

List of Courses having focus on Local, National, Regional and Global Developmental Needs offered by the M.Sc. Physics

M.Sc.						
Programme: M.Sc. Physics					Year: 2023-2025 Batch	
Course Code	Course Title	Need				Rationale
		Local	National	Regional	Global	
23PPS101	Classical Mechanics		✓			To compete CSIR, SLET, NET exams
23PPS102	Quantum Mechanics				✓	Apply critical thinking skills to formulate and solve quantitative problems in Applied Physics, Compleitive Exams like NET, SET, GATE & CSIR.
23PPS103	Mathematical Physics				✓	Necessary skills developed to compete in various competitive exams like CSIR, NET, SET, GATE etc.
23PPS1E1	Applied Electronics				✓	Design Electronic industries
23PPS204	Statistical Mechanics			✓		To impart the knowledge about classical & quantum statistics
23PPS205	Advanced Quantum Mechanics			✓	✓	Develop skills to face complexity for inter-disciplinary and multi-disciplinary research and to arouse critical thinking skills to formulate and solve problems in Applied Physics
23PPS206	Electromagn etic theory & Electrodyna mics				✓	To enhance the skill in solving problems by applying electromagnetic field.

23PPS207	Electronic Communications and Cyber security			✓	✓	Work in IT and Electronic sectors
23PPS2N1	Non Conventional Energy Sources				✓	Awareness on available sources of energy and to fetch opportunities in energy sectors
23PPS2N2	Biomedical Instrumentation				✓	Employment in medical laboratories and related fields
23PPS208	General Physics Lab I		✓			To impart knowledge in experimental techniques and correlate with theory
23PPS209	Electronics Lab I				✓	To train the students to develop the knowledge about design of circuits and utilization of electronic components
22PPS310	Molecular Spectroscopy				✓	To impart knowledge in group theory and understand different spectroscopic techniques
22PPS311	Condensed Matter Physics		✓	✓	✓	Job opportunities in leading premier scientific institutes and in Research lab
22PPS3E2	Thin film & Nano science				✓	To promote and higher education and participate in interdisciplinary research
22PPS412	Lasers & Non-Linear Optics				✓	To impart knowledge in the principle and working of laser and origin of nonlinear phenomenon
22PPS413	Nuclear & Particle Physics		✓		✓	Placements at various Atomic and research centers like IGCAR, BARC and across the globe
22PPS414	General Physics Lab II			✓		To gain the knowledge about experimental methods and measurements
22PPS415	Electronics		✓		✓	Practical skills to cater to the needs of

	Lab II					Teaching, IT and Electronic industry
22PPS416	Computer Lab in C++				✓	Impart basic skills for employability in IT sector
22PPS417	Project		✓		✓	Planning, executing and reporting theoretical and experimental skills to work effectively in diverse teams
22PPS4E3	Microprocessor & Object-Oriented Programming With C++				✓	To impart the knowledge about computation, multimedia display and operating system



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