DEPARTMENT OF PHYSICS
(Honours)

HONOURS (CBCS Syllabus)	NUMBER OF LECTURES	JULY-SEPTEMBER 7 weeks	OCTOBER –DECEMBER 5 weeks	**HONOURS (CBCS Syllabus)**	NUMBER OF LECTURES	JANUARY-MARCH 5.5 weeks	APRIL-JUNE 7.5 weeks
Semester-I C -I	THEORY 12 weeks Credit: 4	MATHEMATICAL PHYSICS – I Calculus, Vector Calculus NO. OF CLASSES= 28	MATHEMATICAL PHYSICS – I Calculus, Vector Calculus, Probability NO. OF CLASSES= 20	**Semester-II C -3**	THEORY 13 weeks Credit: 4	ELECTRICITY AND MAGNETISM NO. OF CLASSES= 22	ELECTRICITY AND MAGNETISM NO. OF CLASSES= 30
Semester –I C-2	THEORY 12 weeks Credit: 4	MECHANICS NO. OF CLASSES=28	MECHANICS NO. OF CLASSES=20	**Semester-II C -4**	THEORY 13 weeks Credit: 4	WAVES AND OPTICS NO. OF CLASSES= 22	WAVES AND OPTICS NO. OF CLASSES= 30
Semester –I P-I	PRACTICAL Credit:2	MATHEMETICAL PHYSICS LAB using PYTHON NO. OF. CLASSES= 28 (subject to the arrival of new computer with given specifications)	MATHEMETICAL PHYSICS LAB using PYTHON NO. OF. CLASSES= 20 (subject to the arrival of new computer with given specifications)	**Semester –II P-3**	PRACTICAL 13 weeks Credit: 2	1.To determine an unknown Low Resistance using Carey Foster's Bridge. 2. To verify the Thevenin and Norton theorems. 3. To verify the Superposition and Maximum power transfer theorems. 4. To determine self-inductance of a coil by Anderson's bridge. 5. To study response curve of a Series LCR circuit and determine its (a) Resonant frequency, (b) Impedance at resonance, (c) Quality factor Q, and (d) Band width.	6.To study the response curve of a parallel LCR circuit and determine its (a) Anti- resonant frequency and (b) Quality factor Q. 7.To study the characteristics of a series RC Circuit. 8.To determine an unknown Low Resistance using Potentiometer. 9.To determine the resistance of a galvanometer using Thomson's method. (subject to arrival of the instrument) 10.Measurement of field strength B and its variation in a solenoid (determine dB/dx) (subject to arrival of the instrument)

Semester –I P-II	PRACTICAL Credit: 2	1. YOUNG'S MODULUS 2. MOMENT OF INERTIA 3. COEFFICIENT OF VISCOSITY 4. MODULUS OF RIGIDITY 5. TO STUDY RANDOM ERROR 6. TO DETERMINE 'g'AND VELOCITY OF A FREELY FALLING BODY BY DIGITAL TIME TECHNIQUE 7. TO DETERMINE HEIGHT OF A BUILDING USING SEXTANT NO. OF CLASSES=28	8. To determine the elastic Constants of a wire by Searle's method 9. To determine the value of g using Bar Pendulum. 10. To determine the value of g using Kater's Pendulum 11. To study the Motion of Spring and calculate, (a) Spring constant, (b) g and (c) Modulus of rigidity. NO. OF CLASSES=20	**Semester –I P-4**	PRACTICAL 13 weeks Credit: 2	To determine the frequency of an electric tuning fork by Melde's experiment and verify λ2 –T law. (Subject to arrival of the instrument) 2. To determine refractive index of the Material of a prism using sodium source. 3. To determine the dispersive power and Cauchy constants of the material of a prism using mercury source. (subject to the arrival of Hg source) 4. To determine wavelength of sodium light using Fresnel Biprism. 5. To determine wavelength of sodium light using Newton's Rings. 6. To determine dispersive power and resolving power of a plane diffraction grating. NO. OF CLASSES = 22	To study Lissajous Figures to derermine the phase difference between two harmonic oscillatiions. 8. To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film. (Subject to arrival of theInstrument) 9. Familiarization with: Schuster`s focusing; determination of angle of prism. 10. To determine wavelength of (1) Na source and (2) spectral lines of Hg source using plane diffraction grating. (subject to arrival of the Hg. source) 11.To investigate the motion of coupled oscillators. (Subject to arrival of theInstrument) 12.To determine the wavelength of sodium source using Michelson's interferometer. (Subject to arrival of theInstrument) NO. OF. CLASSES = 30

Semester-III C -5	THEORY 12 weeks Credit: 4	Mathematical Physics II Fourier Series, Frobenues Methods and Special functions No. of Classes:28 (Subject to the arrival of New computers)	Mathematical Physics II Some Special integrals, Variational Calculus in Physics, Analytical Dynamics, Partial Differential equations No. of Classes:20	**Semester-IV C -8**	THEORY 13 weeks Credit: 4	Mathematical Physics III Complex analysis, Integral transform No. of Classes:22 (Subject to the arrival of New Computers)	Mathematical Physics III Boundary value problems, matrices, Eigen value and Eigen vectors No. of Classes:30
Semester-III C -6	THEORY 12 weeks Credit: 4	Thermal Physics Introduction to thermodynamics, Thermodynamic potentials No. of Classes:28	Thermal Physics Thermodynamic potentials, Kinetic theory of gases No. of Classes:20	**Semester-IV C -9**	THEORY 13 weeks Credit: 4	Elements of Modern Physics Relativistic dynamics, Collection of identical entities No. of Classes:22	Elements of Modern Physics Emergence of Quantum Mechanics, Lasers, Nuclear Physics No. of Classes:30
Semester-III C -7	THEORY 12 weeks Credit: 4	Digital Systems and Applications Introduction,Integrated Circiuts, Digital Circuits, Arithmatic circuits, Data processing circuits No. of Classes:2	Digital Systems and Applications Sequential circuits, Timers, Registers,Counters, Computer Organization No. of Classes:20	**Semester-IV C -10**	THEORY 13 weeks Credit: 4	Analog Systems and Applications History of the development of Electronics,Semiconductor diodes, Two terminal devices, BJT No. of Classes:22	Analog Systems and Applications FET, Amplifiers, Oscillators, OPAMP. Application of OPAMP, Conversion No. of Classes:30
Semester-III **Skilled Enhancement Course – I** **T2**	Theory + lab (Mixed) 12 weeks Credit: 2	Computational Physics Introduction, Scientific programming, Control Statements No of Classes:14	Computational Physics Programming No. of Classes:10	**Semester-IV** **Skilled Enhancement Course – II** **T4**	Theory + lab (Mixed) 13 weeks Credit: 2	Basic Instrumentation Skills Basic of Instruments, Electronic Voltmeter, Cathode Ray Oscilloscope, Signal . generators and analysis instruments No. of Classes:12	Basic Instrumentation Skills Impedance bridges and Q meters. Digital Instruments, Digital multimeters No. of Classes:16
Semester III P5	Practical Credit: 2	Mathematical Physics II Lab General topics, Sorting, statistical Calculation, Interpolation, Numerical Differentiation No. of Classes: 28	Mathematical Physics II Lab Numerical integration, Integration by Stochastic method,Solution of ODE first order differential equation No. of Classes: 20	**Semester IV P8**	Practical Credit:2	Mathematical Physics III Lab ODE initial value problem, Solution of Linear System of equations,Inverse of a matrix, Orthogonalization method,Eigenvalue calculation,Eigen Vectors No. of Classes: 22	Mathematical Physics III Lab Boundary value problems, Newton Raphson method, Integral transform, Dirac Delta function, Introduction of OCTAVE and its use No. of Classes: 32

Semester III P6	Practical Credit: 2	Thermal Physics Lab 1. Stefan's law 2. Thermal Conductivity of Bad conductor by Lee's method 3. Temperature coefficient of resistance of PRT using constant current source (subject to the arrival of the instrument) 4. To study thermo emf of a thermocouple 5. To calibrate a thermocouple to measure temperature in a specified range using potentiometer No. of Classes: 28 (subject to the arrival of the Instrument)	Thermal Physics Lab 6.To calibrate a thermocouple to measure temperature in a specified range using OPAMP (subject to the arrival of the instrument) 7.Measuring Unknown temperature using Diode Sensor 8.To determine mechanical equivalent of heat (subject to the arrival of the Instrument) 9. Coefficient of thermal conductivity by Searle's apparatus (subject to the arrival of the Instrument) 10. Coefficient of thermal conductivity by Angstorm's method No. of Classes: 20 (subject to the arrival of the Instrument)	**Semester IV P9**	Practical Credit:2	Elements of Modern Physics lab 1. Wavelenth of Hα emission of Hydrogen atom 2. Absorption ines of Iodine vapour 3. Value of e/m by bar magnet 4. Wavelength of laser source by diffraction of double slits 5. Wavelenth and anguar spread of solid state laser by plane diffraction grating 6. Work function of the material of filament by directly heated diode 7. Tunneling effect in tunnel diode by IV characteristics No. of Classes: 22 (subject to the arrival of the instruments)	Elements of Modern Physics lab 8. Planck's Constant using blackbody radiation and photo detector 9. Photoelectric Effect 10. Planck's constant using 4 LEDs of different colours 11. Ionization potential of mercury 12. Millican's Oil drop experiment 13. Wavelengt oflaser source using diffraction of single slit No. of Clases: 30 (subject to the arrival of the instruments)
Semester III P7	Practical Credit:2	Digital System and Applications lab 1. Use of CRO 2. Use of Multimeter 3. NOT gate using transistor 4. Use of Universal gate 5. For a given truth table find the	Digital System and Applications lab 6.Different types of Adders 7 FlipFlop 8. Astable Multivibrator and Monostable Multivibrator using 555 timer 9. Subtractor 10. JK Master Slave flipflops 11. Counters	**Semester IV P10**	Practical Credit: 2	Analog Systems and Applications lab 1. I-V characteristics of PN junction diode and Light emitting diode using both votage and current source 2. To study Zener diode 3. V-I and power curves of Solar Cell	Analog Systems and Applications lab 10. To add DC voltage using OPAMP in inverting and in noninverting mode 11. OPAP as integrator and

		equation and develop the circuit No. of Classes: 28	12. Shift Registors No. of Classes: 20			4. Characteristics of BJT in CE configuration 5. To Study RC coupled Oscillator 6. Inverting, Noninvering and buffer amplifier using OPAMP 7. Wien bridge oscillator 8. To deign a circuit to simulate 1st and 2nd order differential equation 9. To study inverting and non inverting amplifier using OPAMP and study its frequency response No. of Classes: 22	differentiator 12. To Study CE transistor amplifier 13. Various biasing configuration of BJT for normal Class A operation 14. To study Phase shift Oscillator and Colpitt's Oscillator 15. To design DAC and ADC 16. Precision differential amplifier 17. To Study zero crossing detector and comparator 18. To study Schmitt trigger and associated circuits No. of Classes:30
Semester V C11	THEORY 12 weeks Credit: 4	Quantum Mechanics and Applications Basic formalism Schrodinger Equation Bound State in an arbitrary potential Total Classes: 28	Quantum Mechanics and Applications Hydrogenlike atoms Atomic Physics Total Classes: 20	**Semester VI C13**	THEORY 13 weeks Credit: 4	Electromagnetic Theory Maxwell's Equations Wave Propagation E.M wave in bounded media Total Classes: 22	Electromagnetic Theory Polarization of E.M wave Wave guide Optical Fibres Total Classes: 30

Semester V C12	THEORY 12 weeks Credit: 4	Solid State Physics Crystal Structure Lattice Dynamics Magnetic and Dielectric properties of matter Total Classes: 28	Solid State Physics Ferroelectric Properties Drude's theory Band Theory Superconductivity Total Classes: 20	**Semester VI C14**	THEORY 13 weeks Credit: 4	Statistical Mechanics Classical statistical Mechanics Statistical Equilibrium Blackbody Radiation Total Classes: 22	Statistical Mechanics System of Identical Particles B.E. Statistics F.D. Statistics Total Classes: 30
Semester V P11	Practical 12 weeks Credit: 2	Quantum Mechanics and Applications Lab 1. To Solve the s wave Schrodinger equation 2. To solve the s wave radial Schrodinger equation	Quantum Mechanics and Applications Lab 3. To solve Schrodinger equation for anharmonic potential 4. To solvethe s wave radial Schrodinder equation for hydrogen molecule	**Semester VI P13**	Practical 13 weeks Credit: 2	Electromagnetic Lab 1. Verification of law of malus 2. Specific rotation 3. Velocity and wavelength of ultrasonic wave 4. Fresnel Formula 5. V-I characteristics of PN diode	Electromagnetic Lab 6. R.I by Gaussian Eyepiece 7. R.I by Wollaston's air film 8. Babinet's compensator 9. Dipole antenna 10. Stefan's constant
Semester V P12	Practical 12 weeks Credit: 2	Solid State Physics Lab 1. Coupling coefficient 2. Dielectric constant 3. Characteristic of ferroelectric crystal 4. BH curve of iron	Solid State Physics Lab 5. Resistivity of a semiconductor 6. Hall Coefficient 7. Susceptibility 8. Complex dielectric Constant	**Semester VI P14**	Practical 13 weeks Credit: 2	Statistical Mechanics Lab 1. Computational analysis of the behavior of a collection of particles in a box 2. Computation of the partition function	Statistical Mechanics Lab 3. To p plot Plank's law and comparison with Rayleigh Jeans Law 4. To plot specific heat of solid according to different laws 5. To plot different distribution laws

Semester –V **DSE T1**	Theory I 12 weeks Credit 4	Advanced Mathematical Methods-I No. of Classes: 35 Laplace Transform Linear Vector space	Advanced Mathematical Methods-I No. of Classes: 25 Cartesian Tensors General Tensors	**Semester –VI** **DSE T2**	Theory I 13 weeks Credit 6	Advanced Mathematical Methods-II No. of Classes: 27 Partial Differential Equation Group Theory	Advanced Mathematical Methods-II No. of Classes: 37 Advanced Probability Theory
Semester –V **DSE T3**	Theory + Assignment 12 weeks Credit: 6	Advanced Dynamics No. of Classes: 35 Lagrangian and Hamiltonian Dynamics Rigid Body Mechanics Small Amplitude Oscillations	Advanced Dynamics No. of Classes: 25 Dynamical Systems Fluid Dynamics	**Semester-VI** **DSE T6**	Theory + Assignment 13 weeks Credit 6	Astronomy and Astro Physics No. of Classes:27 Astronomical Scales Astronomical techniques Physics Principles	Astronomy and Astro Physics No. of Classes:37 The Sun and Solar family Galaxies Large scale structure and Expanding Universe
Semester-V **DSE T4**	Theory + Assignment 12 weeks Credit: 6	Nuclear and Particle Physics No. of Classes: 35 Properties of Nuclei Nuclear Models Radioactive Decay Nuclear Reactors Study of Nuclear Radiation with matter	Nuclear and Particle Physics No. of Classes:25 Particle Physics Particle Accelerators Nuclear Detectors	**Semester-VI** **DSE T11**	Theory 13 weeks Credit 4	Communication Electronics No. of Classes:27 Electronic Comunication Analog Pulse Modulation Digital Pulse Modulation	Communication Electronics No. of Classes:37 Introduction to Communication and Navigation System Mobile telephony System
Semester-V **DSE P1**	Theory I 12 weeks Credit 2	Advanced Mathematical Methods-I Lab No. of Classes: 35 1.Linear Algebra 2.Orthogonal polynomials as eigen functions of Hermitian differential operators. 3. Determination Of the principal	Advanced Mathematical Methods-I Lab No. of Classes: 25 5. Lagrangian formulation in Classical Mechanics with constraints. 6. Study of geodesics in Euclidean and other spaces (surface of a sphere, etc). 7. Estimation of ground	**Semester-VI** **DSE P11**	Practical 13 weeks Credit 2	Communication Electronics Lab No. of Classes:27 1. To design an Amplitude Modulator using Transistor 2. To study envelope detector for demodulation of AM signal 3. To study FM –	Communication Electronics Lab No. of Classes:36 6. To study Time Division Multiplexing (TDM) 7. To study Pulse Amplitude Modulation (PAM) 8. To study Pulse

		axes of moment of inertia through diagonalization. 4. Vector space of wave functions in Quantum Mechanics: Position and momentum differential operators and their commutator wave functions for stationary states as eigenfunctions of Hermitian differential operator.	state energy and wave function of a quantum system.			4. Generator and Detector circuit 5. To study AM Transmitter and To study FM Transmitter and Receiver	Width Modulation (PWM) 9. To study Pulse Position Modulation (PPM) 10. To study ASK, PSK and FSK modulators

DEPARTMENT OF PHYSICS (GENERAL)

Semester I	Theory Mechanics T1 Credit: 4	JULY-SEPTEMBER 7 weeks Particle Dynamics Special theory of Relativity Mathematical methods Elasticity No. of classes = 28	OCTOBER –DECEMBER 5 weeks Particle Dynamics Special theory of Relativity Oscillations Gravitation No. of classes = 20	**Semester II**	Theory Electricity and Magnetism (T2) Electricity and Magnetism Lab (P2) redit: 4	JANUARY-MARCH 5.5 weeks Vector Analysis Electrostatics Electromegnetic Induction NO. OF CLASS = 30	APRIL-JUNE 7.5 weeks Linear Network Maxwells Equations Wave Propagation Magnetic Induction NO. OF CLASSES= 22

Semester I	PRACTICAL Mechanics Lab P1 Credit: 2	1Modulus of rigidity 2.Moment of Inertia 3.Coefficient of Viscosity 4.Young's Modulus 5.To study the random error in observations of time period of some oscillation using chronometer. NO. OF CLASSES=28	6.To determine the height of a building using a Sextant. 7. To determine the elastic Constants of a wire by Searle's method. 8.To determine the value of g using Bar Pendulum. 9. To determine the value of g using Kater's Pendulum. 10. To study the Motion of Spring and calculate, (a) Spring constant, (b) g and (c) Modulus of rigidity NO. OF CLASSES=20	**S1.To determine an unknown Semester II Practical Credit: 2** **Carey Foster's Bridge.** **2. To verify the Thevenin and Norton theorems.** **3. To verify the Superposition and Maximum power transfer theorems.** **4. To determine self-inductance of a coil by Anderson's bridge.** **(SUBJECT TO ARRIVAL OF THE INSTRUMENT)** **5. To study response curve of a Series LCR circuit and determine its (a) Resonant frequency, (b) Impedance at resonance**		1. To determine an unknown Low Resistance using Carey Foster's Bridge. 2. To verify the Thevenin and Norton theorems. 3. To verify the Superposition and Maximum power transfer theorems. 4. To determine self-inductance of a coil by Anderson's bridge. 5. To study response curve of a Series LCR circuit and determine its (a) Resonant frequency, (b) Impedance at resonance	6.To study the response curve of a parallel LCR circuit and determine its (a) Anti- resonant frequency and (b) Quality factor Q. 7. To study the characteristics of a series RC Circuit. 8. To determine an unknown Low Resistance using Potentiometer. 9. To determine the resistance of a galvanometer using Thomson's method. 10. Measurement of field strength B and its variation in a solenoid (determine dB/dx) NO. OF CLASS

				, (c) Quality factor Q, and (d) Band width. **(SUBJECT TO ARRIVAL OF THE INSTRUMENT)** **No. of Classes = 24**		, (c) Quality factor Q, and (d) Band width. No. of Classes = 22	= 30
Semester III	THEORY Credit: 4 T3	Thermal Physics and Statistical Mechanics Laws of Thermodynamics, Thermodynamic potentials, Kinetic theory of gases No. of Classes: 28	Thermal Physics and Statistical Mechanics Theory of Radiation Statistical Mechanics No. of Classes: 20	**Semester IV**	THEORY Credit: 4 T4	Waves and Optics Superposition of two collinear harmonic oscillations, Superposition of two perpendicular harmonic oscillations, Interference Michelson Interferometer No. of Classes: 22	Waves and Optics Wave motion general, Fluids, Sounds, Wave Optics, Diffraction, Polarization
Semester III	PRACTICAL Credit: 2 P3	Thermal Physics and Statistical Lab 1. Verification of Stefan's Law using a torch bulb 2. To determine the Coefficient of Thermal Conductivity of a bad conductor by	Thermal Physics and Statistical Lab 7. Measurement of unknown temperature using Diode sensor. 8. To determine Mechanical Equivalent of Heat, J, by Callender and Barne's constant flow method.	**Semester IV**	PRACTICAL Credit: 2 P4	Waves and Optics Lab 1.To determine the frequency of an electric tuning fork by Melde's experiment and verify $\lambda 2$ –T law. 2. To determine oefficient of	Waves and Optics Lab 7.To determine dispersive power and resolving power of a plane diffraction grating. 8. To determine the thickness of a thin paper by

		Lee and Charlton's disc method. 3. To determine the Temperature Coefficient of Resistance by Platinum Resistance Thermometer (PRT).using constant current source (Subject to the arrival of the instrument) 4.To study the variation of Thermo-Emf of a Thermocouple with Difference of Temperature of its Two Junctions. 6. To calibrate a thermocouple to measure temperature in a specified Range by Null Method using a potentiometer. No. of Classes: 28	9. To determine the Coefficient of Thermal Conductivity of Cu by Searle's Apparatus. 10. To determine the Coefficient of Thermal Conductivity of Cu by Angstrom's Method. No. of Classes: 20			Viscosity of water by Capillary Flow Method (Poiseuille's method). 3. To determine refractive index of the Material of a prism using sodium source. 4.To determine the dispersive power and Cauchy constants of the material of a prism using mercury source. 5.To determine wavelength of sodium light using Fresnel Biprism. 6.To determine wavelength of sodium light using Newton's Rings. No. of Classes: 22	measuring the width of the interference fringes produced by a wedge-shaped Film. 9. Familiarization with: Schuster`s focusing; determination of angle of prism. 10. To determine wavelength of (1) Na source and (2) spectral lines of Hg source using plane diffraction grating. 11. To investigate the motion of coupled oscillators. 12. To determine the wavelength of sodium source using Michelson's interferometer. (Subject to the arrival of the Instruments) No. of Classes: 30

Semester	Theory	July-Sepember 7 weeks No. of Classes: 28	Oct-December 5 weeks No. Of classes 20	**Semester**	Theory	Jan-March 5.5 weeks No. of Classes: 22	April-June 7.5 weeks No. of Classes: 30
Sem - V **GE T5**	Digital Analog Circuits and Instrumentation Credit 4	Digital circuits Semiconductor	Operational Amplifier Instrumentation	**Sem - VI** **GE T7**	Solid State Physics Credit 4	Preliminary topics Crystal Structure Lattice Dynamics	Magnetic Properties Dielectric Properties Band Theory Superconductivity
Sem - V **GE T6**	Perspective of Modern Physics Credit 5+1	Relativity Quantum Mechanics	Atomic Physics Nuclear Physics Xray	**Sem - VI** **GE T8**	Nuclear and Particle Physics Credit 5 + 1	General Properties Nuclear Models Radio active Decay Nuclear Reactions	Detectors Particle Accelerators Particle Physics
Sem - V **GE P5**	Digital Analog Circuits and Instrumentation Lab Credit 2	1. To measure (a) Voltage, and (b) Frequency of a periodic waveform using CRO 2. To verify and design AND, OR, NOT and XOR gates using NAND gates. 3. To minimize a given logic circuit. 4. Half adder, Full adder and 4-bit Binary Adder. 5. Adder-	6. To design an astable multivibrator of given specifications using 555 Timer. 7. To design a monostable multivibrator of given specifications using 555 Timer. 8. To study IV characteristics of PN diode, Zener and Light emitting diode 9. To study the characteristics of a Transistor in CE configuration 10. To design a CE amplifier of given	**Sem - VI** **GE P7**	Solid State Physics Lab Credit 2	1.To determine the Coupling Coefficient of a Piezoelectric crystal. 2. To measure the Dielectric Constant of a dielectric Materials with frequency 3. To study the characteristics of a Ferroelectric Crystal. 4. To draw the BH curve of Fe using Solenoid & determine energy loss from Hysteresis. 5. To measure the resistivity of a semiconductor (Ge) with temperature by reverse bias characteristics of	6. To determine the Hall coefficient of a semiconductor sample. 7. To study temperature coefficient of a semiconductor (NTC thermistor) 8. Measurement of susceptibility of paramagnetic solution (Quinck`s Tube Method) 9. To measure the Magnetic susceptibility of solids 10. To determine the complex dielectric constant and plasma frequency of metal using Surface Plasmon

		Subtractor using Full Adder I.C. 741 and study its Frequency Response. 13. To study Differential Amplifier of given I/O specification using Op-amp.	gain (mid-gain) using voltage divider bias. 11. To design an inverting amplifier of given gain using Op-amp 741 and study its frequency response. 12. To design a non-inverting amplifier of given gain using Op-amp			Ge diode (room temperature to 80 oC) and to determine its band gap.	resonance (SPR) 11. To determine the refractive index of a dielectric layer using SPR
Sem – III & V **Skilled Enhancement Course – 1**	Computational Physics T2 (Theory + Lab) 13 weeks Credit 2	Introduction, Scientific programming, Control Statements No of Classes:14	Programming No of Classes:10	**Sem – IV & VI** **Skilled Enhancement Course –II**	Basic Instrumentation Skills T4 (Theory + Lab) 12 weeks Credit 2	Basic of Instruments, Electronic Voltmeter, Cathode Ray Oscilloscope, Signal. generators and analysis instruments No of Classes:12	Impedance bridges and Q meters. Digital Instruments, Digital multimeters No of Classes:16