I | 3 | 0 | 0 | 3 | 3 |
| 7 | Theory |  | Non Credit Course - I |  |  |  |  |  |
| 8 | Practical | SMA51241 | Numerical & Statistical Methods Lab | 0 | 0 | 3 | 3 | 2 |
| 9 | Practical | ECS51201 | Computer Programming Lab | 0 | 0 | 3 | 3 | 2 |
| 10 | Practical | ECS51203 | Data Structures Lab | 0 | 0 | 3 | 3 | 2 |
| **Total** | | | | **18** | **2** | **9** | **29** | **26** |

**­**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ADAMAS UNIVERSITY**  **SCHOOL OF ENGINEERING & TECHNOLOGY**  **PG PROGRAM: Master of Computer Application (MCA)**  **SEMESTER II** | | | | | | | | |
| **Sl. No** | **Type of Course** | **Course Code** | **­Course Title** | **L** | **T** | **P** | **Contact**  **Hrs./Wk.** | **Credits** |
| 1 | Theory | SMA51142 | Discrete Mathematics | 3 | 1 | 0 | 4 | 4 |
| 2 | Theory | ECS51102 | Design and Analysis of Algorithms | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | ECS51104 | Object Oriented Programming | 3 | 0 | 0 | 3 | 3 |
| 4 | Theory | ECS51106 | Operating System | 3 | 0 | 0 | 3 | 3 |
| 5 | Theory | ECS51108 | Database Management System | 3 | 0 | 0 | 3 | 3 |
| 6 | Theory | HEN41119 | HSS – II | 3 | 0 | 0 | 3 | 3 |
| 7 | Theory |  | Non Credit Course – II |  |  |  |  |  |
| 8 | Practical | ECS51202 | Design and Analysis of Algorithms Lab | 0 | 0 | 3 | 3 | 2 |
| 9 | Practical | ECS51204 | Object Oriented Programming Lab | 0 | 0 | 3 | 3 | 2 |
| 10 | Practical | ECS51206 | Operating System Lab | 0 | 0 | 3 | 3 | 2 |
| 11 | Practical | ECS51208 | Database Management System Lab | 0 | 0 | 3 | 3 | 2 |
| **Total** | | | | **18** | **1** | **12** | **31** | **27** |

**HSS-I: From a list of Language related topics**

**HSS-II: From a list of Law related topics**

**Total Credits (First Year): 53**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ADAMAS UNIVERSITY**  **SCHOOL OF ENGINEERING & TECHNOLOGY**  **PG PROGRAM: Master of Computer Application (MCA)**  **SEMESTER III** | | | | | | | | |
| **Sl. No** | **Type of Course** | **Course Code** | **Course Title** | **L** | **T** | **P** | **Contact**  **Hrs./Wk.** | **Credits** |
| 1 | Theory | EEC52101 | Data Communication & Computer Network | 3 | 1 | 0 | 4 | 4 |
| 2 | Theory | MBA52155 | Accounting & Management | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | ECS52101 | Formal Language and Automata Theory | 3 | 1 | 0 | 4 | 4 |
| 4 | Theory | ECS52103 | Software Engineering | 3 | 0 | 0 | 3 | 3 |
| 5 | Theory |  | Elective – I | 3 | 0 | 0 | 3 | 3 |
| 6 | Theory | HEN42111 | HSS –III (English Communication) | 3 | 0 | 0 | 3 | 3 |
| 7 | Theory |  | Non Credit Course –III |  |  |  |  |  |
| 8 | Practical | ECS52203 | Software Engineering Lab | 0 | 0 | 3 | 3 | 2 |
| 9 | Practical |  | Elective – I Lab | 0 | 0 | 3 | 3 | 2 |
| **Total** | | | | **18** | **2** | **6** | **26** | **24** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ADAMAS UNIVERSITY**  **SCHOOL OF ENGINEERING & TECHNOLOGY**  **PG PROGRAM: Master of Computer Application (MCA)**  **SEMESTER IV** | | | | | | | | |
| **Sl. No** | **Type of Course** | **Course Code** | **Course Title** | **L** | **T** | **P** | **Contact**  **Hrs./Wk.** | **Credits** |
| 1 | Theory | EEC52102 | Microprocessor & Embedded System | 3 | 0 | 0 | 3 | 3 |
| 2 | Theory | ECS52102 | Web Technology | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | ECS52104 | Compiler Design | 3 | 0 | 0 | 3 | 3 |
| 4 | Theory |  | Elective – II | 3 | 0 | 0 | 3 | 3 |
| 5 | Theory |  | Elective – III | 3 | 0 | 0 | 3 | 3 |
| 6 | Theory | HEC42180 | HSS-IV (Economics For Engineers) | 3 | 0 | 0 | 3 | 3 |
| 7 | Theory |  | Non Credit Course –IV |  |  |  |  |  |
| 8 | Practical | EEC52202 | Microprocessor Lab | 0 | 0 | 3 | 3 | 2 |
| 9 | Practical | ECS52202 | Web Technology Lab | 0 | 0 | 3 | 3 | 2 |
| 10 | Practical | ECS52204 | Compiler Design Lab | 0 | 0 | 3 | 3 | 2 |
| **Total** | | | | **18** | **0** | **9** | **27** | **24** |

**HSS-III: From a list of Language related topics**

**HSS-IV and V: From a list of Economics and Finance related topics**

**Total Credits (Second Year): 48**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ADAMAS UNIVERSITY**  **SCHOOL OF ENGINEERING & TECHNOLOGY**  **PG PROGRAM: Master of Computer Application (MCA)**  **SEMESTER V** | | | | | | | | |
| **Sl. No** | **Type of Course** | **Course Code** | **Course Title / Project** | **L** | **T** | **P** | **Contact**  **Hrs./Wk.** | **Credits** |
| 1 | Theory | MBA53101 | Management Information System | 3 | 0 | 0 | 3 | 3 |
| 2 | Theory | ECS53101 | Computer Graphics | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | ECS53103 | Artificial Intelligence | 3 | 0 | 0 | 3 | 3 |
| 4 | Theory | HEC43181 | HSS-V (Financial Accounting) | 3 | 0 | 0 | 3 | 3 |
| 5 | Seminar | ECS53301 | Seminar | 0 | 2 | 0 | 2 | 2 |
| 6 | Project | ECS53401 | Project – I | 0 | 0 | 6 | 6 | 4 |
| 7 | Practical | ECS53201 | Computer Graphics Lab | 0 | 0 | 3 | 3 | 2 |
| 8 | Practical | ECS53203 | Artificial Intelligence Lab | 0 | 0 | 3 | 3 | 2 |
| **Total** | | | | **12** | **2** | **12** | **26** | **22** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ADAMAS UNIVERSITY**  **SCHOOL OF ENGINEERING & TECHNOLOGY**  **PG PROGRAM: Master of Computer Application (MCA)**  **SEMESTER VI** | | | | | | | | |
| **Sl. No** | **Type of Course** | **Course Code** | **Course Title / Project / Viva** | **L** | **T** | **P** | **Contact**  **Hrs./Wk.** | **Credits** |
| 1 | Theory |  | Elective - IV | 3 | 0 | 0 | 3 | 3 |
| 2 | Theory | HPS44101 | HSS-VI (Basics of Organizational Behaviors) | 3 | 0 | 0 | 3 | 3 |
| 3 | Project | ECS53402 | Project – II | 0 | 0 | 12 | 12 | 8 |
| 4 | Viva | ECS53302 | Comprehensive Viva |  |  |  |  | 4 |
| **Total** | | | | **6** | **0** | **12** | **18** | **18** |

**HSS-VI: From a list of Psychology / Behavioral Science related topics**

**Elective I, II, III and IV: From the list of Departmental Electives**

**Total Credits (3rd Year): 40**

**Total Credits (over three years): 141**

**List of Elective Papers:**

**Elective – I (Theory):**

**List of Electives (From MCA):**

**ECS52105 Computer Graphics and Visualization**

**ECS52107 Machine Learning**

**List of Electives (From M.Tech):**

**ECS61105 Pattern Recognition**

**ECS61109 Logic Programming**

**ECS61111 Soft Computing**

**ECS61113 Image and Video Processing**

**ECS61115 Advanced Graph Theory**

**EEC61127 VLSI Design**

**EEC61129 Mobile Computing**

**Elective – I (Lab):**

**List of Electives (From MCA):**

**ECS52205 Computer Graphics and Visualization Lab**

**ECS52207 Machine Learning Lab**

**List of Electives (From M.Tech):**

**ECS61205 Pattern Recognition Lab**

**ECS61209 Logic Programming Lab**

**ECS61211 Soft Computing Lab**

**ECS61213 Image and Video Processing Lab**

**ECS61215 Advanced Graph Theory Lab**

**EEC61227 VLSI Design Lab**

**EEC61229 Mobile Computing Lab**

**Elective – II:**

**List of Electives (From MCA):**

**ECS52106 Applied Graph Theory**

**ECS52108 Cryptography and Cyber Security**

**List of Electives (From M.Tech):**

**ECS61104 Advanced Database System**

**ECS61106 Cloud Computing**

**ECS61108 Neural Network and Deep Learning**

**ECS61110 Advances in Compiler Design**

**Elective – III:**

**List of Electives (From MCA):**

**ECS52110 Distributed Computing**

**ECS52112 Information Retrieval**

**List of Electives (From M.Tech):**

**ECS61118 Formal Systems**

**ECS61120 Principles of Programming Languages**

**ECS61122 High Performance Computer Architecture**

**ECS61124 Natural Language Processing**

**Elective – IV:**

**List of Electives (From M.Tech):**

**ECS61116 Computational Complexity**

**EEC61128 Internet of Things**

**MBA61142 E-Commerce**