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| **BS Computer Science**  |
| **First Semester, First Year** |
| **S. No.** | **Course Code** | **Course title** | **Credit Hour** |
| **Th** | **Pr** | **Total** |
| 1 | HUM-111 | English Composition and Comprehension | 3 | 0 | 3 |
| 2 | BS-121 | Applied Physics | 2 | 1 | 3 |
| 3 | BS-119 | Introduction to Information and Communication Technology (ICT) | 3 | 0 | 3 |
| 4 | BS-132 | Probability & Statistics | 3 | 0 | 3 |
| 5 | HUM-123 | Philosophy | 3 | 0 | 3 |
| 6 | BS-133 | Calculus & Analytical Geometry | 3 | 0 | 3 |
|   |   | **Total** | 17 | 1 | 18 |
| **Second Semester, First Year** |
| **S. No.** | **Course Code** | **Course title** | **Credit Hour** |
| **Th** | **Pr** | **Total** |
| 1 | HUM-112 | Communication Skills | 3 | 0 | 3 |
| 2 | HUM-124 | Introduction to Economics | 3 | 0 | 3 |
| 3 | HUM-217 | Islamic Studies / Ethics | 3 | 0 | 3 |
| 4 | BS-134 | Linear Algebra | 3 | 0 | 3 |
| 5 | BS-141 | Programming Fundamentals | 3 | 1 | 4 |
|   |   | **Total** | 15 | 1 | 16 |

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| **First Semester, Second Year** |
| **S. No.** | **Course Code** | **Course title** | **Credit Hour** |
| **Th** | **Pr** | **Total** |
| 1 | HUM-216 | Technical Writing | 3 | 0 | 3 |
| 2 | HUM-217 | Pakistan Studies | 3 | 0 | 3 |
| 3 | HUM-115 | Professional Practices in Computing | 3 | 0 | 3 |
| 4 | BSCS-222 | Basic Electronics | 2 | 1 | 3 |
| 5 | BSCS-243 | Object Oriented Programming | 3 | 1 | 4 |
| 6 | PLL-2 | PLL\* | NC | NC | NC |
|   |   | **Total** | 14 | 2 | 16 |
| **Second Semester, Second Year** |
| **S. No.** | **Course Code** | **Course title** | **Credit Hour** |
| **Th** | **Pr** | **Total** |
| 1 | HUM-229 | Fundamentals of Management |  3 | 0 | 3 |
| 2 | BSCS-254 | Digital Logic Design | 3 | 1 | 4 |
| 3 | BSCS-235 | Differential Equations | 3 | 0 | 3 |
| 4 | BSCS-266 | Numerical Computing | 3 | 0 | 3 |
| 5 | BSCS-257 | Computer Organization & Assembly Language | 3 | 1 | 4 |
| 6 | PLL-xxx | PLL | NC | NC | NC |
|   |   | **Total** | 15 | 2 | 17 |

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| **First Semester, Third Year** |
| **S. No.** | **Course Code** | **Course title** | **Credit Hour** |
| **Th** | **Pr** | **Total** |
| 1 | BSCS-348 | Data Structures & Algorithms | 3 | 1 | 4 |
| 2 | BSCS-369 | Theory of Automata | 3 | 0 | 3 |
| 3 | BSCS-341 | Discrete Structures | 3 | 0 | 3 |
| 4 | BSCS-362 | Information System Audit | 3 | 0 | 3 |
| 5 | BSCS-363 | Data Communication & Networking | 3 | 1 | 4 |
| 6 | PLL-xxx | PLL | NC | NC | NC |
|   |   | **Total** | 15 | 2 | 17 |
| **Second Semester, Third Year** |
| **S. No.** | **Course Code** | **Course title** | **Credit Hour** |
| **Th** | **Pr** | **Total** |
| 1 | BSCS-444 | Software Engineering | 3 | 0 | 3 |
| 2 | BSCS-345 | Theory of Programming Languages | 3 | 0 | 3 |
| 3 | BSCS-346 | Design & Analysis of Algorithms | 3 | 0 | 3 |
| 4 | BSCS-347 | Principles of Operating systems | 3 | 1 | 4 |
| 5 | BSCS-348 | Database Systems | 3 | 1 | 4 |
| 6 | PLL-xxx | PLL | NC | NC | NC |
|   |   | **Total** | 15 | 2 | 17 |

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| **First Semester, Fourth Year** |
| **S. No.** | **Course Code** | **Course title** | **Credit Hour** |
| **Th** | **Pr** | **Total** |
| 1 | BSCS-449 | Computer & Information Security | 3 | 0 | 3 |
| 2 | BSCS-451 | Parallel & Distributed Computing | 3 | 0 | 3 |
| 3 | BSCS-461 | Compiler Construction | 3 | 0 | 3 |
| 4 | BSCS-453 | Artificial Intelligence | 3 | 1 | 4 |
| 5 | BSCS-454 | Graph Theory  | 2 | 0 | 2 |
| 6 | BSCS-441 | Final Year Project-I | 0 | 3 | 3 |
|   |   | **Total** | 14 | 4 | 18 |
| **Second Semester, Fourth Year** |
| **S. No.** | **Course Code** | **Course title** | **Credit Hour** |
| **Th** | **Pr** | **Total** |
| 1 | BSCS-471 | CS Elective-I | 3 | 1 | 4 |
| 2 | BSCS-472 | CS Elective-II | 3 | 0 | 3 |
| 3 | BSCS-473 | CS Elective-III | 2 | 0 | 2 |
| 4 | BSCS-474 | CS Elective-IV | 2 | 1 | 3 |
| 5 | BSCS-441 | Final Year Project-II | 0 | 3 | 3 |
|   |   | **Total** | 10 | 5 | 15 |