# Scheme of Study for Bachelor of Science in
# Information Technology BS (IT)
### 4-year Programme (8 Semesters) (2012-2016)

**Semester I: (19 credit hours)**

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 1 | IT 101 | Introduction to Information and Comm. Technologies | Computing General Education | 2+1 | - |
| 2 | CS 103 | Programming Fundamentals | Computing core course | 3+1 | - |
| 3 | MT 105 | Calculus and Analytical Geometry | Computing Supporting course | 3+0 | - |
| 4 | EE 107 | Basic Electronics | Computing Supporting course | 2+1 | - |
| 5 | EG 109 | English Composition & Comprehension | Computing General Education | 3+0 | - |
| 6 | * 111 | University Elective I | University Electives | 3+0 | - |

**Semester II: (17 credit hours)**

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 1 | CS 102 | Discrete Structures | Computing core course | 3+0 | - |
| 2 | CS 104 | Object Oriented Programming | Computing core course | 2+1 | Programming Fundamentals |
| 3 | IT 106 | Fundamentals of IT | IT core course | 3+0 | - |
| 4 | * 108 | University Elective II | University Electives | 3+0 | - |
| 5 | EG 110 | Communication Skills | Computing General Education | 3+0 | - |
| 6 | PK 112 | Pakistan Studies | Computing General Education | 2+0 | - |

**Semester III: (17 credit hours)**

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 1 | CS 201 | Digital Logic Design | Computing core course | 2+1 | Discrete Structures |
| 2 | CS 203 | Data Structures and Algorithms | Computing core course | 2+1 | Object Oriented Paradigm |
| 3 | MT 205 | Linear Algebra | Computing Supporting course | 3+0 | - |
| 4 | EG 207 | Technical and Business Writing | Computing General Education | 3+0 | - |
| 5 | PK 209 | Islamic Studies/Ethics | Computing General Education | 2+0 | - |
| 6 | * 211 | University Elective III | University Electives | 3+0 | - |

**Semester IV: (18 credit hours)**

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 1 | CS 202 | Operating Systems | Computing core course | 2+1 | Data Structures and Algorithms |
| 2 | CS 204 | Introduction to Database Systems | Computing core course | 2+1 | Data Structures and Algorithms |
| 3 | IT 206 | Organizational Behaviour | IT supporting course | 3+0 | - |
| 4 | MT 208 | Probability and Statistics | Computing supporting course | 3+0 | - |
| 5 | CS 210 | Computer Communication and Networks | Computing core course | 2+1 | Operating Systems |
| 6 | * 212 | University Elective IV | University Electives | 3+0 | - |

**Semester V: (18 credit hours)**

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 1 | IT 301 | Web Systems and Technologies | IT core course | 2+1 | Fundamentals of IT |
| 2 | * 303 | University Elective V | Computing core course | 3+0 | - |
| 3 | CS 305 | Introduction to Software Development | Computing core course | 3+0 | Data Structures and Algorithms |
| 4 | * 307 | IT Elective I | IT Electives | 3+0 | - |
| 5 | IT 309 | Multimedia Systems and Design | IT core course | 2+1 | Fundamentals of IT |
| 6 | IT 311 | Information Systems | IT supporting course | 3+0 | - |

**Semester VI: (18 credit hours)**

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 1 | * 302 | University Elective VI | University Electives | 3+0 | - |
| 2 | IT 304 | Systems and Network Administration | IT core course | 2+1 | - |
| 3 | * 306 | IT Elective II | IT Electives | 3+0 | - |
| 4 | * 308 | University Elective VII | University Electives | 3+0 | - |
| 5 | * 310 | IT Elective –III | IT Electives | 3+0 | - |
| 6 | CS 312 | Human Computer Interaction | Computing core course | 2+1 | - |

**Semester VII: (18 credit hours)**

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 1 | IT401 | Technology Management | IT supporting course | 3+0 | - |
| 2 | * 403 | IT Elective IV | IT Electives | 3+0 | - |
| 3 | IT 405 | Network Security | IT core course | 3+0 | - |

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 4 | IT 407 | System Integration and Architecture | IT core course | 3+0 | Fundamentals of IT |
| 5 | * 409 | IT Elective V | IT Electives | 3+0 | - |
| 6 | *411 | IT Elective VI | IT Elective | 3+0 | - |

**Semester VIII: (12 credit hours)**

| # | Course code | Course Title | Category | Credit Hours | Prerequisites |
|---|---|---|---|---|---|
| 1 | CS 402 | IT Capstone /Software Project | Computing core course | 6 | - |
| 2 | * 404 | IT Elective VII | IT Elective | 3 | - |
| 3 | SS 406 | Professional Practices | Computing General education | 3 | - |