

MSC CS Syllabus 2019-20

Semester – I: Theory courses

| Course code | Course Title | No of hours | Credits |
|-------------|--|-------------|---------|
| PSCS101 | Analysis of Algorithms and Researching Computing | 60 | 04 |

4

| | | | |
|---|--------------------------------------|----|----|
| PSCS102 | Advanced Networking Concepts | 60 | 04 |
| PSCS103 | Advanced Database Systems | 60 | 04 |
| PSCS104 | Robotics and Artificial Intelligence | 60 | 04 |
| Total Credits for Theory courses in Semester -I | | | 16 |

Semester I – Practical Laboratory courses

| Course code | Course Title | No of hours | Credits |
|---|---|---------------|---------|
| PSCSP101 | Analysis of Algorithms & Researching Computing and Advanced Networking Concepts | 60+60= 120 | 04 |
| PSCSP102 | Advanced Database Systems and Robotics & Artificial Intelligence | 60+60= 120 | 04 |
| Total Credits for Practical Laboratory courses in Semester –I | | | 08 |

Semester II – Theory courses

| Course code | Course Title | No of hours | Credits |
|---|---|-------------|---------|
| PSCS201 | Advanced Operating Systems | 60 | 04 |
| PSCS202 | Design and implementation of Modern Compilers | 60 | 04 |
| PSCS2031 | Elective I- Track A: Cloud Computing (Concepts and Design of Web services) | 60 | 04 |
| PSCS2032 | Elective I- Track B: Cyber and Information Security (Network Security) | | |
| PSCS2041 | Elective II - Track C: Business Intelligence and Big Data Analytics (Business Intelligence) | 60 | 04 |
| PSCS2042 | Elective II - Track D: Machine Intelligence (Fundamentals of Machine Intelligence) | | |
| Total Credits for Theory courses in Semester II | | | 16 |

Semester II – Practical Laboratory courses

| Course code | Course Title | No of hours | Credits |
|--|---|---------------|---------|
| PSCSP201 | Analysis of Algorithms & Researching Computing and Advanced Networking Concepts | 60+60= 120 | 04 |
| PSCSP202 | Elective I and Elective II | 60+60= 120 | 04 |
| Total Credits for Practical Laboratory courses in Semester –II | | | 08 |

Semester III – Theory courses

| Course Code | Course Nomenclature | Lecture In Hours | Credits |
|--|---|------------------|---------|
| PSCS 301 | Ubiquitous Computing | 60 | 4 |
| PSCS 302 | Social Network Analysis | 60 | 4 |
| PSCS 3031 | Elective I - Track A: Cloud Computing –II (Cloud Computing Technologies) | 60 | 4 |
| PSCS 3032 | Elective I - Track B: Cyber and Information Security- II (Cyber Forensics) | | |
| PSCS 3033 | Elective II - Track C: Business Intelligence and Big Data Analytics –II (Mining Massive Data sets) | 60 | 4 |
| PSCS 3034 | Elective II - Track D: Machine Learning –II (Advanced Machine Learning) | | |
| Total Credits for Theory courses in Semester III | | | 16 |

Semester-III: Practical Laboratory Courses

| Course code | Course Title | No of hours | Credits |
|--|---|---------------|---------|
| PSCSP5 | Ubiquitous Computing and Social Network Analysis | 60+60= 120 | 04 |
| PSCSP6 | Elective I and Elective II | 60+60= 120 | 04 |
| Total Credits for Practical Laboratory courses in Semester–III | | | 08 |

Semester-IV: Theory courses

| Course Code | Course Nomenclature | Lecture In Hours | Credits |
|---|---|------------------|---------|
| PSCS 401 | Simulation and Modeling | 60 | 4 |
| PSCS 4021 | Specialization - Track A: Cloud Computing –III (Building Clouds and Services) | 60 | 4 |
| PSCS 4022 | Specialization - Track B: Cyber and Information Security- II (Cryptography and Crypt Analysis) | | |
| PSCS 4023 | Specialization - Track C: Business Intelligence and Big Data Analytics –III (Intelligent Data Analysis) | | |
| PSCS 4024 | Specialization - Track D: Machine Learning –III (Computational Intelligence) | | |
| Total Credits for Theory courses in Semester-IV | | | 08 |

Semester-IV: Practical course

| Course code | Course Title | No of hours | Credits |
|-------------|--|---------------|---------|
| PSCSP7 | Simulation & Modeling and Specialization | 60+60= 120 | 04 |

Semester–IV: Internship

| Course code | Course Title | No of hours | Credits |
|-------------|--------------------------|-------------|---------|
| PSCSP8 | Internship with industry | 300 | 06 |

Semester–IV: Project Implementation

| Course code | Course Title | No of hours | Credits |
|-------------|------------------------|-------------|---------|
| PSCSP9 | Project Implementation | 200 | 06 |

1. Ubiquitous Computing

2. Social Network Analysis

Elective - I (a) Track A: Cloud Computing – II (Cloud Computing Technologies) (b) Track B: Cyber and Information Security – II (Cyber Forensics)

Elective – II (a) Track C: Business Intelligence and Big Data Analytics – II (Mining Massive Data sets)
(b) Track D: Machine Learning – II (Advanced Machine Learning)