

**MSc Physics Curriculum  
2020**

| SEMESTER 1 of M Sc/Semester 7 of Int M sc |   |       |     | SEMESTER 2 of M Sc/Semester 8 of Int M Sc  |  |       |           |
|---|---|-------|-----|--|--|-------|-----------|
| Code No                                   | Course  | L T P | Cr  | Code No                                    | Course   | L T P | Cr        |
| 18PHY501                                  | Classical Mechanics   | 3 1 0 | 4   | 18PHY511                                   | Quantum Mechanics II                             | 3 1 0 | 4         |
| 18PHY502                                  | Quantum Mechanics I   | 3 1 0 | 4   | 18PHY512                                   | Mathematical Physics II                          | 3 1 0 | 4         |
| 18PHY503                                  | Mathematical Physics I  | 3 1 0 | 4   | 18PHY513                                   | Statistical Mechanics                            | 3 1 0 | 4         |
| 18PHY504                                  | Computational Physics   | 3 1 0 | 4   | 18PHY514                                   | Advanced Electrodynamics                         | 3 1 0 | 4         |
| 18PHY581/<br>18PHY586                     | Advanced Physics Lab /<br>Physics Lab A                                     | 0 0 6 | 2   | 18PHY515/<br>18PHY518                      | Experimental Techniques/<br>Advanced Electronics | 3 1 0 | 4         |
| 18CUL501                                  | Cultural Education  | 2 0 0 | P/F | 18PHY583/<br>18PHY587                      | Advanced Electronics Lab /<br>Physics Lab B      | 0 0 6 | 2         |
| 18PHY582                                  | Simulation Lab  | 0 0 3 | 1   | 18AVP501                                   | Amrita Value Programme                           | 1 0 0 | 1         |
| 18PHY591                                  | Mini Project  | 0 0 3 | 1   |  |  |       |           |
| <b>TOTAL 20</b>                           |   |       |     | <b>TOTAL 23</b>                            |  |       |           |
| SEMESTER 3 of M Sc/Semester 9 of Int M Sc |   |       |     | SEMESTER 4 of M Sc/Semester 10 of Int M Sc |  |       |           |
| 18PHY601/<br>18PHY517                     | Atomic, Molecular and Optical Physics/<br>Atomic and Molecular Spectroscopy | 3 1 0 | 4   | 18PHY696                                   | Dissertation                                     |       | 18        |
| 18PHY602                                  | Condensed Matter Physics  | 3 1 0 | 4   | 18PHY697/<br>18PHY698                      | Viva voce /<br>Seminar                           |       | 2         |
| 18PHY603                                  | Nuclear and Particle Physics  | 3 1 0 | 4   | <b>TOTAL</b>                               |  |       | <b>20</b> |
|   | Elective I  | 3 0 0 | 3   |  |  |       |           |
|   | Elective II   | 3 0 0 | 3   |  |  |       |           |
| 18PHY681/<br>18PHY583                     | Spectroscopy Lab /<br>Advanced Electronics Lab                              | 0 0 6 | 2   | <b>TOTAL 2 Yr MSc</b>                      |  |       | <b>85</b> |
| 18PHY690                                  | Free/Open Elective / Live-in-Lab  | 2 0 0 | 2   |  |  |       |           |
| <b>TOTAL</b>                              |   |       |     | <b>22</b>                                  |  |       |           |