

| BS Biostatistics                                           |                     |                   |             |
|------------------------------------------------------------|---------------------|-------------------|-------------|
| Course Title                                               | Course Code         | Course Type       | Credit Hour |
| Semester 1                                                 |                     |                   |             |
| GEN(NS)                                                    |                     | General           | 3           |
| Functional English                                         | GENG-101            | General           | 3           |
| Civics and Community Engagement                            | GCCE-101            | General           | 2           |
| Islamic Studies / Ethics (for Non-Muslims)                 | GISL-101 / GETH-101 | General           | 2           |
| Biostatistics I - Statistical Theory                       | BSTA-101            | Major             | 3           |
| Introduction to Biology                                    | BSTA-102            | Major             | 3           |
| Tarjuma-e-Quran                                            | HQ-001              | Compulsory        | 0           |
| Total Credit Hours                                         |                     |                   | 16          |
| Semester 2                                                 |                     |                   |             |
| GEN(AH)                                                    |                     | General           | 2           |
| Quantitative Reasoning (I)                                 | GQR-101             | General           | 3           |
| Entrepreneurship                                           | GENT-101            | General           | 2           |
| Ideology and Constitution of Pakistan                      | GICP-101            | General           | 2           |
| Calculus                                                   | SMTH-101            | Major             | 3           |
| Biostatistics II - Probability Theory                      | BSTA-103            | Major             | 3           |
| Tarjuma-e-Quran                                            | HQ-002              | Compulsory        | 1           |
| Total Credit Hours                                         |                     |                   | 16          |
| Semester 3                                                 |                     |                   |             |
| Applications of Information and Communication Technologies | GICT-201            | General           | 3           |
| Expository Writing                                         | GENG-201            | General           | 3           |
| Linear Algebra                                             | SMTH-102            | Major             | 3           |
| Epidemiology                                               | BSTA-202            | Major             | 3           |
| Biostatistics III - Decision Making                        | BSTA-201            | Major             | 3           |
| Tarjuma-e-Quran                                            | HQ-003              | Compulsory        | 0           |
| Total Credit Hours                                         |                     |                   | 15          |
| Semester 4                                                 |                     |                   |             |
| GEN(SS)                                                    |                     | General           | 2           |
| Quantitative Reasoning (II)                                | GQR-202             | General           | 3           |
| Demography and Official Statistics                         | BSTA-205            | Major             | 3           |
| Statistical Computing                                      | BSTA-204            | Major             | 3           |
| Categorical Data Analysis                                  | BSTA-203            | Major             | 3           |
| Tarjuma-e-Quran                                            | HQ-004              | Compulsory        | 1           |
| Total Credit Hours                                         |                     |                   | 15          |
| Semester 5                                                 |                     |                   |             |
| Interdisciplinary                                          |                     | Interdisciplinary | 3           |
| Interdisciplinary                                          |                     | Interdisciplinary | 3           |
| Programming with R                                         | STAT-203            | Major             | 3           |
| Design and Analysis of Experiments                         | BSTA-302            | Major             | 3           |
| Design and Analysis of Medical Studies                     | BSTA-301            | Major             | 3           |
| Tarjuma-e-Quran                                            | HQ-005              | Compulsory        | 0           |
| Total Credit Hours                                         |                     |                   | 15          |
| Semester 6                                                 |                     |                   |             |
| Interdisciplinary                                          |                     | Interdisciplinary | 3           |
| Interdisciplinary                                          |                     | Interdisciplinary | 3           |
| Hospital and Healthcare Management                         | BSTA-304            | Major             | 3           |
| Survival Analysis and Modeling                             | BSTA-303            | Major             | 3           |
| Multivariate Analysis                                      | STAT-305            | Major             | 3           |
| Tarjuma-e-Quran                                            | HQ-006              | Compulsory        | 1           |
| Total Credit Hours                                         |                     |                   | 16          |
| Semester 7                                                 |                     |                   |             |
| Fieldwork                                                  | BSTA-401            | Major             | 3           |
| Elective-I                                                 |                     | Major             | 3           |
| Qualitative Research Methods                               | BSTA-404            | Major             | 3           |
| Bioinformatics                                             | BSTA-403            | Major             | 3           |
| Infectious Diseases and Modeling                           | BSTA-402            | Major             | 3           |
| Tarjuma-e-Quran                                            | HQ-007              | Compulsory        | 0           |
| Elective-II                                                |                     | Major             | 3           |
| Total Credit Hours                                         |                     |                   | 18          |
| Semester 8                                                 |                     |                   |             |
| Capstone Project                                           | BSTA-405            | Major             | 3           |
| Elective-III                                               | BSTA-               | Major             | 3           |
| Machine Learning                                           | CSTA-304            | Major             | 3           |
| Time Series Analysis                                       | CSTA-202            | Major             | 3           |
| Health Insurance and Health Laws                           | BSTA-406            | Major             | 3           |
| Tarjuma-e-Quran                                            | HQ-008              | Compulsory        | 1           |
| Elective-IV                                                | BSTA-               | Major             | 3           |
| Total Credit Hours                                         |                     |                   | 19          |
| Signature                                                  |                     |                   |             |