ABHAYAPURI COLLEGE

Teaching Plan for the Session 2023, Odd semester

Name of the Teacher: **DR. BIJOY BARMAN**

Designation: **Assistant Professor**

Department: **PHYSICS**

Month & Year	No. of Class days	Classes	No. of period			Syllabus break up	Tentative date of exam. / Remarks
			Theory	Practical	Seminar/ Tutorial		
August 2023	24	Sem-I	7	8	4	**Paper: PHY-HC-1026**▶Unit-II: Work and Kinetic energy theorem, conservative and non-conservative forces, potential energy, Energy Diagram. Stable and unstable equillibrum. Elastic potential energy. Force as a gradient of potential energy. Work and potential energy. Work done by conservative forces. Law of conservation of energy.	12 Aug-Librarians Day, 13 Aug -College Foundation Day, 15 Aug-Independence Day, 3rd Week of August → Freshmens Social
		Sem-III (H)	7	13		**Paper: PHY-HC-3026**▶Unit-I: Zeroth and First Law of Thermodynamics: Extensive and intensive Thermodynamic Variables, Thermodynamic Equilibrium, Zeroth Law of Thermodynamics & Concept of Temperature, Concept of Work & Heat, State Functions, First Law of Thermodynamics and its differential form, Internal Energy, First Law & various processes, Applications of First Law: General Relation between CP and CV, Work Done during Isothermal and Adiabatic Processes, Compressibility and Expansion Coefficient. **Paper: PHY-HC-3026**▶ Unit II: Second Law of Thermodynamics: Reversible and Irreversible process with examples. Conversion ofWork into Heat and Heat intoWork. Heat Engines. Carnot's Cycle, Carnot engine & efficiency. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence. Carnot's Theorem. Applications of Second Law of Thermodynamics: Thermodynamic Scale of	

						Temperature and its Equivalence to Perfect Gas Scale.	
		Sem-V (H)	13		4	**Paper: PHY-HE-5056** ▶Nuclear and Particle Physics: Unit I: General Properties of Nuclei (Lectures 10) Constituents of nucleus and their Intrinsic properties, quantitative facts about mass, radii, charge density (matter density), binding energy, average binding energy and its variation with mass number, main features of binding energy versus mass number curve, N/A plot, angular momentum, parity, magnetic moment, electric moments, nuclear excites states. Unit II: Nuclear Models (Lectures 12) Liquid drop model approach, semi empirical mass formula and significance of its various terms, condition of nuclear stability, two nucleon separation energies, Fermi gas model (degenerate fermion gas, nuclear symmetry potential in Fermi gas), evidence for nuclear shell structure, nuclear magic numbers, basic assumption of shell model, concept of mean field, residual interaction, concept of nuclear force.	
		Sem-III (RC/HG)	4	6		**Paper: PHY-HG-3016 & Paper:PHY-RC-3016** ▶Unit II : Thermodynamic Potentials: Enthalpy, Gibbs, Helmholtz and Internal Energy functions, Maxwell's relations & applications - Joule-Thompson Effect, Clausius- Clapeyron Equation, Expression for ($C_P - C_V$), C_P/C_V , TdS equations.	
		Sem-V (RC)	3			**Paper:** PHY-HE-5056, Nuclear and Particle Physics : Unit IV: Nuclear Reactions (Lectures 8) Types of Reactions, Conservation Laws, kinematics of reactions, Q-value, reaction rate, reaction cross section, Concept of compound and direct Reaction, resonance reaction, Coulomb scattering (Rutherford scattering).	
		HS-II	7	6		Unit-II: Current Electricity: Kirchhoff's law and simple applications, Wheatstone bridge, metre bridge. Potentiometer-principle and applications to measure potential difference for comparing emf of two cell's, measurement of internal resistance of a cell. Carbon resistors, colour code for resistor series and parallel combinations of resistors, temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of a cell,	

						combination of cell in series and parallel.	
September 2023	25	Sem-I	6	6	3	**Paper: PHY-HC-1026►** Fundamental of Dynamics: Reference frames. Inertial Frams, Review of Newtons laws of motion. Galilean transformations, Gallelian invariance. Momentum ofvariable mass system: motion of rocket. Motion of a projectile in uniform gravitational field, dynamics of a system of particles,centre of mass, principle of conservation of momentum, Impulse.	5th Sept, Teachers Day, 11 Sept, Tithi of Sri Sri Sankardev
		Sem-III (H)	6	11		**Paper: PHY-HC-3026►** Unit III: Entropy: Concept of Entropy, Clausius Theorem. Clausius Inequality, Second Law of Thermodynamics in terms of Entropy. Entropy of a perfect gas. Principle of Increase of Entropy. Entropy Changes in Reversible and Irreversible processes with examples. Entropy of the Universe. Entropy Changes in Reversible and Irreversible Processes. Principle of Increase of Entropy. Temperature–Entropy diagrams for Carnot's Cycle. Third Law of Thermodynamics. Unattainability of Absolute Zero. Unit IV: Thermodynamic Potentials: Thermodynamic Potentials: Internal Energy, Enthalpy, Helmholtz Free Energy, Gibb's Free Energy. Their Definitions, Properties and Applications. Surface Films and Variation of Surface Tension with Temperature. Magnetic Work, Cooling due to adiabatic demagnetization, First and second order Phase Transitions with examples, Clausius Clapeyron Equation and Ehrenfest equations.	Odd SEM Sessional exam. before 24th September
		Sem-V (H)	8		3	**Paper: PHY-HE-5056 ►**Nuclear and Particle Physics: ► Unit III: Radioactivity decay (Lectures 10) (a) Alpha decay: basics of α-decay processes, theory of α- emission, Gamow factor, Geiger Nuttall law, α-decay spectroscopy. (b) -decay: energy kinematics for -decay, positron emission, electron capture, neutrino hypothesis. (c) Gamma decay: Gamma rays emission & kinematics, internal conversion. **Paper: PHY-HE-5056,** Unit IV: Nuclear Reactions (Lectures 8) Types of Reactions, Conservation Laws, kinematics of reactions, Q-value, reaction rate, reaction cross section, Concept of compound and direct Reaction, resonance	17 Sept-Viswakarma Puja, 24 Sept-NSS day

						reaction, Coulomb scattering (Rutherford scattering).	
		Sem-III (RC/HG)	3	6		**Paper:PHY-HG-3016 & Paper:PHY-RC3016►** Unit III : Kinetic Theory of Gases: Derivation of Maxwell's law of distribution of velocities and its experimental verification, Mean free path (Zeroth Order),	
		Sem-V (RC)	3			**Paper:** PHY-HE-5056, Nuclear and Particle Physics: Unit V: Interaction of Nuclear Radiation with matter (Lectures 8) Energy loss due to ionization (Bethe- Block formula), energy loss of electrons, Cerenkov radiation. . Gamma ray interaction through matter, photoelectric effect, Compton scattering, pair production, neutron interaction with matter.	
		HS-II	6	2		Unit-I: electrostatics: Electric Charges and their conservation. Coulomb's law-force between two points charge, force between multiple charges: superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to dipole, torque on a dipole in a uniform electric field Electric potential, potential difference, electric potential due to a point charge and system of charge, equipotential surfaces, electrical potential energy of a system of two point charge and of electric dipoles in an electrostatic field.	
October 2023	15	Sem-I	6	8	2	**Paper: PHY-HC-1026►** Collision: Elastic and inelastic collision between particles. Centre of mass and laboratory frames.	
		Sem-III (H)	6	9		**Paper: PHY-HC-3026►** Unit V: Maxwell's Thermodynamic Relations: Derivations and applications of Maxwell's Relations, Maxwell's Relations:(1) Clausius Clapeyron equation, (2) Values of Cp-Cv, (3) TdS Equations, (4) Joule-Kelvin coefficient for Ideal and Van der Waal Gases, (5) Energy quations, (6) Change of Temperature during Adiabatic Process. Unit VI : Distribution of Velocities: Maxwell-Boltzmann Law of Distribution of Velocities in an Ideal Gas and its Experimental	

						Verification. Doppler Broadening of Spectral Lines and Stern's Experiment. Mean, RMS and Most Probable Speeds. Degrees of Freedom. Law of Equipartition of Energy (No proof required). Specific heats of Gases.	
		Sem-V (H)	10		4	**Paper: PHY-HE-5056** ►Nuclear and Particle Physics: ► Unit V: Interaction of Nuclear Radiation with matter (Lectures 8) Energy loss due to ionization (Bethe- Block formula), energy loss of electrons, Cerenkov radiation. Gamma ray interaction through matter, photoelectric effect, Compton scattering, pair production, neutron interaction with matter. Unit VI: Detector for Nuclear Radiations (Lectures 8) Gas detectors: estimation of electric field, mobility of particle, for ionization chamber and GM Counter. Basic principle of Scintillation Detectors and construction of photo-multiplier tube (PMT). Semiconductor Detectors (Si and Ge) for charge particle and photon detection (concept of charge carrier and mobility), neutron detector.	
		Sem-III (RC/HG)	4	8		**Paper:PHY-HG-3016&Paper:PHY-RC-3026►** Unit III : Kinetic Theory of Gases: Transport Phenomena: Viscosity, Conduction and Diffusion (for vertical case), Law of equipartition of energy (no derivation) and its applications to specific heat of gases; mono-atomic and diatomic gases.	
		Sem-V (RC)	4			**Paper: PHY-HE-5056** ►Nuclear and Particle Physics: Unit V: Interaction of Nuclear Radiation with matter (Lectures 8) Energy loss due to ionization (Bethe- Block formula), energy loss of electrons, Cerenkov radiation. Gamma ray interaction through matter, photoelectric effect, Compton scattering, pair production, neutron interaction with matter. _Unit V: Interaction of Nuclear Radiation with matter (Lectures 8) Energy loss due to ionization (Bethe-Block formula), energy loss of electrons, Cerenkov radiation. Gamma ray interaction through matter, photoelectric effect, Compton scattering, pair production, neutron interaction with matter.	
		HS-II	5	4		Unit-I: electrostatics: Electric flux, statement of gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane	

						sheet and uniformly charged thin spherical shell (field inside and outside). Conductor and insulators, free charges and bound charges inside a conductor, Dielectrics and electric polarization, capacitor and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor, Van de Graaff generator.	
November 2023	21	Sem-I	9	6	5	**Paper: PHY-HC-1016**► Orthogonal Curvilinear Cordinates: Orthogonal and curvilinear coordinates. Derivation of gradient, Divergence, Curl and Laplacian in Certesian, Spherical and Cylindrical Coordinates System. Revision & end semester exam	5th Nov, Death Annivers ary of Dr. Bhupen Hazarika
		Sem-III (H)	9	8		**Paper: PHY-HC-3026**► Unit VII: Molecular Collisions: Mean Free Path. Collision Probability. Estimates of Mean Free Path. Transport Phenomenon in Ideal Gases: (1) Viscosity, (2) Thermal Conductivity and (3) Diffusion. Brownian Motion and its Significance. **Paper: PHY-HC-3026**► Unit VIII: Real Gases: Behaviour of Real Gases: Deviations from the Ideal Gas Equation. The Virial Equation. Andrew's Experiments on CO2 Gas. Critical Constants. Continuity of Liquid and Gaseous State. Vapour and Gas. Boyle Temperature. Van der Waal's Equation of State for Real Gases. Values of Critical Constants. Law of Corresponding States. Comparison with Experimental Curves. P-V Diagrams. Joule's Experiment. Free Adiabatic Expansion of a Perfect Gas. Joule-Thomson Porous Plug Experiment. Joule- Thomson Effect for Real and Van der Waal Gases. Temperature of Inversion. Joule- Thomson Cooling.	24th Nov, NCC Day
		Sem-V (H)	12		3	Paper: **PHY-HE-5056** ►Nuclear and Particle Physics: ► Unit VII: Particle Accelerators (Lectures 5) Accelerator facility available in India: Van-de Graaff generator (Tandem accelerator), Linear accelerator, Cyclotron, Synchrotrons. Unit VIII: Particle physics (Lectures 14) Particle interactions; basic features, types of particles and its families. Symmetries and Conservation Laws:	

						energy and momentum, angular momentum, parity, baryon number, Lepton number, Isospin, Strangeness and charm, concept of quark model, color quantum number and gluons.	
		Sem-III (RC/HG)	3	8		**Paper:PHY-HG-3016&Paper:PHY-RC3016►** Unit IV : Theory of Radiation: Blackbody radiation, Spectral distribution, Concept of Energy Density, Derivation of Planck's law, Deduction of Wien's distribution law, Rayleigh-Jeans Law, Stefan Boltzmann Law and Wien's displacement law from Planck's law.	
		Sem-V (RC)	4			**Paper: PHY-HE-5056** ►Nuclear and Particle Physics:Unit VI: Detector for Nuclear Radiations (Lectures 8) Gas detectors: estimation of electric field, mobility of particle, for ionization chamber and GM Counter. Basic principle of Scintillation Detectors and construction of photo-multiplier tube (PMT). Semiconductor Detectors (Si and Ge) for charge particle and photon detection (concept of charge carrier and mobility), neutron detector.	
		HS-II	8	10		Unit-III: Magnetic effect of current and magnetism: Concept of magnetic field, Orested's experiments. Biot-Savart law and its applications to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire, Straight and toroidal solenoids. Force on a moving charge in uniform magnetic and electric fields. Cyclotron. Force on a current carrying conductor in a uniform magnetic field. Force between two parallel current carrying conductors-defination of ampere. Torque experienced by a current loop in a magnetic field, moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.	
December, 2023	17	Sem-I (H)	6	6	3	End semester examination	
		Sem-III (H)	6	14		Revision of course & End semester examination	
		Sem-V (H)	9		3	Revision of course & End semester examination	
		Sem-III (RC/HG)	3	6		Revision of course & End semester examination	

		Sem-V (RC)	3			Revision of course & End semester examination	1st Dec, AIDS Day
		HS-II	7	6		Unit-III: Magnetic effect of current and magnetism: Current loop as a magnetic dipole and its magnetic dipole moment. Magnetic dipole moment of a revolving electron. Magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole (bar magnet) in a uniform magnetic field, para, dia, and ferro magnetic substances with examples. Electromagnets and factors affecting their strangths. Permanent magnets.	

Signature of HOD
Department of Physics

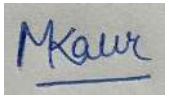
Head
Dept. of Physics
Abhayapuri College

(Dr. Bijoy Barman)
Signature of Teacher
Department of Physics

Abhayapuri College
Teaching Plan, Session: 2023-24
Semester: August – December, 2023
Department of Mathematics
Name of Teacher: Dr. Mandeep Kaur

Month	Teaching Days	Class	Paper	No. of Alloted Classes	Topics Taught	Remarks
August, 2023	25	H.S. 1st year	Chapter 13	04	Probability and related problems	
		H.S. 2nd year	Chapter 13	09	Conditional Probability and related problems	
		FYUGP- 1st Sem	Classical Algebra	08	Unit 1: Polar representation of complex no., De-Moivre's Theorem, nth root of unity	
		FYUGP-1st Sem SEC	Basic Programming in C	08	Basic Definitions, Low-level and high-level languages, C program structure.	
		FYUGP-1st Sem MDC	MDC-1	05	Unit 1: Numbers, Division Algorithm, Logarithms and Anti-logarithms.	
		TDC - 3rd Sem (H)	MAT-HC-4036	17	Unit1: Symmetries of a square, Dihedral groups, definition and examples of groups. Subgroups, centralizer, normalizer, center of a group, product of two subgroups. Cyclic groups.	
		TDC- 5th Sem (H)	MAT-HE-6 066	25	Unit 1: The Linear Programming Problem: Standard, Canonical and matrix forms, Graphical solution. Correspondence between basic feasible solutions and extreme points. Unit 2: Simplex Method: Optimal solution, Termination criteria for optimal solution of the Linear Programming Problem.	
September, 2023	23	H.S. 1st year	Chapter 13	05	Mutually exclusive and exhaustive events, related problems.	
		H.S. 2nd year	Chapter 13	07	Linear Programming Problem	
		FYUGP- 1st Sem	Classical Algebra	08	Unit1: Application of De-Moivre's Theorem. Unit 2: Algebraic equations, Descartes rule of sign, relation between roots and co-efficients.	
		FYUGP-1st Sem SEC	Basic Programming in C	05	Variables and Operators in C, if-else statement, for loop, arrays, nested loops, practical.	
		FYUGP-1st Sem MDC	MDC-1	04	Unit 1: Test of prime numbers, Types of Number System and problems.	
		TDC - 3rd Sem (H)	MAT-HC-4036	17	Unit 2: Cycle notation for permutations, properties of permutations cosets, Lagrange's theorem. External direct product, normal subgroups, factor groups, Cauchy's theorem	
		TDC- 5th Sem (H)	MAT-HE-6066	23	Unit 2: Unique and alternate optimal solutions, Unboundedness; Simplex Algorithm, Artificial variables, Two-phase method, Big-M method. Unit 3: Motivation and Formulation of Dual problem; Primal-Dual relationships; Fundamental Theorem of Duality; Complimentary Slackness.	

October, 2023	16	H.S. 1st year	Chapter 13	02	Problems related to Probability	
		H.S. 2nd year	Chapter 13	05	Linear Programming Problem	
		FYUGP- 1st Sem	Classical Algebra	06	Unit 2: Transformation of Equations, Cardon's method, Euler's method	
		FYUGP-1st Sem SEC	Basic Programming in C	05	Switch statement, pointers, related C programs	
		FYUGP-1st Sem MDC	MDC-1	03	Unit 2: Percentage, Average, Discount, Profit & Loss, Problems based on Age, Time, speed and Distance, Time & Work, Clock & Calendar, Partnership and percentage, SI and CI.	
		TDC - 3rd Sem (H)	MAT-HC-4036	10	Unit 3: Group homomorphisms, properties of homomorphisms, Cayley's theorem, Isomorphisms, First, Second and Third isomorphism theorems.	
		TDC- 5th Sem (H)	MAT-HE-6 066	16	Unit 4: Transportation Problem: Definition and formulation; Methods of finding initial basic feasible solutions, Assignment Problem. Game Theory: Two- person zero-sum games, Games with mixed Strategies.	
November, 2023	22	H.S. 1st year	Chapter 13	03	Revision	
		H.S. 2nd year	Chapter 13	08	Revision	
		FYUGP- 1st Sem	Classical Algebra	×	Practical	
		FYUGP-1st Sem SEC	Basic Programming in C	×	Revision	
		FYUGP-1st Sem MDC	MDC-1	05	Unit 2: Effective rate of interest, Present value, net present vale and future value, Regular Annuity, Mixture and Alligation, Races and Games.	
		TDC - 3rd Sem (H)	MAT-HC-4036	×	Revision	
		TDC- 5th Sem (H)	MAT-HE-6 066	×	Revision	



Dr. Mandeep Kaur
Department of Mathematics
Abhayapuri College

ABHAYAPURI COLLEGE

TEACHING PLAN FOR THE SESSION 2023-24

Name of Teacher: Dr. Kuleswar Singha **Department: Geography** **Class: FYUGP 2nd Sem**

Sl No.	Month & Year	No.of Class Days	No. of Allotted Classes	Syllabus Break-Up	Date of Exam./other Evaluation etc.	Remarks
1	Jan/24	10 days	Geog = 02	Unit II: Concept of man-environment relationship in human geography		Classes up to 30/05/2024
			MDC= 02	Unit-I: Environment as s system: Meaning of environment;		
			SEC = 02	Unit 1: Fundamentals of Remote Sensing (Practical) Visual Interpretation of Aerial photograph and Satellite Imagery and preparation of thematic maps based on appropriate classification scheme.		
2	Feb/24	23 days	Geog = 03	Changing man-environment relationship through ages;		
			MDC= 03	Components of earth's environment system and their characteristics and interrelationship:;;		
			SEC = 05	Unit 1: Fundamentals of Remote Sensing (Practical) Analysis of satellite image: Digital classification of satellite image: supervised and unsupervised.		
3	Mar/24	23 days	Geog = 03	Impact of environment on man in different geographical conditions	Sessional exam held on 3rd week of March, 2024	
			MDC=03	Lithosphere, Hydrosphere, Atmosphere and Biosphere		
			SEC = 08	Unit 2: Fundamentals of Geographical Information System (GIS) (Practical) Geo-referencing and Data layer creation: Map scanning, geometric correction, digitization of different layers using point, line and polygon, attribute data input and their thematic representation, Buffer creation, Overlay analysis.		
4	April/24	23 days	Geog = 03	Impact of man and its activities on environment in different parts of the world;		
			MDC= 03	Ecosystem, its components and functioning		

			SEC = 05	Unit 3: Fundamentals of Global Positioning System (GPS) GPS data collection, plotting and mapping of various features within college campus		
5	May/24	23 days	Geog = 03	Urbanization and environment in different global contexts		
			MDC= 03	Concept of balanced environment		
			SEC = 03	Remedial Classes		
6.	Jun/24		Geog= 0	**Semester Exam**		
			MDC= 0			

Signature of the HoD/Vice Principal

Head, Geography
Abhayapuri College

Signature of the Teacher

ABHAYAPURI COLLEGE

TEACHING PLAN FOR THE SESSION 2023-24 (Jan-June)

Name of Teacher: Dr. Kuleswar Singha **Department: Geography** **Class: TDC 4th Sem**

Sl No.	Month & Year	No. of Class Days	No. of Allotted Classes	Syllabus Break-Up (Hons)	Syllabus Break-Up (RE+RG+Sk)	Date of Exam./other Evaluation etc.	Remarks
01	Jan/24	10	Hons:- 08 RE:- RG:- Se:-	**Theory** 1. Remote Sensing: Definition and History of Development. (3 classes) 2. Principles of Remote Sensing System: Energy sources, EMR and its interaction with Atmosphere and Earth Features; Platform, Sensor and Resolutions; Aerial and Satellite Remote Sensing; Fundamentals of Photogrammetry. (8 classes) **Practical** 1. Visual Interpretation of Aerial photograph and Satellite Imagery and preparation of thematic maps based on appropriate classification scheme. 2 assignments 2. Analysis of aerial photographs and satellite image: Determination of photo scale and object height from aerial photo (Using Stereoscope); Digital classification of satellite image: supervised and unsupervised. 3 assignments	-		Classes up to / /2024
02	Feb/24	23	Hons:- 20 RE:- RG:- SE	**Theory** 3. Remote Sensing data products, sources and characteristics; Elements of Image Interpretation (Visual & Digital); Digital Image Processing: Image Enhancement and Classification (Supervised and Un-supervised). (6classes) **Practical** 3. Geo-referencing and Data layer creation: Map scanning, geometric correction, digitization of different layers using point, line and polygon, attribute data input and their thematic representation, Buffer creation, Overlay analysis. 3 Assignments 1 0			
03	Mar/24	23	Hons:- 18 RE:- RG:- Se	**Theory** 4. Application of Remote Sensing: Land, Vegetation and Water (3 classes) **Practical** 4. GPS data collection, plotting and mapping of various features within college campus. 2 Assignments			

	Apr'24	24	Hons:- 17 RE:- RG:- SE	• Revision		3rd Week of April Sessional Examination. 2024 & Re examination	
05	May'24	26	Hons:- RE:- RG				

Signature of the HoD Vice Principal

HOD Geography
Abhayapuri College

Signature of the Teacher

ABHAYAPURI COLLEGE

TEACHING PLAN FOR THE SESSION 2023-24 (Jan-June)

Name of Teacher: Dr. Kuleswar Singha **Department: Geography** **Class: TDC 6th Sem**

Sl No.	Month & Year	No. of Class Days	No. of Allotted Classes	Syllabus Break-Up (Hons)	Syllabus Break-Up (RE+RG+Sk)	Date of Exam./other Evaluation etc.	Remarks
01	Jan/24	10	Hons:- 15 RE:- RG:- Se:-	• Meaning and significance of research; types of research; Basics of research methodology; Review of literature and its need; Ethics of research. (6 Classes)	-		Classes up to / /2024
02	Feb/24	23	Hons:- 26 RE:- RG:- SE	• Research Design: Statement of the problem, Review of research works, Objectives, Research questions, Hypotheses, Database and methodology, Significance, Organization of the Work and Referencing. (10 Classes) • Data Collection: Types and Sources of Data; Methods of primary data collection (both qualitative and quantitative, and physical and human geographic data); Concept of sample survey; Pilot survey; Data processing (Manual and computerised). (10 Classes)			
03	Mar/24	23	Hons:- 25 RE:- RG:- Se	• Geographic Research: Meaning and Characteristics; Formulation of research problem. (4 Classes) • Statistical Analysis of Data: Qualitative data analysis; Quantitative data analysis; Data representation (Manual and computerised). (5 Classes)			
04	Apr/24	24	Hons:- 26				

			RE:- RG:- SE	• Structure of a Research Report: Preliminaries; Text; Tables, Figures and Appendices; Citations, References and Bibliography; Research/Project Report Writing; Executive Summary. (5 Classes) • Project Report Preparation and Evaluation • Evaluation		3rd Week of April Sessional Examination, 2024 & Re examination	
05	May/24	26	Hons:- RE:- RG	• Revision			

Signature of the HoD/Vice Principal

HoD, Geography
Abhayapuri College

Signature of the Teacher

w.e.f. 01/08/2023

Abhayapuri College

Department of Mathematics

Syllabus break – up for the 1st, 3rd and 5th semester, session 2023-2024

SL NO.	Teacher Name	Class/Papers	Unit-wise	No. of classes per week	MARKS	Total no. of classes per week	Total Marks Allotted	Remarks
1.	Abhijit Barman	MAT0100104 - Classical Algebra	Unit 2, 3	02	50	18	300	1 class for Students' Seminar
		HC-3036 Analytical Geometry	Unit-1	04	50			
		RC-3016 Differential Equations	Unit 1, 2	04	50			
		SEC-3014-CAS & RS	Unit-1	02	50			
		HC-5026-Linear Algebra	Complete	06	100			
2.	Dr. Mandeep Kaur	H.S. 1st yr	Unit-5	01	20	18	340	1 class for Students' Seminar
		H.S. 2nd yr	Unit 5, 6	02	20			
		MAT0100104 - Classical Algebra	Unit 1, 2	02	50			
		SEC – Basic Programming in C	Unit-1, 2, 3, 4	02	50			
		HC-3026 Group Theory-I	Complete	04	100			
		HE-5046 Linear Programming	Complete	06	100			

3.	Biman Roy	H.S. 1st yr	Unit-1	03	20	20	360	1 class for Students' Seminar
		H.S. 2nd yr	Unit-1, 2	01	40			
		HC-3036 Analytical Geometry	Unit-2	02	50			
		RC-3016 Differential Equations	Unit 2, 3	01	50			
		HE-5016 Number Theory	Complete	06	100			
		RE-5016 Number Theory	Complete	06	100			
4.	Shilpi Chutia	H.S. 1st yr	Unit- 2, 4	02	40	18	330	1 class for Students' Seminar
		H.S. 2nd yr	Unit-3	03	40			
		HC-3016 Theory of Real Functions	Complete	04	100			
		SEC-3014-CAS & RS	Unit-2	02	50			
		HC-5016-Complex Analysis	Complete	06	100			

H. O. D
Department of Mathematics
Abhayapuri College

Asso. Prof. & Head
Deptt. of Mathematics
Abhayapuri College, Abhayapuri

ABHAYAPURI COLLEGE
DEPARTMENT OF MATHEMATICS
Syllabus Distribution for 2nd, 4th and 6th Semester, 2023-2024 (Even Semester)

w.e.f. 24-01-2024

S.L. no.	Teacher Name	Class/Papers	Unit-wise	No. of classes per week	Marks	Total no. of classes per week	Total Marks Alloted	Remarks
1	ABHIJIT BARMAN	`Calculus (2nd sem)	Unit 2, 4	2	50	16	270	2 class for Students Seminar
		Skill 2nd sem	1/3	1	25			
		MDC-2nd sem		2	45			
		HC-4016 Multivariate Calculus	Unit- 1 & 2	3	50			
		HC-6026 Partial Differential Equations	Complete	6	100			
2	DR. MANDEEP KAUR	H.S. 1st yr	Probability	1	12	17	292	2 Classes for Students Seminar
		MDC-2nd sem		1	30			
		HC-4036 Ring Theory	Complete	5	100			
		Skill 4th sem	1/2	2	50			
		HE-6066 Group Theory II	Complete	6	100			
3	DEEPJYOTI PATHAK	H.S. 1st yr	Unit- 3	1	20	17	290	3 Classes for Students Seminar
		H.S. 2nd yr	Unit-4	2	20			
		Skill 2nd sem	2/3	2	50			
		HC-4016 Multivariate Calculus	Unit- 3 & 4	2	50			
		HC-4026 Numerical Methods	Unit- 2 & 3	3	50			
		Skill 4th sem	1/2	2	50			
		Skill 6th sem	2/3	2	50			
4	BIMAN ROY	H.S. 1st yr	Unit-1 & 2	2	41	17	296	1 class for Students Semi nar
		H.S. 2nd yr	Unit- 1,3,6	2	30			
		HC-4026 Numerical Methods	Unit-1 & 3	2	50			
		RC-6016 Numerical Methods	Complete	6	100			
		HC-6016 Riemann Integration and Metric Spaces	Unit- 2 , 3	3	50			
		Skill 6th sem	1/3	1	25			
5	SHILPI CHUTIA	H.S. 1st yr	Unit- 2,4	2	27	17	277	3 class for Students Semi nar
		H.S. 2nd yr	Unit-2,3,4,5	2	50			
		`Calculus (2nd sem)	Unit- 1 & 3	2	50			
		RC-4016 Real Analysis	Complete	5	100			
		HC-6016 Riemann Integration and Metric Spaces	Unit 2, 3	3	50			

HOD
Department of Mathematics
Abhayapuri College