



MASTER OF SCIENCE - PHYSICS

PROGRAMME OVERVIEW

Physics is one of the oldest academic disciplines. Not only is it the fundamental to all basic natural sciences, it has also been significant and influential through advances in its understanding that have translated into new technologies.

M Sc. Physics is a synonym to Master of Science in Physics. The course provides a thorough analytical background to basic and modern foundations of conventional physics coupled with an insight into areas such as Material Science & Electronics, which are offered as a subject of specialization.

Programme Name

Master of Science

Programme Code

044

Course Code and Name

4404 - M. Sc in Physics

Degree Awarded

Master of Science

Duration of the Programme

2 years, 4 semesters

Total Credits

100

Eligibility

The minimum qualification required to apply is a bachelor's degree in the respective discipline from a recognized university

Medium of Instruction / Examination

English

Study Campus

Center for Post Graduate Studies

Jayanagar 3rd Block, Bangalore

Programme Timings

8:30 am - 4:30 pm (Mon-Fri)

8:30 am - 1:00 pm (Sat)

Examinations & Assessments

1. Internal tests
2. Assignments
3. Seminar presentation
4. Class tests
5. Preparatory theory and Practical examination
6. End term theory and Practical examination

Curriculum

Semester 1

Classical Mechanics

Quantum Mechanics - I

Electronics (General)

Mathematical Methods of Physics

Learning labs: General Practical - I

Electronics (General) Practical

Semester 2

Statistical Mechanics

Quantum Mechanics - II

Electrodynamics

Computational Methods in Physics

Learning Labs: General Practical - II

Computer Exercises

Semester 3

Condensed Matter Physics

Nuclear and Particle Physics

Materials Science (Special) – I (or) Electronics (Special) - I

Elective: Atomic, Molecular and Resonance Spectroscopy (or) X Ray Crystallography (or) Spectroscopic Techniques

Learning Labs: Modern Physics

Materials Science (Special) Practical - I (or) Electronics (Special) Practical - I

Semester 4

Astrophysics and Relativity

Materials Science (Special) - II (or) Electronics (Special) – II

Materials Science (Special) - III (or) Electronics (Special) - III

Elective: Laser Physics and Applications (or) Physics of Nano Materials (or) Structure, Spectra and Properties of Bio Molecules / Molecular Physics

Learning Labs: Materials Science(Special) Practical - II or Electronics (Special) Practical - II

Project and Dissertation Viva-Voce

CAREER OPPORTUNITIES

M.Sc. in Physics degree will help to develop robust, high-level analytical and problem-solving skills that are widely applicable and highly valued by a diverse range of employers including those in education, finance, engineering, computing and management.

After the successful completion of programme, can find a challenging career in the government, education, health, energy and medical sectors.