

Faculty of Information Technology

Semester: Spring 2022

BS Computer Science:

| <u>S #</u> | <u>Course Code</u> | <u>Course Title</u> | <u>Sections</u> | <u>Semester</u> |
|------------|--------------------|--|-----------------|-----------------|
| 1 | CSCS1513 | Introduction to Computing | 4 | 1 |
| 2 | CSCS1511 | Introduction to Computing Lab | 4 | 1 |
| 3 | CSHU2833 | Logic Thinking (UCP Elective I) | 4 | 1 |
| 4 | CSHU1823 | English Composition & Comprehension | 4 | 1 |
| 5 | CSSS1723 | Basic Electronics | 4 | 1 |
| 6 | CSHU1863 | Islamic and Religious Studies | 4 | 1 |
| 7 | CSSS1813 | Pre-calculus (Only for Medical Background) | 4 | 1 |
| 8 | CSCP1013 | Programming Fundamentals | 20 | 2 |
| 9 | CSCP1011 | Programming Fundamentals Lab | 20 | 2 |
| 10 | CSCS2523 | Digital Logic Design | 20 | 2 |
| 11 | CSCS2521 | Digital Logic Design Lab | 20 | 2 |
| 12 | CSSS1713 | Calculus and Analytical Geometry | 20 | 2 |
| 13 | CSHU1873 | Communication & Presentation Skills | 20 | 2 |
| 14 | CSHU1893 | Pakistan Studies | 20 | 2 |
| 15 | CSSS1853 | Elementary Algebra | 20 | 2 |
| 16 | CSCP2023 | Object Oriented Programming | 5 | 3 |
| 17 | CSCP2021 | Object Oriented Programming Lab | 5 | 3 |

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| 18 | CSCS3543 | Computer Org. & Assembly Lang. | 5 | 3 |
| 19 | CSCS3541 | Computer Org. & Assembly Lang. Lab | 5 | 3 |
| 20 | CSSS2733 | Multivariate Calculus | 5 | 3 |
| 21 | CSAL1213 | Discrete Structures | 5 | 3 |
| Uni-Elective Courses, Select any 1 course from the following: | | | | |
| 22 | CSMG1923 | Financial Accounting | 1 | 3 |
| 23 | CSHU1843 | Introduction to Psychology | 3 | 3 |
| 24 | CSMG1933 | Introduction to Business | 1 | 3 |
| 25 | CSCP2033 | Data Structure & Algorithms (DSA-T) – Theory | 13 | 4 |
| 26 | CSCP2031 | Data Structure & Algorithms (DSLAB) – Lab | 13 | 4 |
| 27 | CSDB2313 | Introduction to Database Systems (DB-T) – Theory | 13 | 4 |
| 28 | CSDB2311 | Introduction to Database Systems (DB-LAB) – Lab | 13 | 4 |
| 29 | CSSS2743 | Probability and Statistics (PROB) | 13 | 4 |
| 30 | CSSS2753 | Linear Algebra (LA) | 13 | 4 |
| CS- Elective, Select any 1 course from the following: | | | | |
| 31 | CSST3663 | Microcontroller Programming and Interfacing (MPI) | 3 | 4 |
| 32 | CSSE4153 | Human Computer Interaction | 3 | 4 |
| 33 | CSIP3113 | Digital Signal Processing | 3 | 4 |
| 34 | CSAL4323 | 3D Computer Graphics (3DCG) | 1 | 4 |
| 35 | CSDS4423 | Programming for Big Data (PBD) | 3 | 4 |

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| 36 | CSCS3553 | Operating Systems (OS-T) – Theory | 4 | 5 |
| 37 | CSCS3551 | Operating Systems (OS- Lab) – Lab | 4 | 5 |
| 38 | CSSE3113 | Introduction to Software Engineering - I (ISD) | 4 | 5 |
| 39 | CSAL3233 | Design and Analysis of Algorithm (AA) | 4 | 5 |
| 40 | CSSS2763 | Differential Equation (DE) | 4 | 5 |
| CS- Elective, Select any 1 course from the following: | | | | |
| 41 | CSSE3143 | Web Application Development (WAD) | 1 | 5 |
| 42 | CSCP3063 | Mobile Application Development (MAD) | 1 | 5 |
| 43 | CSAL3203 | Introduction to Image Processing (IIP) | 1 | 5 |
| 44 | CSST3633 | Game Development (GD) – CSST3633 | 1 | 5 |
| 45 | CSAL3243 | Artificial Intelligence (AI- T) | 7 | 6 |
| 46 | CSAL3241 | Artificial Intelligence (AI- Lab) | 7 | 6 |
| 47 | CSNC2413 | Computer Communications and Networks (CCN-T) | 7 | 6 |
| 48 | CSNC2411 | Computer Communications and Networks (CCN-Lab) | 7 | 6 |
| 49 | CSAL3253 | Theory of Automata (TOA) | 7 | 6 |
| 50 | CSHU2813 | Technical and Business Writing (ENG-3) | 7 | 6 |
| CS- Elective, Select any 1 course from the following: | | | | |
| 51 | CSDB3363 | Data Analysis Techniques (DAT) | 2 | 6 |
| 52 | CSAL3213 | Advanced 3D Modeling for Games (ADMG) | 2 | 6 |
| 53 | CSDB4363 | Schemaless Database System | 1 | 6 |
| 54 | CSAL3273 | Mathematics For Machine Learning | 1 | 6 |

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| 55 | CSAC3613 | Computational Geometry for Designing and Animation (CGDA) | 1 | 6 |
| 56 | CSNC3413 | Information Security (ISEC) | 3 | 7 |
| 57 | CSCS4573 | Compiler Construction (CC) | 3 | 7 |
| 58 | CSAL4263 | Numerical Computing (NM) | 3 | 7 |
| 59 | CSSE4173 | Final Year Project 1 (FYP-I) | 1 | 7 |
| Uni- Elective Select any 1 course from the following: | | | | |
| 60 | CSMG3943 | Organizational Behavior and Culture (OBC) | 2 | 7 |
| 61 | CSMG2913 | Technology Entrepreneurship (TENT) | 1 | 7 |
| CS- Elective Select any 1 courses from the following: | | | | |
| 62 | CSDB3263 | Introduction to Computer Vision | 1 | 7 |
| 63 | CSDS4473 | Big Data Analytics | 1 | 7 |
| 64 | CSDB4313 | Introduction to Data Science (IDS) | 1 | 7 |
| 65 | CSGE4963 | Professional Practices(PP) | 5 | 8 |
| 66 | CSCS2543 | Parallel and Distributed Computing | 5 | 8 |
| 67 | CSSE4183 | Final Year Project 2 (FYP-II) | 1 | 8 |
| CS- Elective Select any 1 courses from the following: | | | | |
| 68 | CSAL4253 | Introduction to Natural Language Processing (I-NLP) | 1 | 8 |
| 69 | CSNC3443 | Blockchain Essentials | 1 | 8 |
| 70 | CSAL4333 | Intoduction to Deep Learning | 1 | 8 |
| 71 | CSAL4243 | Introduction to Machine Learning (IML) | 1 | 8 |

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| 72 | CSSE4193 | Software Testing | 1 | 8 |
| Uni- Elective Select any 1 course from the following: | | | | |
| 73 | CSHU3873 | Speak Well - English Conversation | 1 | 8 |
| 74 | CSHU2863 | Introduction to Sociology | 2 | 8 |
| 75 | CSMG2943 | The Aesthetic Approach | 2 | 8 |