**Batch 11 &12 (F2016-S2017)**

**BS (SE):4-year Program, 8 Semesters, 42 Courses, 135 Credit Hours**

**Semester 1 Semester 2**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **Pre-req** | **Credit Hours** | **Course Code** | **Course Title** | **Pre-req** | **Credit Hours** |
| CC1011w | Introduction to Computing |  | 4  (3+1) | SE141 | Programming Fundamentals |  | 4  (3+1) |
| CC1311w | Discrete Structures |  | 3 | PH121 | Basic Electronics |  | 3  (2+1) |
| MA100 | Calculus-I |  | 3 | EN112 | English II | Eng I | 3 |
| EN110 | English I |  | 3 | MA103 | Supporting Elective-I (e.g., Calculus II) |  | 3 |
| HM150 | Islamic Studies |  | 3 |  | GE/University Elective-I |  | 3 |
|  | **Semester Credits** |  | **16** |  | **Semester Credits** |  | **16** |

**Semester 3 Semester 4**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **Pre-req** | **Credit Hours** | **Course Code** | **Course Title** | **Pre-req** | **Credit Hours** |
| CC2211w | Digital Logic and Design |  | 4  (3+1) | CC2711w | Software Engineering |  | 3 |
| CC2111w | Object Oriented Programming | PF | 4  (3+1) |  | Supporting Elective-II (e.g., Operations Research, Differential Equation) |  | 3 |
| CC2421w | Introduction to Database Systems |  | 4  (3+1) | CC2411w | Data Structures and Algorithms | OOP | 4  (3+1) |
| MA150 | Probability and Statistics |  | 3 | MA210 | Linear Algebra |  | 3 |
|  | GE/University Elective II |  | 3 | EN325 | Technical English and Report Writing |  | 3 |
|  | **Semester Credits** |  | **18** |  | **Semester Credits** |  | **16** |

**Semester 5 Semester 6**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **Pre-req** | **Credit Hours** | **Course Code** | **Course Title** | **Pre-req** | **Credit Hours** |
| SE3721w | Object Oriented Software Engineering (Software Construction) | OOP, SE | 4  (3+1) | SE3741w | Software Verification and Validation (SQT) | SE | 3 |
| SE3731w | Software Requirement and Specifications | SE | 3 | SE3751w | Software Architecture and Design | SE | 3 |
| CC3021w | Operating Systems | DSA | 4  (3+1) | CC3611w | Computer and Communication Networks |  | 4  (3+1) |
|  | SE Elective I | SE | 3 |  | SE Elective II | SE | 3 |
|  | Supporting Elective III (e.g.Analysis of Algorithms) |  | 3 |  | SE Elective-III | SE | 3 |
|  |  |  |  |  | SE Elective IV | SE | 3 |
|  | **Semester Credits** |  | **17** |  | **Semester Credits** |  | **19** |

**Semester 7 Semester 8**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **Pre-req** | **Credit Hours** | **Course Code** | **Course Title** | **Pre-req** | **Credit Hours** |
| CC4981w | Final Year Project-I |  | 3 | CC4991w | Final Year Project-II | FYP-I | 3 |
| SE3761w | Software Project Management | SE | 3 |  | GE/University Elective III |  | 3 |
| CC3041w | Human Computer Interaction |  | 3 |  | GE/University Elective IV |  | 3 |
|  | SE Elective-V | SE | 3 | HU4092 | Professional Practices |  | 3 |
|  | SE Elective-VI | SE | 3 |  | SE Elective-VII | SE | 3 |
| SS171 | Pakistan Studies |  | 3 |  |  |  |  |
|  | **Semester Credits** |  | **18** |  | **Semester Credits** |  | **15** |