

**CURRICULUM FOR M. Sc. IN BIOSTATISTICS**

**1<sup>ST</sup> YEAR**

| <b>Semester I</b> |                          |   |                |                       |                            |                      |              |
|-------------------|--------------------------|---|----------------|-----------------------|----------------------------|----------------------|--------------|
|                   | <b>Syllabus Ref. No.</b> | <b>Subject</b>  | <b>Credits</b> | <b>Teaching hours</b> | <b>Marks</b>               |                      |              |
|                   |                          | <b>Theory</b>   |                |                       | <b>Internal Assessment</b> | <b>Semester Exam</b> | <b>Total</b> |
|                   | MBS 101 T                | Basic Mathematics and Introduction to Statistical Methods | 4              | 4                     | 20                         | 80                   | 100          |
|                   | MBS 102 T                | Epidemiology  | 4              | 4                     | 20                         | 80                   | 100          |
|                   | MBS 103 T                | Health Economics  | 4              | 4                     | 20                         | 80                   | 100          |
|                   | MBS 104 T                | Demography  | 4              | 4                     | 20                         | 80                   | 100          |
|                   | MBS 105 T                | Health Care System and Policies & Health Surveys          | 4              | 4                     | 20                         | 80                   | 100          |
|                   | <b>Practical</b>         |   |                |                       |                            |                      |              |
|                   | MBS 101 P                | Basic Mathematics and Introduction to Statistical Methods | 2              | 4                     | 10                         | 40                   | 50           |
|                   | MBS 102 P                | Epidemiology  | 2              | 4                     | 10                         | 40                   | 50           |
|                   | MBS 103 P                | Health Economics  | 2              | 4                     | 10                         | 40                   | 50           |
|                   | MBS 104 P                | Demography  | 2              | 4                     | 10                         | 40                   | 50           |
|                   |                          | <b>Total</b>  | 28             | 36                    | 140                        | 560                  | 700          |

**Semester II**

|                  | Syllabus Ref.<br>No. | Subject                              | Credits | Teaching<br>hours | Marks                  |                  |       |
|------------------|----------------------|--------------------------------------|---------|-------------------|------------------------|------------------|-------|
|                  |                      |                                      |         |                   | Internal<br>Assessment | Semester<br>Exam | Total |
| <b>Theory</b>    |                      |                                      |         |                   |                        |                  |       |
| MBS 106 T        |                      | Research Methodology-I               | 4       | 4                 | 20                     | 80               | 100   |
| MBS 107 T        |                      | Sampling Techniques in Health        | 4       | 4                 | 20                     | 80               | 100   |
| MBS 108 T        |                      | Estimation and Testing of Hypothesis | 4       | 4                 | 20                     | 80               | 100   |
| MBS 109 T        |                      | Applied Multivariate Analysis        | 4       | 4                 | 20                     | 80               | 100   |
| <b>Practical</b> |                      |                                      |         |                   |                        |                  |       |
| MBS 106 P        |                      | Research Methodology-I               | 2       | 4                 | 10                     | 40               | 50    |
| MBS 107 P        |                      | Sampling Techniques in Health        | 2       | 4                 | 10                     | 40               | 50    |
| MBS 108 P        |                      | Estimation and Testing of Hypothesis | 2       | 4                 | 10                     | 40               | 50    |
| MBS 109 P        |                      | Applied Multivariate Analysis        | 2       | 4                 | 10                     | 40               | 50    |
| MBS 110          |                      | Seminar                              | 1       | 2                 | 50                     | 0                | 50    |
|                  |                      | <b>Total</b>                         | 25      | 34                | 170                    | 480              | 650   |

**2<sup>ND</sup> YEAR**

| Semester III |                   |   |         |                |                     |               |       |
|--------------|-------------------|---|---------|----------------|---------------------|---------------|-------|
|              | Syllabus Ref. No. | Subject                                   | Credits | Teaching hours | Marks               |               |       |
|              | Theory            |   |         |                | Internal Assessment | Semester Exam | Total |
|              | MBS 111 T         | Biostatistics and Research Methodology-II | 4       | 4              | 20                  | 80            | 100   |
|              | MBS 112 T         | Survival Analysis                         | 4       | 4              | 20                  | 80            | 100   |
|              | MBS 113 T         | Design of Experiment and Clinical Trial   | 4       | 4              | 20                  | 80            | 100   |
|              |                   | <b>Core Elective course**</b>             | 4       | 4              | 20                  | 80            | 100   |
|              | MBS 114 T         | Non parametric Test                       |         |                |                     |               |       |
|              | MBS 115 T         | Advance Statistical Computing             |         |                |                     |               |       |
|              | MBS 116 T         | Time Series Analysis                      |         |                |                     |               |       |
|              | MBS 117 T         | Operations Research                       |         |                |                     |               |       |
|              | MBS 118           | Dissertation/Project*                     | 6       | 12             | 50                  | -             | 50    |
|              | <b>Practical</b>  |   |         |                |                     |               |       |
|              | MBS 111 P         | Biostatistics and Research Methodology-II | 2       | 4              | 10                  | 40            | 50    |
|              | MBS 112 P         | Survival Analysis                         | 2       | 4              | 10                  | 40            | 50    |
|              | MBS 113 P         | Design of Experiment and Clinical Trial   | 2       | 4              | 10                  | 40            | 50    |
|              |                   | <b>*Core Electives</b>                    | 2       | 4              | 10                  | 40            | 50    |
|              | MBS 114 P         | Non parametric Test                       |         |                |                     |               |       |
|              | MBS 115 P         | Advance Statistical Computing             |         |                |                     |               |       |
|              | MBS 116 P         | Time Series Analysis                      |         |                |                     |               |       |
|              | MBS 117 P         | Operations Research                       |         |                |                     |               |       |
|              | MBS 119           | Seminar                                   | 1       | 2              | 50                  | 0             | 50    |
|              |                   | <b>Total</b>                              | 31      | 46             | 220                 | 480           | 700   |

| Semester IV       |  |         |                |                     |               |       |
|-------------------|--|---------|----------------|---------------------|---------------|-------|
| Syllabus Ref. No. | Subject  | Credits | Teaching hours | Marks               |               |       |
|                   | Theory   |         |                | Internal Assessment | Semester Exam | Total |
|                   | <b>General elective **</b>                                     | 4       | 4              | 100                 | -             | 100   |
| GE 001 T          | Pursuit of Inner Self Excellence (POISE)                       |         |                |                     |               |       |
| GE 002 T          | Bioethics, Biosafety, IPR & Technology Transfer                |         |                |                     |               |       |
| GE 003 T          | Disaster management and mitigation resources                   |         |                |                     |               |       |
| GE 004 T          | Human rights   |         |                |                     |               |       |
| MBS 118           | Dissertation / Project*  | 18      | 36             | -                   | 200           | 200   |
| <b>Practical</b>  |  |         |                |                     |               |       |
| MBS 120 P         | Educational Tour / Field Work/Industrial Visit/Hospital Visit* | 2       | 0              | 50                  | -             | 50    |
|                   | <b>Total</b>   | 24      | 40             | 150                 | 200           | 350   |