

M.Sc. in Physics

After successful completion of two year degree program in physics a student should be able to;

**Programme
Specific
Outcome**

PSO-1 Gain the knowledge of Physics through theory and experiments.

PSO-2 Understand and apply principles of physics for understanding the scientific phenomenon in classical and quantum physics.

PSO-3 Understand and apply statistical methods for describing the quantum and classical a particles phenomenon in various physical systems.

PSO-4 Enhance student's ability to develop mathematical models for physical systems.

PSO-5 Understand good laboratory practices and safety via handle the sophisticated instruments/equipments and develop research oriented skills.

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Course Code	Course name	Course Outcome
PHS-101.1	METHODS OF MATHEMATICAL PHYSICS - I	This course deals with the understanding of mathematical methods and its implementation in physics.
PHS-101.2	CLASSICAL MECHANICS	Enhance student's knowledge of classical mechanics.
PHS-102.1	QUANTUM MECHANICS - I	This course provides knowledge of quantum mechanics.
PHS-102.2	SOLID STATE – I	The course improves student's knowledge of solid state physics.
PHS-103.1	ELECTRODYNAMICS	This is a course of electrodynamics and its various practical application.
PHS-103.2	MATERIALS: PREPARATION AND CHARACTERIZATION	This course develops student's skill of material preparation and characterization
PHS-104.1	ANALOG ELECTRONICS - I	The course improves student's knowledge of fundamental analog electronics.
PHS-104.2	DIGITAL ELECTRONICS - I	The course improves student's knowledge of fundamental digital electronics.
PHS-195	ELECTRONICS PRACTICAL – I	This course deals with basic electronics practical.
PHS-196	COMPUTER PRACTICAL	This course deals with computational skills in physics.
PHS-201.1	QUANTUM MECHANICS - II	This quantum mechanics course enhance knowledge on the subject.
PHS-201.2	METHODS OF MATHEMATICAL PHYSICS - II	The course improves the idea of mathematical techniques in physics.
PHS-202.1	SOLID STATE II	This is a rigorous course of solid state physics.
PHS-202.2	SEMICONDUCTOR PHYSICS	This course deals with the fundamentals of semiconductor physics.
PHS-203.1	ANALOG ELECTRONICS - II	This is a rigorous course in analog electronics.
PHS-203.2	DIGITAL ELECTRONICS - II	This is a rigorous course in digital electronics.
CPHS-204	CONCEPTS OF PHYSICS: INVENTIONS AND APPLICATION(CBCS)	This course improves student's skill in innovative inventions and its application.
PHS-295	ELECTRONICS PRACTICAL – II	The course deals with electronics practical.
PHS-296	ADVANCE PRACTICAL – I	This course improves advanced practical skills.
PHS-301.1	QUANTUM MECHANICS - III	The course develops student's complete understanding of quantum mechanics.
PHS-301.2	STATISTICAL MECHANICS - I	This is a course of basic statistical mechanics.
PHS-302.1	MOLECULAR SPECTROSCOPY & LASER PHYSICS	This is a course on molecular spectroscopy & laser physics.
PHS-302.2	NUCLEAR PHYSICS - I	The course deals with nuclear physics.
SPECIAL PAPER(CHOOSE ANY ONE)↓		

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PHS-303A,303B,301C	SOLID STATE PHYSICS-I, APPLIED ELECTRONICS-I, APPLIED OPTICS AND OPTO-ELECTRONICS-I	This special paper provides rigorous and advanced knowledge on the subject.
CPHS-304	INTRODUCTORY ASTROPHYSICS (CBCS)	This is a course of introductory astrophysics.
PHS-395	ADVANCE PRACTICAL-II	The course improves advanced practical skills.
SPECIAL BASED PRACTICAL (ANY ONE)↓		
PHS-396A, 396B, 396C	SOLID STATE PHYSICS-I (practical), APPLIED ELECTRONICS-I (practical), APPLIED OPTICS AND OPTO-ELECTRONICS-I(practical)	The course develops advanced practical knowledge of the subject.
PHS-401.1	PARTICLE PHYSICS	This course deals with the fundamentals of particle physics.
PHS-401.2	STATISTICAL MECHANICS - II	This course enhances the understanding of statistical mechanics.
PHS-402.1	NUCLEAR PHYSICS - II	The course deals with some advanced topics of nuclear physics.
PHS-402.2	QUANTUM FIELD THEORY	The course deals with basic quantum field theory.
PHS-403.1	SEMICONDUCTOR DEVICES	This is a course on semiconductor devices.
PHS-403.2	APPLIED OPTICS	The course deals with applied optics.
SPECIAL PAPER(CHOOSE ANY ONE)↓		
PHS-404A, 404B,404C	SOLID STATE PHYSICS-II, APPLIED ELECTRONICS-II, APPLIED OPTICS AND OPTO-ELECTRONICS-II	This special paper provides rigorous and advanced knowledge on the subject.
SPECIAL BASED PRACTICAL (ANY ONE)↓		
PHS-495A, 495B, 495C	SOLID STATE PHYSICS-I (practical), APPLIED ELECTRONICS-I (practical), APPLIED OPTICS AND OPTO-ELECTRONICS-I(practical)	The course develops advanced practical knowledge of the subject.
PHS-496	PROJECT, SEMINAR AND GRAND VIVA	This course enhances student's ability to develop and design a new problem, their critical thinking and most importantly develop research-oriented skills.