

**DEPARTMENT OF PHYSICS**  
**Course Specific Outcome**

<b>Semester</b>	<b>Paper /Course</b>	<b>Name of the Paper/Corse</b>	<b>Course Outcome</b>
Semester-1	CC-1	Mathematical physics-I	Mathematics is the language of physics. To gain a deep understanding of the physical world through mathematics and develop skill in mathematical modelling, problem solving and critical thinking.
	CC-2	Mechanics	It strengthens quantitative reasoning and problem solving skills that are valuable in areas beyond physics. Gain the knowledge that why the world works the way it does.
	GE-I-1	Mechanics, Oscillation and electromagnetism	Through this syllabus student gain a brief knowledge about whole of the topic which will increase the skill in their honours subject. Also increase the mathematical skill of a student through physics.
Semester-2	CC-3	Electricity and magnetism	To increase deep understanding about physics and the use of Coulomb's law and Gauss' law for the electrostatic force. the relationship between electrostatic field and electrostatic potential. the use of the Lorentz force law for the magnetic force.
	CC-4	OPTICS	Introduction to the discipline of optics and its role in the modern society. The student will get knowledge in the geometrical approximation.
	GE-I-2	Optics, atomic physics, quantum mechanics & nuclear physics	Through this syllabus student gain a brief knowledge about whole of the topic which will increase the skill in their Honours subject
Semester-3	CC-5	Mathematical physics-II	Mathematics gives physics the tools to explain what scientists observe in the physical world. To develop skill in mathematical modelling, problem solving and critical thinking.
	CC-6	Thermal Physics	To know various ancient cycles of heat. This is also reason behind the invention of steam engine, rotors and shipments.
	CC-7	Analog system & application	Deep understanding the working of electronics in details and how communication process is achieved via electronics devices.
	SEC-1	Renewable and non-renewable energy	To know about the growth of the economy. This course envisages the new and renewable source of energy, available in nature and to expose the students on sources of energy crisis.

Semester-4	CC-8	Mathematical physics-III	To gain a deep understanding of the physical world and develop skill in mathematical modelling, problem solving and critical thinking.
	CC-9	Elements of modern physics	To gain knowledge of fundamental concepts in modern physics including special relativity and quantum mechanics and will be able to apply this knowledge to solve problems.
	CC-10	Digital system and application	To understanding about signal transmission over a long distance and how network of semiconductor devices such as transistors perform signal – processing takes.
	SEC-2	Quantitative and qualitative thinking.	To gain knowledge about the distinction between quantitative and qualitative methods of research and Qualitative analysis results in rich data that gives an in-depth picture.
Semester-5	CC-11	Quantum Mechanics and its Application	Gain a deep knowledge about the description of the physical properties of nature at the scale of atoms and subatomic particles. By know quantum mechanics one can know most successful theories in science and many unknown Mystery.
	CC-12	Solid State Physics	Gain the knowledge about Arrangements of atoms, can explain crystal systems, Diffraction and Reciprocal space. One can explain the Defines Atomic packing, Crystal, Lattice, Unit cell and Translation vectors. Help it in many research Methodology.
	DSE-1	Classical Dynamics	It strengthens quantitative reasoning and problem-solving skills that are valuable in areas beyond physics. Find out why the world works the way it does.
	DSE-2	Nuclear and Particle physics	To know how the economic impacts on the applications of nuclear physics. Deep knowledge in Nuclear reactions power stars, generating energy and forming the chemical elements we find in nature. Nuclear Physics helps us understand how the heavy elements are formed in the violent explosions of stars.
Semester-6	CC-13	Electromagnetic theory	Increases the possibility of domestic exposure to Magnetic fields. How to use electromagnetic fields used for the treatment of different disease. The study of EM is essential to understanding the properties of light, its propagation through tissue, scattering, and changes in the state of polarization.
	CC-14	Statistical Mechanics	To gain knowledge about probability theory and the microscopic physical laws. It can be used to explain the thermodynamic behaviour of large systems.

	DSE-3	Nano material and Application	Students should have the skills and knowledge to Explain the fundamental principles of nanotechnology and their application to biomedical engineering. Gain knowledge in the advance technology in field of nanotechnology.
	DSE-4	Project paper	Through this paper students get motivated towards research methodology. To make them understand the concepts of Project Management for planning to execution of projects.