Course Name	Course outcome
Optics and Modern Physics (PH-19001)	1. Analyze the intensity variation of light due to interference, diffraction and polarization
	2. They will be able to implement these phenomena to design advanced optical instruments
	3. Understand the principle, construction and working of lasers in order to implement Laser Technology in engineering field
	4. Understand fundamentals of quantum mechanics and apply to one dimensional motion of particles.
	5. Understand the principle, production and transmission of ultrasonic waves and understand the working of various instruments based on ultrasonic
Optics and Modern Physics Laboratory (PH-19002)	1. to demonstrate and verify phenomenon of optics using experimental methods
	2. to differential between quantum mechanical and classical behavior of fundamental particles.
Semiconductor Physics and Electromagnetism (PH-19003)	1. Understand the band theory of solids and the carrier concentration in solids
	2. The charge distribution and charge transfer process in semiconductors.
	3. The intrinsic and extrinsic conductivity to design semiconductor devices
	4. The fundamentals of electromagnetism.
	5. Understand the electric polarization and identify the dielectrics for device study
	6. Understand the electrodynamics and use Maxwell's equations for solving problems
Solid State Physics Laboratory (PH-19004)	1. calculate parameter associated with semiconducting devices and analyze devices based on its applications.
	2. to study and analyze behavior of different magnetic materials using experimental methods.
Solid State Physics and Statistical Thermodynamics (PH-19005)	1. Different types of structure of solids and its characterization by x-ray technique.
	2. Band structure of solids, categorization of solids based on band structure, ideas about Fermi level positions in semiconductors
	3. Foundation of statistical mechanics, basic concepts and various terms and formulations
	4. The connection between statistics and thermodynamics, understanding thermodynamics by statistical point of view

	and its techniques.
	5. Thermal properties of solids, specifically, specific heat and some models for specific heat calculation
	6. Origin of magnetism, various types of magnetic materials and its use in modern technology
Foundation of Physics (PH-16001)	1. Understand classical and wave mechanics to implement for the problems
	2. Understand of the laws of thermodynamics to implement in various thermodynamic systems and processes.
	3. Understand the basic principles of Electromagnetism and formulate it to solve the engineering problems.
	4. Aware of limits of classical physics and will be able to use it in the appropriate field in order to solve the problems.