


FOUR YEAR UNDERGRADUATE PROGRAM (NEP- 2020)
PROGRAM: BACHELOR IN SCIENCE (2024 – 28)
DISCIPLINE – PHYSICS
SESSION - 2024 – 25

DSC- 01 to 08		DSE- 01 to 12		DGE- 01 to 02	
Code	Course Title	Code	Course Title	Code	Course Title
PHSC- 01 T	Mechanics	PHSE- 01	Introduction to Statistical Mechanics	PHGE- 01 T	Mechanics
PHSC- 01P	Lab Course			PHGE- 01 P	Lab Course
PHSC- 02 T	Electricity & Magnetism	PHSE- 02	Mathematical Physics-I	PHGE- 02 T	Electricity & Magnetism
HSC- 02 P	Lab Course			PHGE- 02 P	Lab Course
PHSC- 03 T	Heat & Thermodynamics	PHSE- 03	Nuclear Physics	VAC	
PHSC- 03 P	Lab Course				
PHSC- 04 T	Waves & Optics	PHSE- 04 T	Numerical Methods & C Programming		
PHSC- 04 P	Lab Course	PHSE- 04 P	Lab Course		
PHSC- 05 T	Introduction to Quantum Mechanics	PHSE- 05	Mathematical Physics-II	PHVAC- 01	Renewable Energy and Energy Harvesting
PHSC- 05 P	Lab Course				
PHSC- 06 T	Solid State Physics & Solid State Devices	PHSE- 06	Classical Electrodynamics & Electromagnetic theory	SEC	
PHSC- 06 P	Lab Course				
PHSC- 07	Classical Mechanics	PHSE- 07 T	Digital Electronics		
		PHSE- 07 P	Lab Course		
PHSC- 08	Quantum Mechanics	PHSE- 08 T	Operational Amplifier & Its Applications	PHSEC- 01	Basic Electrical Skill
		PHSE- 08 P	Lab Course		
		PHSE- 09 T	Solid State Physics		
		PHSE- 09 P	Lab Course		
		PHSE- 10	Atomic and Molecular Physics		
		PHSE- 11	Statistical Mechanics		
		PHSE- 12 T	Microprocessor		
		PHSE- 12 P	Lab Course		

Signature of Convener & Members (CBoS):









Program Outcomes (PO):

The learning outcomes of the undergraduate degree course in physics are as follows:

- **In-depth disciplinary knowledge:** The student will acquire comprehensive knowledge and understanding of the fundamental concepts, theoretical principles and processes in the main and allied branches of physics.
- **Hands-on/ Laboratory Skills:** Comprehensive hands-on/ laboratory exercises will impart analytical, computational and instrumentation skills. The students will be able to demonstrate mature skills for the collation, evaluation, analysis and presentation of information, ideas, concepts as well as quantitative and/or qualitative data.
- **Role of Physics:** The students will develop awareness and appreciation for the significant role played by physics in current societal and global issues. They will be able to address and contribute to such issues through the skills and knowledge acquired during the programme
- **Communication and Skills:** Various DSCs, DSEs, SECs, and GEs have been designed to enhance student's ability to write methodical, logical and precise reports. The courses will, in addition, guide the student to communicate effectively through presentations, writing laboratory/ project reports and dissertations.
- **Critical and Lateral Thinking:** The programme will develop the ability to apply the underlying concepts and principles of physics and allied fields beyond the classrooms to real life applications, innovation and creativity.
- **Research skills:** The course provides an opportunity to students to hone their research and innovation skills through assignment/internship/dissertation. It will enable the students to demonstrate mature skills in literature survey, information management skills, data analysis and research ethics.

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