

## Subjects for M.Sc. Bioinformatics

### ► Semester I

|  | L | P | Total/week |
|--|---|---|------------|
| MBI 101 Introduction to Modern Biology | 3 | - | 3          |
| MBI 102 Basic Mathematics              | 3 | - | 3          |
| MBI 103 Introduction to Computing      | 3 | 3 | 6          |
| MBI104 Fundamental of Bioinformatics   | 3 | 3 | 6          |
| MBI 105 Cell & Molecular Biology       | 3 | - | 3          |

### ► Semester II

|   | L | P | Total/week |
|---|---|---|------------|
| MBI 201 Statistics for Bioinformatics               | 3 | - | 3          |
| MBI 202 Data Structures & Algorithm                 | 3 | 3 | 6          |
| MBI 203 Introduction to Database programming for BI | 3 | 3 | 6          |
| MBI 204 Structure of Biomolecules                   | 3 | - | 3          |
| MBI 205 Fundamental of Genetics                     | 3 | - | 3          |

### ► Semester III

|   | L | P | Total/Week |
|---|---|---|------------|
| MBI 301 Genome Biology                                | 3 |   | 3          |
| MBI 302 Biological Databanks<br>Data Mining& Security | 3 | 3 | 6          |
| MBI 303 Computational Biology                         | 3 | 3 | 6          |
| MBI 304 Object oriented Programming                   | 3 | 3 | 6          |
| MBI 305 Seminar Based Course                          | 3 |   | 3          |

### ► Semester IV

|  | L | P | Total/Week |
|--|---|---|------------|
| MBI 401 Rational Drug Design                         | 3 | 3 | 6          |
| MBI 402 Molecular Structure Prediction Visualization | 3 | 3 | 6          |
| MBI 403 Protein Engineering & Proteomics             | 3 | 3 | 6          |
| MBI 404 Genomics & Transcriptomics                   | 3 | 3 | 6          |
| MBI 405 Project Work                                 |   |   | 6          |

## Advanced Post Graduate Diploma in Bioinformatics

### • Semester I

|   | <b>L</b> | <b>P</b> | <b>Total/week</b> |
|---|----------|----------|-------------------|
| PBI 101 Intro to Modern Biology/<br>Basic Mathematics | 3        | -        | 3                 |
| PBI 102 Statistics for Bioinformatics                 | 3        | -        | 3                 |
| PBI 103 Introduction to Computing                     | 3        | 3        | 6                 |
| PBI 104 Fundamentals of Bioinformatics                | 3        | 3        | 6                 |
| PBI 105 Structure of Biomolecules                     | 3        | -        | 3                 |
| PBI 106 Genetics, Cell and Molecular Biology          | 3        | -        | 3                 |

### Semester II

|   | <b>L</b> | <b>P</b> | <b>Total/week</b> |
|---|----------|----------|-------------------|
| PBI 202 Data Structures & Algorithm                                   | 3        | 3        | 6                 |
| PBI 203 Biological Data Banks, Data<br>Mining & Computational Biology | 3        | 3        | 6                 |
| PBI 204 Rational Drug Design  | 3        | -        | 3                 |
| PBI 205 Proteomics & Molecular<br>Structure Prediction                | 3        | -        | 3                 |
| PBI 206 Object-Oriented and DB Progr. for BI                          | 3        | 3        | 6                 |