BS Computer Science

1st Year Batch 17 to 27

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| **Fall Semester** | **Spring Semester** |
| **Code** | **Course Title** | **CH** | **Pre-req** | **Code** | **Course Title** | **CH** | **Pre-req** |
| CS-141 | Programming Fundamentals | 3 | - - - - | CS-142 | Structured Programming | 3 | CS-141 |
| EN-110 | English I | 2 | - - - - | EN-112 | English II | 2 | EN-110 |
| HM-150 | Islamic Studies I | 2 | - - - - | MA-103 | Calculus II | 3 | MA-100 |
| MA-100 | Calculus I | 3 | - - - - | NS-125 | Applied Physics | 4 | ME-105 |
| ME-105 | Applied Mechanics | 4 | - - - - | HM-250 | Islamic Studies II | 2 | HM-150 |
| SS-171 | Pakistan Studies | 2 | - - - - | HS-xxx | Humanities / Social Science Elective | 3 | - - - - |
| Semester Credit Hours: | 16 |  | Semester Credit Hours: | 17 |  |

2nd Year

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| **Fall Semester** | **Spring Semester** |
| **Code** | **Course Title** | **CH** | **Pre-req** | **Code** | **Course Title** | **CH** | **Pre-req** |
| CS-150 | Object Oriented Programming | 3 | CS-142 | CS-210 | Data Structures & Algorithms | 3 | CS-142 |
| CS-200 | Discrete Mathematics | 3 | MA-100 | CS-225 | Computer Organization and Assembly Language | 4 | CS-141 CS-220 |
| CS-220 | Digital Logic Design | 4 | - - - - | CS-232 | Numerical Analysis | 3 | MA-230 |
| MA-210 | Linear Algebra | 3 | - - - - | EN-201 | Communication Skills | 2 | EN-112 |
| MA-230 | Differential Equations | 3 | MA-103 | MA-150 | Probability and Statistics | 3 | MA-100 |
|  | Humanities / Social Science Elective | 3 | - - - - | CS-356 | Open Source Software Development | 3 | CS-150 |
| Semester Credit Hours: | 19 |  | Semester Credit Hours: | 18 |  |

3rd Year

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| **Fall Semester** | **Spring Semester** |
| **Code** | **Course Title** | **CH** | **Pre-req** | **Code** | **Course Title** | **CH** | **Pre-req** |
| CS-300 | Theory of Automata & Formal Languages | 3 | CS-200 | CS-325 | Operating Systems | 3 | CS-210CS-225 |
| CS-310 | Analysis of Algorithms | 3 | CS-200CS-210 | CS-332 | Computer Networks | 3 | CS-142MA-150 |
| CS-345 | Object Oriented Software Development | 3 | CS-150 | CS-360 | Artificial Intelligence | 3 | CS-200MA-150 |
| CS-370 | Database Systems | 3 | CS-210 | CS-390 | Software Engineering | 3 | CS-210CS-345 |
| NS-097 | SST Seminar | 0 | - - - - |  | Humanities / Social Science Elective | 3 | - - - - |
| CS-320 | Computer Architecture | 3 | CS-225 |  | Humanities / Social Science Elective | 3 | - - - - |
|  | Social Science Elective | 3 | - - - - |  |  |  |  |
| Semester Credit Hours: | 18 |  | Semester Credit Hours: | 18 |  |

4th Year

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| **Fall Semester** | **Spring Semester** |
| **Code** | **Course Title** | **CH** | **Pre-req** | **Code** | **Course Title** | **CH** | **Pre-req** |
| CS-450 | Human Computer Interaction | 3 | CS-150 | CS-401 | Compiler Construction | 3 | CS-210 CS-300 |
| CS-491 | Capstone Project I | 3 | - - - - | CS-492 | Capstone Project II | 3 | CS-491 |
|  | Technical Elective | 3 | - - - - |  | Technical Elective | 3 | - - - - |
|  | Technical Elective | 3 | - - - - |  | Technical Elective | 3 | - - - - |
|  | Technical Elective | 3 | - - - - |  |  |  |  |
|  | Technical Elective | 3 | - - - - |  |  |  |  |
| Semester Credit Hours: | 18 |  | Semester Credit Hours: | 12 |  |
| Total Credit Hours:136 |