

**SPECIAL CENTRE FOR SYSTEMS MEDICINE
JAWAHARLAL NEHRU UNIVERSITY**

Ph.D. Programme in Systems Medicine: 2021-22

COURSE STRUCTURE

FIRST SEMESTER (14 Credits)

A. Core Courses

- i. SSM601- Research methodology
- ii. SSM602- Advances in systems biology and bioinformatics
- iii. SSM603- Molecular basis of human diseases
- iv. SSM604- Advances in genomics and transcriptomics, and research methodology
- v. SSM605- Advances in proteomics and metabolomics, and research methodology
- vi. SSM606- Advances in immunomics and pathomics

B. Optional Courses

- i. SSM621- Innovation, IP and entrepreneurship
- ii. SSM622- Applications of graph theory in computational biology and systems medicine

Note: Students are required to opt at least one optional course in addition to the core courses.

SECOND SEMESTER (04 Credits)

- i. SSM651- Manuscript writing and editing
- ii. SM652- Critical analysis and presentation of research articles
- iii. SSM653- Writing and defense of research proposal
- iv. SSM654- Hands-on laboratory techniques (at least 3 techniques)