

**JAWAHARLAL NEHRU UNIVERSITY**  
**SCHOOL OF PHYSICAL SCIENCES**

**Courses for Winter Semester-2021**

**M.Sc. (Physics)**

**2<sup>nd</sup> Semester**

| Course No. | Title                   | Credits |
|------------|-------------------------|---------|
| PS421      | Quantum Mechanics-II    | 3       |
| PS429      | Statistical Mechanics   | 3       |
| PS423      | Electromagnetic Theory  | 3       |
| PS428      | Mathematical Physics-II | 2       |
| PS424      | Relativistic Physics    | 2       |
| PS426      | Physics Lab.II          | 4       |

**Pre-Ph.D. (Physics)**

**2<sup>nd</sup> Semester**

| Course No. | Title                                   | Credits |
|------------|---|---------|
| PS722      | Phase Transition and Critical Phenomena | 3       |
| PS662      | Expt Methods in Physics                 | 3       |
| PS762P     | Seminar course                          | 1       |
| PS699      | Research Methodology Course I           | 3       |

**M.Sc. (Chemistry)**

**2<sup>nd</sup> Semester**

| Course No. | Title                          | Credits |
|------------|--------------------------------|---------|
| PS 456C    | Adv. Organic Chemistry-I       | 3       |
| PS 457C    | Adv. Inorganic Chemistry-I     | 3       |
| PS 458C    | Molecular spectroscopy         | 3       |
| PS 459C    | Concepts in Physical Chemistry | 3       |
| PS 460C    | Laboratory-II                  | 7       |

**Pre-Ph.D. (Chemistry)**

**2<sup>nd</sup> Semester**

| Course No.           | Title  | Credits |
|----------------------|--|---------|
| PS 456C              | Adv. Organic Chemistry-I                     | 3       |
| PS 457C              | Adv. Inorganic Chemistry-I                   | 3       |
| PS 458C              | Molecular spectroscopy                       | 3       |
| PS 459C              | Concepts in Physical Chemistry               | 3       |
| PS 613C*             | Computational Chemistry and its Applications | 3       |
| PS 741C <sup>+</sup> | Seminar Course                               | 1       |
| PS 617C <sup>+</sup> | Research Methodology Course                  | 3       |

**Note: Pre-PhD students can take any of the two courses (in addition of PS 741C<sup>+</sup> and PS 617C<sup>+</sup>) from this list as per their choice.**

**\*This course is only for Pre-PhD Students.**

**+ These courses are compulsory for Pre-PhD. Students**

**M.Sc. (Mathematics)****2<sup>nd</sup> Semester**

| <b>Course No.</b> | <b>Title</b>         | <b>Credits</b> |
|-------------------|----------------------|----------------|
| PM405             | Algebra II           | 4              |
| PM407             | Functional Analysis  | 4              |
| PM408             | Discrete Mathematics | 4              |
| PM406             | Measure Theory       | 4              |

**Pre-Ph.D. (Mathematics)****2<sup>nd</sup> Semester**

| <b>Course No.</b> | <b>Title</b>                  | <b>Credits</b> |
|-------------------|-------------------------------|----------------|
| PS715M            | Seminar Course                | 1              |
| PS646M            | Research Methodology Course I | 3              |
| PS647M            | Research Course II            | 3              |