**ADAMAS UNIVERSITY**

**SCHOOL OF ENGINEERING**

**AND**

**TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE**

**AND**

**ENGINEERING**

**Course Structure & Syllabus of**

**Master of Computer Application (MCA)**

**(W.e.f AY 2020 – 21)**

**SoET 2.0**

**(Engineering+)**

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| **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 | CSE21901 | Computer Programming with Python | 3 | 0 | 0 | 3 | 3 |
| 2 | Theory | MTH21201 | Numerical & Statistical Methods | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | CSE21902 | Computer Organization & Architecture | 3 | 0 | 0 | 3 | 3 |
| 4 | Theory | CSE21903 | Software Engineering | 3 | 0 | 0 | 3 | 3 |
| 5 | Theory | ENG21112 | HSSM– I (English Communication) | 3 | 0 | 0 | 3 | 2 |
| 6 | Theory | CSE21904 | Data Structures with Python | 3 | 0 | 0 | 3 | 3 |
| 7 | Practical | CSE22905 | Computer Programming with Python Lab. | 0 | 0 | 3 | 3 | 2 |
| 8 | Practical | MTH22201 | Numerical & Statistical Methods Lab | 0 | 0 | 3 | 3 | 2 |
| 9 | Practical | CSE22906 | Computer Organization & Architecture Lab | 0 | 0 | 3 | 3 | 2 |
| 10 | Practical | CSE22907 | Data Structures with Python Lab | 0 | 0 | 3 | 3 | 2 |
| **Total** | | | | **18** | **0** | **12** | **30** | **25** |

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| **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 | CSE21908 | Mobile Applications using Android/IoS | 3 | 0 | 0 | 3 | 3 |
| 2 | Theory | CSE21909 | Object Oriented Programming with Java | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | CSE21910 | Operating System | 3 | 0 | 0 | 3 | 3 |
| 4 | Theory | CSE21911 | Database Management System | 3 | 0 | 0 | 3 | 3 |
| 5 | Theory | MTH21519 | Discrete Mathematics | 3 | 0 | 0 | 3 | 3 |
| 6 | Practical | CSE22912 | Mobile Applications using Android/IoS Lab | 0 | 0 | 3 | 3 | 2 |
| 7 | Practical | CSE22913 | Object Oriented Programming with Java Lab | 0 | 0 | 3 | 3 | 2 |
| 8 | Practical | CSE22914 | Operating System Lab | 0 | 0 | 3 | 3 | 2 |
| 9 | Practical | CSE22915 | Database Management System Lab | 0 | 0 | 3 | 3 | 2 |
| **Total** | | | | **15** | **0** | **12** | **27** | **23** |

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

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| **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 | ECS52141 | Web Technology | 3 | 0 | 0 | 3 | 3 |
| 2 | Theory | EEC52101 | Data Communication & Computer Network | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | ECS52143 | Cyber Security | 3 | 0 | 0 | 3 | 3 |
| 4 | Theory | HEN42111 | HSS –III (English Communication) | 3 | 0 | 0 | 3 | 2 |
| 5 | Theory |  | Elective Course – I | 3 | 0 | 0 | 3 | 3 |
| 6 | Theory |  | Elective Course – II | 3 | 0 | 0 | 3 | 3 |
| 7 | Practical | ECS52241 | Web Technology Lab | 0 | 0 | 3 | 3 | 2 |
| 8 | Practical | ECS52243 | Cyber Security Lab | 0 | 0 | 3 | 3 | 2 |
| 9 | Practical |  | Elective Course – I Lab | 0 | 0 | 3 | 3 | 2 |
| 10 | Project | ECS52441 | Project -I | 0 | 0 | 3 | 3 | 2 |
| **Total** | | | | **18** | **0** | **12** | **30** | **25** |

**From a list of departmental electives:**

**Elective Course – I**

1. Artificial Intelligence and Machine Learning (ECS52145)

2. Fundamentals of Cloud Computing (ECS52153)

**Elective Course – II**

1. Natural Language Processing and Its Application (ECS52147)

2. Cloud Storage (ECS52155)

3. Data Warehousing & Data Analytics (ECS51150)

**Elective Course – I Lab**

1. Artificial Intelligence and Machine Learning Lab using Tensor flow (ECS52245)

2. Fundamentals of Cloud Computing Lab (ECS52253)

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| **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 |  | Elective Course – III | 3 | 0 | 0 | 3 | 3 |
| 2 | Theory | HPS44101 | HSS-VI (Basics of Organizational Behaviors) | 3 | 0 | 0 | 3 | 3 |
| 3 | Theory | MBA52180 | Project Management | 3 | 0 | 0 | 3 | 3 |
| 4 | Practical |  | Elective Course – III Lab | 0 | 0 | 3 | 3 | 2 |
| 5 | Seminar | ECS52342 | Seminar | 0 | 2 | 0 | 2 | 2 |
| 6 | Project | ECS52442 | Project -II | 0 | 0 | 6 | 6 | 4 |
| **Total** | | | | **9** | **2** | **9** | **20** | **17** |

**From a list of departmental electives:**

**Elective Course – III**

1. Game Design (ECS52157)
2. Public Blockchain- Ethereum (ECS52142)

**Elective Course – III Lab**

1. Game Design Lab using CONSTRUCT (ECS52257)
2. Public Blockchain- Ethereum Lab (ECS52242)

**Total Credits (Second Year): 42**

**Total Credits (over two years): 48 + 42 = 90**