**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 |
| CC 1011w | Introduction to Computing |  | 4  (3+1) | Se141 | Programming Fundamentals |  | 4  (3+1) |
| CC 1311w | Discrete Structures |  | 3 | PH121 | Basic Electronics |  | 3  (2+1) |
| MA100 | Calculus and Analytical Geometry (Calculus-I) |  | 3 | EN201\EN112 | Communication Skills (English-II) | Eng I | 3 |
| EN110 | Functional English (English-I) |  | 3 | MA103 | Supporting Elective-I (e.g., Calculus II) |  | 3 |
|  | 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) | CC 2711w | Software Engineering |  | 3 |
| CC 2111w | Object Oriented Programming | PF | 4  (3+1) |  | Supporting Elective-II (e.g., Operations Research) |  | 3 |
| CC 2421w | Introduction to Database Systems |  | 4  (3+1) | CC 2411w | Data Structures and Algorithms | OOP | 4  (3+1) |
|  | Probability and Statistics |  | 3 |  | Linear Algebra |  | 3 |
|  | GE/University Elective II |  | 3 |  | Technical Report Writing (English-III) |  | 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 |
| SE 3721w | Object Oriented Software Engineering (Software Construction) | OOP, SE | 4  (3+1) | SE 3741w | Software Verification and Validation (SQT) | SE | 3 |
| SE 3731w | Software Requirement and Specifications | SE | 3 | SE 3751w | Software Architecture and Design | SE | 3 |
| CC 3021w | Operating Systems | DSA | 4  (3+1) | CC 3611w | Computer Communication and Networks |  | 4  (3+1) |
|  | SE Elective I | SE | 3 |  | SE Elective II | SE | 3 |
|  | Supporting Elective III (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 |
| CC 4981w | Final Year Project-I |  | 3 | CC 4991w | Final Year Project-II | FYP-II | 3 |
| SE 3761w | Software Project Management | SE | 3 |  | GE/University Elective III |  | 3 |
| CC 3041w | Human Computer Interaction |  | 3 |  | GE/University Elective IV |  | 3 |
|  | SE Elective-V | SE | 3 |  | Professional Practices |  | 3 |
|  | SE Elective-VI | SE | 3 |  | SE Elective-VII | SE | 3 |
|  | Pakistan Studies |  | 3 |  |  |  |  |
|  | **Semester Credits** |  | **18** |  | **Semester Credits** |  | **15** |