Programme Specific Outcome: B.ScHonours (Physics) and Minor Physicsunder CCFUP,2023 and NEP, 2020

The purpose of the undergraduate physics program is to provide knowledge in emerging and varied areas of Physics for higher studies, research and industries related to software and hardware applications.

The students will acquire a scientific knowledge of the fundamental principles of Physics through study of Classical Mechanics, Electromagnetic Theory, Optics, Heat and Thermodynamics, Statistical Mechanics, Solid State Physics, Nuclear Physics, Modern Physics, Quantum Mechanics and other areas of Physics. The students will acquire a fair amount of computational skill using open source software packages.

The students will learn effective communication skill to present their knowledge of physics from basic concepts to specific advanced areas in the form of preparation of laboratory note book, project work, seminar presentation, poster presentation, wall magazines, models and other modes.

The students will learn to work independently as well as a group during laboratory sessions, projects and student seminars. They will be able to utilize the small summer/ winter recesses through their involvement in small projects under careful guidance of reputed faculties and may get the flavor of the current trend of research.

The student will acquire a purposeful knowledge of scientific literature and ethical issues related to physics which will be helpful for employment in Govt. and non Govt. sectors.

Course Code	Course Name	Course Outcome
PHSHMJ101	MJ1T MJ1P Foundation of Physics - 1	The course provides the mathematical tools to know the basic laws of physics and good knowledge of vector calculus and probability. It gives introduction to thermodynamics, thermodynamic relations and kinetic theory of gases.
PHSHMJ102	MJ2T MJ2P Foundation of Physics - 2	This course in Classical Mechanics serves as the foundation for further progress towards study of physics at graduate level. Newtonian mechanics forms the basis of this course. The Physics of rotational motion of a rigid body and fluid motion are also introduced.

		The students will learn fundamental properties of charged particles and electric fields, electricity, magnetism, electromagnetic induction and electrical circuits.
PHSSEC01	SEC 1P Introduction to Python Programming and Graph Plotting	The students will learn basics of programming in Python, a universally accepted open source programming language. This course will be extremely beneficial as it will build the foundation of application of computational techniques in any branch of theoretical and experimental physics
PHSSEC02	SEC 2P Basic Instrumentation	This course deals with basic ideas of measurements. The details study about resistance, analog and digital ammeter and voltmeter and also digital multimeter. This course introduces the electrical household wiring which includes concept of basic electricity, circuit connection and wiring and safety and security.
PHSHMI01	MI1T MI1P Mathematical Physics and Mechanics	This course is offered to students of Chemistry, Mathematics & Computer Science as per their choice. The students will learn the basic mathematical tools like vectors analysis, calculus of vectors, differential equations etc. to get an entry into Mechanics, Gravitation and the studies of General properties of Matter.
PHSHMI02	MI2T MI1P Thermal Physics and Statistical Mechanics	This course is offered to understand the basic laws of nature which are inbuilt in the laws of Thermodynamics. The other aspects like kinetic theory of gas, the distribution of radiation energy are also covered in this course. The course is further extended to

		understand Statistical Mechanics which is relevant to study Thermodynamics analytically.