



গড়গাঁও মহাবিদ্যালয়

GARGAON COLLEGE



Course Distribution
Department of Physics
2021-22

Course distribution of odd semester, 2021-22

Department: Physics

Faculty Name	Semester		Paper Code	Unit wise division
Dilip Bordoloi	I	H	C2: Mechanics C2-Lab	Fundamental of dynamics, Work and energy, Collision, Rotational dynamics, Elasticity.
		GE	GE1: Mechanics	Elasticity, Special theory of Relativity.
	III	H	C6: Thermal Physics	Zeroth and First Law of Thermodynamics, Secod law of Thermodynamics, Entropy.
		GE	DSC-3A: Thermal Physics and Statistical Mechanics	Law of thermodynamics
	V	H	DSE1: Classical Dynamics C12-Lab	Special Theory of Relativity, Fluid Dynamics.
Atul Borchetia	I	H	C1: Mathematical Physics-1 C2-Lab	Calculus
		GE	GE1: Mechanics	Momentum and energy, Rotational motion.
	III	H	C5: Mathematical Physics-II	Fourier Series, Frobenius Method and Special Function, Some Special Integral
		GE	DSC-3A: Thermal Physics and Statistical Mechanics	Theory of radiation
	V	H	C12: Solid State Physics C12-Lab	Crystal Structure, Elementary Lattice Dynamics, Magnetic properties of matter
Diganta Konwar	I	H	C2: Mechanics	Fluid motion, Gravitation and Central force motion, Oscillation, Non-Inertial systems.
		GE	GE1: Mechanics	Gravitation, Oscillation
	III	H	C7: Digital System and Application C6-Lab C7-Lab	Introduction to CRO, Integrated Circuit, Digital Circuit, Boolean Algebra, Data Processing Circuits, Arithmetic Circuit, Sequential Circuit, Timers, Shift registers, Counters(4 bits)
		GE	DSC-3A: Thermal Physics and Statistical Mechanics	Kinetic Theory of Gases.
	V	H	DSE2: Astronomy & Astrophysics	Astronomical Scales, Astronomical Technique, The Sun, The milky way, Galaxies, Large scale structure & expanding universe.
Guna Kanta Sonowal	I	H	C1: Mathematical Physics-1 C1-Lab.	Vector Calculus, Vector differentiation, Vector integration.
		GE	GE1: Mechanics	Vector, Ordinary differential Equation.

	III	H	C6: Thermal Physics	Thermodynamic Potential, Maxwell's Thermodynamic Relations, Kinetic Theory of Gases, Distribution of velocities, Molecular Collisions, Real Gases,
		GE	DSC-3A: Thermal Physics and Statistical Mechanics	Statistical Mechanics.
	V	H	C11: Quantum Mechanics & Applications C9-Lab	Time dependent Schrodinger Equation, Time independent Schrodinger Equation, General discussion of bound states in an arbitrary potential, Quantum theory of hydrogen like atoms, Atoms in Electric and Magnetic fields, Atom in external Magnetic fields, Many electron atoms.
Jayanta Sonowal	I	H	C1: Mathematical Physics-1 C2: Mechanics	Orthogonal Curvilinear Coordinates, Introduction to probability, Dirac Delta function and its properties. Special theory of relativity.
		GE	GE1: Mechanics	Law of motion.
	III	H	C5: Mathematical Physics-II C7: Digital System and Application C5-Lab C7-Lab	Theory of Errors, Partial Differential Equations. Computer organization, Intel 8085 Microprocessor Architecture, Introduction to Assembly Language.
		GE	DSC-3A: Thermal Physics and Statistical Mechanics	Thermodynamic Potential.
	V	H	DSE2: Astronomy & Astrophysics	Astronomical Scales, Astronomical Technique, The Sun, The milky way, Galaxies, Large scale structure & expanding universe.



H.O.D. Physics

Course distribution even Semester 2021- 2022

Faculty Name	Semester		Paper Code	Unit wise division
Dilip Bordoloi	II	H	C3: Electricity and Magnetism C4: Waves and Optics C4-Lab	Electric circuits, Network Theorems, Ballistic Galvanometer. Fresnel diffraction, Holography.
		GE	DSC-2A: Electricity and Magnetism	Electromagnetic induction, Maxwell's equation and electromagnetic wave propagation.
	IV	H	C8: Mathematical physics-III C9-Lab C10-Lab	Integral Transforms, Laplace transform.
		GE	DSC-4A: Wave and Optics DSC-4A-Lab	Diffraction
	VI	H	C13: Electromagnetic theory C13-Lab C14: Statistical Mechanics	EM Wave propagation in unbounded media, EM wave in bounded media, Optical fibers. Bose-Einstein statistics, Fermi-Dirac statistics.
Atul Borchetia	II	H	C3: Electricity and Magnetism C3-Lab	Magnetic Field, Magnetic properties of Matter, Electromagnetic Induction
		GE	DSC-2A: Electricity and Magnetism DSC-2A-Lab	Electrostatics
	IV	H	C9: Elements of Modern physics	Planck's quantum theory, Radiation, Position measurement, Schrödinger equation, Two slit interference experiments with photons, One dimensional rigid box.
		GE	DSC-4A: Wave and Optics	Michelson's interferometer, Polarization.
	VI	H	C13: Electromagnetic Theory DSE-3: Nuclear and Particle Physics DSE-4: Nano material and Application DSE-4-Lab	Maxwell equation. Interaction of nuclear radiation with matter, Detector for nuclear radiation. Particle accelerators. Nanoscale system.
Diganta Konwar	II	H	C4: Waves and Optics C4-lab	Superposition of Collinear Harmonic Oscillations, Superposition of two perpendicular harmonic oscillations, Wave motion, Velocity of waves, Superposition of two harmonic waves.

		GE	DSC-2A: Electricity and Magnetism	Electrostatics in Dielectric medium.
	IV	H	C10: Analog System and Application C10-Lab	Semiconductor diode, Two terminal devices and their applications, Bipolar junction transistors, Amplifiers, Coupled amplifier, Feedback in amplifiers.
		GE	DSC-4A: Wave and Optics	Superposition of two collinear harmonic oscillations, Superposition of two perpendicular harmonic oscillations, Wave motion-General.
	VI	H	DSE-3: Nuclear and Particle Physics C13-Lab	General properties of nuclei, Nuclear models, radioactive decay, Nuclear reactions. Particle Physics.
Guna Kanta Sonowal	II	H	C3: Electricity and Magnetism C4-Lab	Electric Field and Electric Potential, Dielectric properties of Matter
		GE	DSC-2A: Electricity and Magnetism	Vector analysis.
	IV	H	C8: Mathematical physics-III C9-Lab	Complex Analysis.
		GE	DSC-4A: Wave and Optics DSC-4A-Lab	Sound
	VI	H	C13-Electromagnetic Theory C14: Statistical Mechanics	Polarization of electromagnetic waves. Classical statistics, Classical theory of radiation, Quantum theory of radiation.
Jayanta Sonowal	II	H	C4: Waves and Optics C3-Lab	Wave optics, Interference, Interferometer, Diffraction, Fraunhofer diffraction
		GE	DSC-2A: Electricity and Magnetism DSC-2A-Lab	Magnetism
	IV	H	C9: Elements of Modern physics C9: Elements of Modern physics C8-Lab	Atomic Nucleus, Radioactivity, Fission and Fusion, Lasers. Sinusoidal oscillations, Operational amplifiers, Applications of Op-Amps, Conversion.
		GE	DSC-4A: Wave and Optics	Wave optics, Interference
	VI	H	DSE-4: Nano material and Application DSE-4-Lab	Synthesis of nanostructure materials, Characterization, Optical properties, Electron transport, applications.



H.O.D. Physics