

**School Name: School of Basic and Applied Sciences**  
**Programme Name: Master of Science (Physics) (2 Years)**  
**Scheme: 2015-17**

| Semester 1   |             |                              |       |   |   |    |
|--------------|-------------|------------------------------|-------|---|---|----|
| Sl. No       | Course Code | Name of the Course           |       |   |   |    |
|              |             |                              | L     | T | P | C  |
| 1            | PHY 501     | Mathematical Physics-I       | 4     | - | - | 4  |
| 2            | PHY 502     | Classical Mechanics          | 4     | - | - | 4  |
| 3            | PHY 503     | Quantum Mechanics-I          | 4     | - | - | 4  |
| 4            | PHY 504     | Electronics                  | 4     | - | - | 4  |
| 5            | PHY 505     | Physics Laboratory-I         | -     | - | 8 | 4  |
|              |             |                              | Total |   |   | 20 |
| Semester II  |             |                              |       |   |   |    |
| Sl No        | Course Code | Name of the Course           |       |   |   |    |
|              |             |                              | L     | T | P | C  |
| 1            | PHY 506     | Mathematical Physics-II      | 4     | - | - | 4  |
| 2            | PHY 507     | Statistical Mechanics        | 4     | - | - | 4  |
| 3            | PHY 508     | Electrodynamics              | 4     | - | - | 4  |
| 4            | PHY 509     | Quantum Mechanics-II         | 4     | - | - | 4  |
| 5            | PHY 510     | Physics Laboratory-II        | -     | - | 8 | 4  |
|              |             |                              | Total |   |   | 20 |
| Semester III |             |                              |       |   |   |    |
| Sl No        | Course Code | Name of the Course           |       |   |   |    |
|              |             |                              | L     | T | P | C  |
| 1            |             | Elective-I                   | 4     | - | - | 4  |
| 2            | PHY 511     | Nuclear and Particle Physics | 4     | - | - | 4  |
| 3            | PHU 501     | Research Methodology         | 3     | - | - | 3  |

|   |         |                       |       |   |   |    |
|---|---------|-----------------------|-------|---|---|----|
| 4 | PHY 512 | Computational Methods | 4     | - | - | 4  |
| 5 | PHY 513 | Solid State Physics   | 4     | - | - | 4  |
| 6 | PHY 514 | Analytical Techniques | 3     | - | - | 3  |
| 7 | PHY 515 | Computational Lab     | -     | - | 2 | 1  |
|   |         |                       | Total |   |   | 23 |

#### Semester IV

| Sl No | Course Code | Name of the Course |       |   |   |    |
|-------|-------------|--------------------|-------|---|---|----|
|       |             |                    | L     | T | P | C  |
| 1     | PHY 516     | Project            | -     | - | - | 12 |
| 2     |             | Elective II        | 4     | - | - | 4  |
| 3     |             | Elective III       | 4     | - | - | 4  |
|       |             |                    | Total |   |   | 20 |

#### Elective-I

| Sl No | Course Code | Name of the Course               |   |   |   |   |
|-------|-------------|----------------------------------|---|---|---|---|
|       |             |                                  | L | T | P | C |
| 1     | PHE501      | Physics of Semiconductor Devices | 4 | - | - | 4 |
| 2     | PHE503      | Materials Science                | 4 | - | - | 4 |
| 3     | PHE505      | Advanced Nuclear Physics         | 4 | - | - | 4 |
|       |             |                                  |   |   |   |   |

#### Elective-II

|   |        |                                |   |   |   |   |
|---|--------|--------------------------------|---|---|---|---|
| 1 | PHE502 | Analog and Digital Electronics | 4 | - | - | 4 |
| 2 | PHE504 | Advanced Solid-State Physics   | 4 | - | - | 4 |
| 3 | PHE506 | Advanced Particle Physics      | 4 | - | - | 4 |
|   |        |                                |   |   |   |   |

#### Elective-III

|   |        |                              |   |   |   |   |
|---|--------|------------------------------|---|---|---|---|
| 1 | PHE507 | Atomic and Molecular Physics | 4 | - | - | 4 |
|---|--------|------------------------------|---|---|---|---|