S. S. JAIN SUBODH P.G. COLLEGE

[Affiliated to the University of Rajasthan, Jaipur]

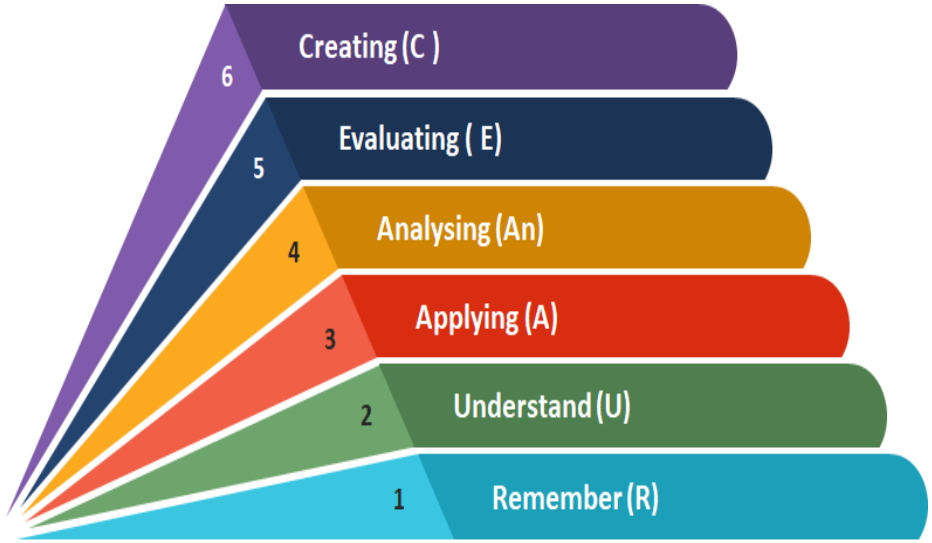
U.G. (Pass Course) 2022-23
POs, PSOs, COs

PO’s, PSO’s, CO’s as per Bloom’s Taxonomy

Subodh College has adopted a comprehensive framework for educational outcomes, integrating Bloom's Taxonomy to ensure a structured and effective learning experience. Bloom’s Taxonomy recently updated, categorizes learning into six levels. These levels guide the design of Programme Outcomes (PO), Programme Specific Outcomes (PSO), and Course Outcomes (CO) to enhance students' cognitive, affective, and psychomotor development.

Learning objectives discussed in the syllabus is observable, specific, and measurable as they are framed according to the recent bloom’s taxonomy. The stepwise procedure followed is mentioned as follows:

- Programme outcomes (POs) for UG/PG and UG (Hons.) Courses and other professional courses are discussed.
- Programme specific outcomes (PSOs) are briefly described.
- Course outcomes of offered papers are written by mentioning which particular PSOs it is addressing in learning process.
- Cognitive attributes, on the basis of bloom’s taxonomy, are further mentioned. These are Remember (recall facts and basic concept), Understand (explains idea or concept), Apply (use information in new situations), Analyse (draw connections among ideas), Evaluate (Justify a stand or decision), Create (produce new or original work). All are observable, specific, and measurable in terms of cognitive analysis.



Under-Graduation (U.G.): PO's ,PSO's , CO's

S. No.	Under-Graduation Programme
1.	B.Sc. Physics
2.	B.Sc. Chemistry
3.	B.Sc. Botany
4.	B.Sc. Biotechnology
5.	B.Sc. Microbiology
6.	B.Sc. Mathematics
7.	B.Sc. Zoology
8.	B.Sc. Psychology
9.	B.Sc. Geography
10.	B.Sc. Economics
11.	Bachelor of Computer Application (BCA)
12.	B.SC. Statistics
13.	B.A. Hindi
14.	B.A Political Science
15.	B.A. History
16.	B.A. Geography
17.	B.A. Economics
18.	B.A Statistics
19.	B.A. Public Administration
20.	B.A. Philosophy
21.	B.A Psychology
22.	B.A. English Literature
23.	B.A. Sociology
24.	B.A. Sanskrit
25.	B.A. Math
26.	B.A. Physical Education
27.	B.Com. Accounting and Business Statistics (ABST)
28.	B.Com. Business Administration (BADM)
29.	B.Com. Economic Administration and Financial Management (EAFM)
30.	Bachelor of Business Administration (BBA)

Programme B.Sc. (Pass Course) - 2022-23

Programme Outcome (PO) of Bachelor of Science (Pass Course):- Successful completion of Bachelor of Science program will make the students proficient in following areas:
1. Graduates will be able to recall key concepts, terms, and definitions in their field of study.
2. They will comprehend the principles and theories underlying this area of study and will apply their knowledge and skills to solve problems and make decisions in practical settings.
3. They will be able to break down complex information into its component parts to examine its underlying structures and relationships.
4. They will be able to assess the credibility, accuracy, and relevance of information and knowledge in their field.
5. They will generate new ideas, solutions, and designs through critical thinking and creativity, helping them develop innovative solutions to real-world problems using evidence-based practices.
6. They will plan and conduct experiments to test hypotheses and gather data for analysis of the problem at hand.
7. They will learn to fraternize and work effectively in groups to achieve common goals and objectives.
8. They will express ideas clearly and persuasively in a variety of formats, including written, oral, and visual.
9. They will be able to superintend, organize and oversee projects, resources, and teams to achieve desired outcomes.
10. They will demonstrate leadership skills by motivating and inspiring others towards a shared vision and common goals.
11. They will be able to identify opportunities for improvement and develop creative solutions to address challenges by applying research methods and tools to investigate, analyze, and interpret data in their field of study.
12. They will apply ethical principles and values to make morally sound decisions and act with integrity in their professional lives.

Physics
Programme Specific Outcomes (PSO's)

PSO-1	Developing proficiency in scientific principles & fundamentals.
PSO-2	Development of analytical and critical thinking.
PSO-3	Development of quantitative & computational skills.
PSO-4	Development of problem-solving skills.
PSO-5	Exposure to experimental & laboratory skills.
PSO-6	Development of interdisciplinary understanding with crossover to Physics, Chemistry & Mathematics.
PSO-7	Development of effective communication skills, team work & collaborative skills.

Semester	Course Code	Course Title	Course Outcomes on completing the course, the student will be able to:	Attributes	
				PSO addressed	Cognitive levels
I	BSPH101	Paper – I Mechanics-I	**CO1:** Understand the concept of inertial and non-inertial frames of reference.	1,2, 3,4,4	R, U, A, An
			CO2: Apply transformations of displacement, velocity,and acceleration between different frames of referenceinvolving translation.	5,6	E,C
			CO3: Explain the Galilean transformation and the invariance of Newton's laws	3,6,5	A,C,E
			CO4: Analyze the motion in rotating frames, including the Transformation of displacement, velocity, and acceleration, and the effects of pseudo forces such as the Coriolis force	1,2, 3,4,4	R, U, A, An
			CO5: Analyze the motion of a Foucault pendulum and understand its relation to the rotation of the Earth.	5,6	E,C
			CO6: Define conservative and non-conservative forces and analyze rectilinear motion under conservative forces, Potential energy curves, Understanding the motion of particles under conservative forces.	3,6,5	A,C,E
			CO7: Explain the concept of the center of mass, Equations of motion for rotating bodies and the moment of inertia, Kinetic energy of rotation.	1,2, 3,4,4	R, U, A, An
I	BSPH102	Paper – II Electromagnetism (I)	**CO1:** Understand the concept of scalar and vector fields and their physical significance,Demonstrate knowledge of gradient, divergence, and curl operators and their applications in electromagnetism, Apply Gauss divergence and Stoke's theorems to analyze electric and magnetic fields.	1,2, 3,4,4	R, U, A, An
			CO2: Explain the behaviourof electric fields and potential energy in different charge distributions, Analyze theinteraction of electric dipoles with external electric fields and calculate the resulting potentials, Solve problems related to Poisson's and Laplace's equations in electrostatics.	5,6	E,C
			CO3: Describe the behaviour of electric fields in different types of matter, including dielectrics and polarized spheres, Understand the concept of electricdisplacement, susceptibility, and dielectric constant, Understand the concept of vector fields and Their mathematical representation. Calculate partial derivatives, Gradients, and line integrals ofscalar and vector fields.	3,6,5	A,C,E

			CO4: Apply Gauss's divergence theorem and understand the physical Meaning of divergence in Cartesian coordinates. Relate divergence to the concept of solid angle and Gauss's law, Apply Curl to vector fields and understand its physical significance. Use Stoke's theorem to relate curl to line integrals.	1,2, 3,4,4	R, U, A, An
I	**BSPH103**	**Paper–IIIOptics-I**	**CO1:** Understand the concept of interference and diffraction fields, polarization and their physical significance.	1,2, 3,4,4	R, U, A, An
			CO2: Applications of interference, and diffraction in framework of Fraunhoffer & Fresnel diffraction phenomenon.	1,2, 3,4,4	R, U, A, An
			CO3: Explain the formation of Newton's rings and determination of wavelength & refractive index.	5,6	E,C
			CO4: Explain the principle of Michelson's interferometer and determination of wavelength & refractive index.	3,6,5	A,C,E
			CO5: Production and analysis of different type of polarizations and their applications.	1,2	R,U
			CO6: Solve problems related to above mentioned topics.	1,2,3	R,U,A
I	**BSPH151**	**Physics Practical – I**	**CO1:** Demonstrate proficiency in using various electrical components and instruments required for conducting experiments.	1,2, 3,4,4	R, U, A, An, E, C
			CO2: Apply theoretical concepts of electricity and magnetism to design and execute experiments.	1,2, 3,4,	R, U, A, An
			CO3: Analyse experimental data using appropriate mathematical and statistical techniques.	5,6	E,C
			CO4: Interpret experimental results and draw conclusions based on data analysis.	3,6,5	A,C,E
			CO5: Develop skills in accurately measuring physical quantities and recording experimental observations.	1,2	R,U
			CO6: Communicate experimental procedures, results, and conclusions effectively in written reports.	1,2, 3,4,4	R, U, A, An
II	**BSPH201**	**Paper – I Mechanics & Oscillations - II**	**CO1:** Understand the motion under central forces, including gravitational interaction, and apply Kepler's laws, Damped harmonic oscillations.	1,2, 3,4,4	R, U, A, An
			CO2: Driven harmonic oscillators with damping and understand frequency response and power dissipation.	3,4	A,An
			CO3: Coupled oscillators and analyse systems of oscillators with neighbour interactions.	1,2	R,U

			CO4: Analyse mechanical and electrical system undergoing oscillatory motion	5,6	E,C
II	**BSPH202**	**Paper – II Electromagnetism - II**	**CO1:** Analyse the behaviour of magnetic fields in various materials, Ampere's law, and Magnetic vector potential.	1,2, 3,4,4	R, U, A, An
			CO2: Electromagnetic waves and their behaviour in isotropic and dispersive media, Energy density and Radiation pressure.	3,4	A,An
			CO3: Magnetic forces, Charge in motion, Invariance of charge, Analyse Electricfield measured in differentframes of reference.	1,2	R,U
			CO4: Magnetic field in free space & matter, Apply Ampère's circuital law and useit in differential form with the vector potential.	5,6	E,C
			CO5: Calculate the magnetic field for different current configurations using the Biot- Savart law and deduce the field of any current- arrying wire, Transformation relations for electric and magnetic fields between inertial frames, Study electric fields in matter, including electrical moments, dipole and quadrupole moments, Electric susceptibility and atomic polarizability.	3,4	A,An
II	**BSPH203**	**Paper III Optics – II**	**CO1:** Understanding of the concept of coherent nature of light, mono-chromatism & definition of LASER.	1,2, 3,4,4	R, U, A, An
			CO2: Understanding of the concept of LASER, stimulated emission, Spontaneous emission, Einstein's coefficients, population inversion, optical pumping.	1,2,3,4,5	R,U,A,An,E
			CO3: Methods and production, construction of He-Ne, CO2 & Ruby lasers.	1,2,3,4,5	R,U,A,An,E
			CO4: Understanding of basic principles of holography, construction & reconstruction of image and applications of holography.	1,2,3,4,5	R,U,A,An,E
			CO5: Understanding of concepts of fibre optics, total internal reflection & light propagation.	5,6	E,C
II	**BSPH251**	**Physics Practical – II**	**CO1:** Through these experiments, students will develop practical skills in experimental techniques, data collection, analysis, and interpretation. They will also enhance their understanding of fundamental concepts and principles in oscillations, damping, coupled oscillators, and material properties.	1,2, 3,4,4	R, U, A, An
			CO2: The lab experiences will foster critical thinking, problem-solving abilities, and the application of theoretical knowledge to real-world scenarios	5,6	E,C

III	**BSPH301**	**Statistical And Thermo dynamical Physics – I**	**CO1:** General interactions in thermodynamics & first law of thermodynamics, Helmholtz free energy, Gibb's free energy & Clausius-Clapeyron equation, vapor-pressure curve, Zeroth law of thermodynamics.	11,2, 3,4,4	R, U, A, An
			CO2: Study systems in thermal contact with a heat reservoir canonical distribution, and energy fluctuations.	5,6	E,C
			CO3: Calculate the entropy of a system in a heat bath and analyze the Helmholtz free energy, Explore adiabatic interactions, enthalpy, and the first law of thermodynamics.	1,2	R,U
			CO4: Learn about the thermodynamic scale as an absolute scale and Apply Maxwell relations.	5,6	E,C
III	**BSPH302**	**Paper II Mathematical Physics & Special Theory of Relativity - I**	**CO1:** Understanding of the various concepts of mathematical physics for applications in physical theories.	1,2, 3,4,4	R, U, A, An
			CO2: Understanding of coordinate transformations, gradient, divergence & curl, Cartesian, circular, cylindrical and spherical polar coordinates, Jacobian.	5,6	E,C
			CO3: Concept of tensor analysis & Dirac delta function	5,6	E,C
			CO4: Concept of second order differential equations and special functions.	1,2	R,U
III	**BSPH303**	**Paper -III Electronics & Solid State Devices - I**	**CO1:** Kirchhoff's first and second laws and their applications in circuits.	1,2, 3,4,4	R, U, A, An
			CO2: Open & short circuits, Hybrid parameters, Network.	4,5,6	An,E,C
			CO3: Understanding of the concept of bipolar junction transistor, Loadline, Operating point and hybrid parameters for transistors, Transistor as amplifiers.	5,6	E,C
			CO4: Frequency response of transistor amplifiers.	1,2	R,U
			CO5: Understanding of the rectifiers & voltage regulation.	5,6	E,C
III	**BSPH351**	**Physics Practical – III**	**CO1:** Through these experiments, students will develop practical skills in experimental techniques, data collection, analysis, and interpretation.	1,2, 3,4,4	R, U, A, An, E, C
			CO2: They will also enhance their understanding of fundamental concepts and principles in optics, electronics & thermodynamics.	5,6	E,C
			CO3: The lab experiences will foster critical thinking, problem-solving abilities, and the application of theoretical knowledge to real-world scenarios.	5,6	E,C

IV	**BSPH401**	**Paper– I Thermo dynamical And Statistical Physics - II**	**CO1:** Understand the concept of kinetic theory of gases, energy distribution function &Maxwell's equations.	1,2, 3,4,	R, U, A, An
			CO2: Experimental verification of Maxwell velocity distribution & principle of equipartition of energy.	5,6	E,C
			CO3: Explain the transport phenomenon of gases, mean free path, distribution of meanpaths, viscosity & diffusion.	1,2	R,U
			CO4: Explanation of thermodynamics in the framework of statistical approach.	5,6	E,C
			CO5: Formulation of classical statistics to form phase space, micro- and macro-spaces, thermodynamic probability, monoatomic ideal gas & Heat capacity of solids. Understand classical statistics and its Validity. Study phase space, microstates, macrostates, Thermodynamic, probability, and entropy.	5,6	E,C
IV	**BSPH402**	**Paper - II Mathematical Physics & Special Theory ofRelativity - II**	**CO1:** Understanding of Lorentz transformation and four vector formulation.	1,2, 3,4,	R, U, A, An
			CO2: Understanding of the concept of transformation between lab and centre of mass system.	5,6	E,C
			CO3: Understanding of theconcept of relativistic electrodynamics.	1,2	R,U
			CO4: Understanding of the concept of boundary value problems.	5,6	E,C
IV	**BSPH403**	**Paper – III Electronics & Solid State Devices - II**	**CO1:** Basic understanding of concept of oscillators, Different types of Oscillators of Colpitts and Hartleyoscillators, RC oscillators.	1,2, 3,4,	R, U, A, An
			CO2: Basic understanding of operational amplifiers, characteristics in form ofinverting, non-inverting,adder, buffer and difference amplifiers.	5,6	E,C
			CO3: Basic understanding of applications of operational amplifiers in Form of integrator, differentiator, multiplier and divider, voltage to current and current to voltage convertor.	1,2	R,U
			CO4: Concept of feedback and feedback amplifiers, effect on frequency gain response.	1,2, 3,4,	R, U, A, An
			CO5: Introduction to field effect transistors (FETs), metal-oxide-semiconductor field effect transistors (MOSFET) and voltage-Current responses.	1,2, 3,4,	R, U, A, An

IV	**BSPH451**	**Physics Practical – IV**	**CO1:** Through these experiments, students will develop practical skills in experimental techniques, data collection, analysis, and interpretation.	1,2, 3,4,	R, U, A, An, E, C
			CO2: They will also enhance their understanding of fundamental concepts and principles in optics, electronics & thermodynamics.	1,2, 3,4,	R, U, A, An
			CO3::The lab experiences will foster critical thinking, problem-solving abilities, and the application of theoretical knowledge to real-world scenario.	1,2, 3,4,	R, U, A, An
V	**BSPH501**	**Paper – I Quantum Mechanics – I**	**CO1:** Development of the basic concept of quantum theory, historical evidences and experimental evidences ofquantum theory.	1,2, 3,4,	R, U, A, An
			CO2: Electromagnetic and blackbody radiations & spectral distribution of energy.	2,3,4	U,A,An
			CO3: Limitations of classical theory explaining what it could not explain which quantum mechanics can explain qualitatively.	1,2	R,U
			CO4: Planck's radiation law& Compton effect.	1,2,3,4,5,6	R, U, A, An, E, C
			CO5: Matter waves in reference to de Brogliehypothesis.	2,3,4	U,A,An
			CO6: Davison-Germer experiment to confirm wave nature of electrons which further proved de Broglie hypothesis.	1,2	R,U
			CO7: Schrödinger's wave mechanics and the uncertainty principle along with its effect.	1,2,3,4,5,6	R, U, A, An, E, C
V	**BSPH502**	**Paper – II Nuclear Physics - I**	**CO1:** Understanding of the various nuclear properties of nuclei; nuclear magneticdipole moment & electric quadruple moment, parity conservation.	1,2, 3,4,	R, U,A, An
			CO2: Understanding of the concept of radioactive decays.	2,3,4	U,A,An
			CO3: Understanding of the concept of detectors and accelerators.	1,2	R,U
			CO4: Basic understanding of the concept of elementary particles.	1,2,3,4,5,6	R, U, A, An, E, C
V	**BSPH503**	**Paper–III Solid State Physics - I**	**CO1:** Understanding of the concepts of crystal binding and crystal structure.	1,2, 3,4,	R, U,A, An
			CO2: Understanding of the concept of thermal properties of solids.	2,3,4	U,A,An
			CO3: Understanding of the concept of band theory of solids.	1,2	R,U
			CO4: Understanding of the concept of magnetic properties of solids.	1,2,3,4,5,6	R, U, A, An, E, C

V	**BSPH551**	**Physics Practical – V**	**CO1:** Through these experiments, students will develop practical skills in experimental techniques, data collection, analysis, and interpretation.	1,2, 3,4,6,7	R, U, A, An, E, C
			CO2: They will also enhance their understanding of fundamental concepts and principles in optics, electronics & thermodynamics.	1,2	R,U
			CO3: The lab experiences will foster critical thinking, problem-solving abilities, and the application of theoretical knowledge to real-world scenarios.	1,2	R,U
VI	**BSPH601**	**Paper - I : Quantum Mechanics – II**	**CO1:** Understanding of the concept of bound state problems.	1,2, 3,4,	R, U, A, An
			CO2: Understanding of the concept of applications of quantum theory to atomic spectroscopy.	1,2	R,U
			CO3: Understanding of the concept of molecular spectroscopy.	1,2	R,U
VI	**BSPH602**	**Paper–II: Nuclear Physics - II**	**CO1:** Understanding of the concept of nuclear models.	1,2, 3,4,	R, U, A, An
			CO2: Understanding of the concept of nuclear fission.	1,2	R,U
			CO3: Understanding of the concept of accelerators.	1,2	R,U
			CO4: Understanding of the concept of fundamental interaction.	1,2	R,U
			CO5: Understanding of the concept of quark model.	1,2	R,U
VI	**BSPH603**	**Paper – III Solid State Physics - II**	**CO1:** Understanding of crystallography and diffraction.	1,2, 3,4,	R, U, A, An
			CO2: Understanding of the concept of electrical properties of solids.	1,2	R,U
			CO3: Understanding of the concept of semiconductors.	1,2, 3,4,	R, U, A, An
			CO4: Understanding of the concept of magnetic properties of solids.	1,2	R,U
VI	**BSPH651**	**Physics Practical - VI**	**CO1:** Through these experiments, students will develop practical skills in experimental techniques, data collection, analysis, and interpretation.	1,2, 3, 4, 5	R, U, A, An, E, C
			CO2: They will also enhance their understanding of fundamental concepts and principles in optics, electronics & thermodynamics.	1,2, 3,4,	R, U, A, An
			CO3: The lab experiences will foster critical thinking, problem-solving abilities, and the application of theoretical knowledge to real-world scenarios.	1,2	R,U

Chemistry
PROGRAMME SPECIFIC OUTCOMES (PSO's)

S.NO.	On completion of Bachelor of Science, the student will be able to :
PSO-1	Have sound knowledge, strong foundation and the ability to understand essential facts, concepts, principles, phenomena and current scientific theories in different branches of chemistry.
PSO-2	Apply the knowledge acquired to understand, interpret, analyze mathematical derivations, numerical and solve qualitative and quantitative problems.
PSO-3	Demonstrate skills in the evaluation and interpretation of chemical information and data.
PSO-4	Know the properties and behaviour of matter, elements in the periodic table, commonly used chemicals in industry and laboratories, special materials and their uses.
PSO-5	Predict the structures of compounds, separate and characterize them; understand the mechanism of reactions of chemical compounds and their synthesis.
PSO-6	Have knowledge of working of various instruments used in chemical analysis and the skills in the operation of standard instruments used in chemistry.
PSO-7	Acquire the laboratory skills needed to design and interpret chemical research in laboratories and industries.
PSO-8	Analyses the chemistry of various hydrocarbons, functional groups and their derivatives, biomolecules , natural products and their functioning and roles of biomolecules in the living system.

Semester	Course Code	Course Title	Course Outcomes on completing the course, the student will be able to:	Attributes	
				PSO Addressd	Cognitive Levels
I	BSCH101	Inorganic Chemistry-I	**CO1:** Learn about chemical bonding, hybridization and learn to draw shapes and geometrics of various inorganic molecules and able to understand the periodic variations of different properties of S block elements.	1,3	U,E,R,A
			CO2: Analyse molecular orbital theory and able to understand the difference between valence band theory and molecular orbital theory.	1,3	U,E, An
			CO3: Get deep insight of periodicity of p- block elements and chemistry of Noble gases.	1,3	R,U
			CO4: Study the theoretical Principles of Qualitative Analysis and identification of acidic (cation) and basic (anion) radicals in inorganic mixture experimentally.	1,8	R,U,A
I	BSCH102	Organic Chemistry-I	**CO1:** Understand the basic concept of organic reaction mechanism and able to learn about different reactive intermediates.	1,3	R,U
			CO2: Develop knowledge of saturated aliphatic hydrocarbons (alkanes and cycloalkanes), their IUPAC nomenclature, structure, physical and chemical properties.	6,8	R, U, A
			CO3: Learn about preparation, properties and chemical reactions of Alkenes and cycloalkenes	1,5,8	U, R
			CO4: Able to learn nomenclature, classification and methods of formations of Dienes and also learn about nomenclature, structure mechanism of chemical reactions of Alkynes.	1,5,8	U, An, R
I	BSCH103	Physical Chemistry-I	**CO1:** Learn about the Gaseous state of matter and applications of Gas laws to define properties of Ideal and Real gases.	1,3	R,U
			CO2: Discussion of maxwell's distribution of molecular velocity, critical phenomenon and PV isotherm of real gases	1,4	U,R,A
			CO3: Understand the basics and advanced concepts of Liquid State, Liquid crystals	1,3	R,U
			CO4: Analyse solid state and crystal structure of NaCl, KCl and	1,3	R,U,An

			CsCl		
I	**BSCH151**	**Chemistry Practical-I**	**CO1:** Study the Theoretical Principles of Qualitative Analysis	1,6,7	U,An,R
			CO2: Learn about the identification of acidic (cation) and basic (anion) radicals in inorganic mixture experimentally.	1,6,7	R, E, An, A
			CO3: Recognize the concept of Viscosity and and its determination and able to determine the percentage composition of any given unknown organic liquid by Ostwald Viscometer	1,6,7	An, A
			CO4: Understand the concept of Surface Tension and and its determination and able to determine the percentage composition of any given unknown organic liquid by stalagmometer.	1,6,7	U,An, A
II	**BSCH201**	**Inorganic Chemistry-II**	**CO1:** Analyse the structure of ionic solids; fajan's rule and solubility of ionic solids	1,4	U,R, An
			CO2: Get deep insight of Metallic bond; theories of metallic bond and chemistry of Noble gases.	1,4	U,An
			CO3: Knowledge about s-block elements includes their functions in biosystem.	1,6,7	U, An, R
			CO4: Study of some important compounds of p-block elements	1,4	U,R
II	**BSCH202**	**Organic Chemistry-II**	**CO1:** Learn stereochemistry of chiral compounds and its relation to presence of stereo-axis; concept of stereoisomerism and concept of absolute and relative configuration.	1,5	U,An
			CO2: Demonstrate the basic concepts of geometrical isomerism; spatial arrangement of atoms and groups in a molecule and their nomenclature and concept of conformational isomerism.	1,2,5	U, An
			CO3: Understand nomenclature of benzene derivatives, concept of Aromaticity and Electrophilic Substitution reactions and directive influence of various functional groups on arenes.	1,5,8	U,R,A
			CO4: Discuss the structure and properties of Alkyl and Aryl halides and polyhalogenated compounds	1,5,8	U,R

			CO4: Study of some important compounds of p-block elements.	1,4	U,R
II	**BSCH203**	**Physical Chemistry-II**	**CO1:** Understand Colloidal state of matter with indepth study of Sols, Gels and Emulsions	1,2,4	R,U, An
			CO2: Evaluate rate laws, rate equations of different types of reactions, determine rate constant values, order of reactions, effect of temperature and other factors on reaction rate.	1,2	U,R,A,E
			CO3: Knowledge about various theories of chemical kinetics	1,5	U, An
			CO4: Have deep insight of colligative properties.	1,2,3	U,R
II	**BSCH251**	**Chemistry Practical-II**	**CO1:** Determination of functional groups in organic compound through element detection.	1,6,7	U, A, An
			CO2: Enumerate quantitative estimation of unknown solutions by volumetric analysis.	1,6,7	U, A, An
			CO3: Elucidation of melting point and boiling point of organic compounds.	1,6,7	U, A, An
			CO4: Learn to perform iodometric titrations	1,6,7	U, A, An
III	**BSCH301**	**Inorganic Chemistry-III**	**CO1:** Get in depth knowledge of various theories of acid and bases.	1,6,7	U, A, An
			CO2: Learn the concept of hardness and softness and limitations of HSAB principle and Non aqueous solvents and their general characteristics.	1,2	U, R, A
			CO3: Understand the basics of nuclear chemistry.	1,4	U, R, A
			CO4: Illustrate principles and process of solvent extraction and develop skills required for qualitative and quantitative inorganic analysis and separation processes.	1,2	R,U
III	**BSCH302**	**Organic Chemistry-III**	**CO1:** Get in depth knowledge of classification, nomenclature, methods of formation and properties of Alcohols.	1,5,8	U,R, An
			CO2: Interpret the knowledge of classification, nomenclature, methods of formation and properties of Phenols and name reactions of Phenols mentioned in syllabus.	1,5,8	U, R, An
			CO3: Learn Nomenclature, structure synthesis, physical and chemical properties of aldehydes, ketones and name reactions	1,5,8	R, U, An

			mentioned in syllabus.		
			CO4: Acquire knowledge about nnomenclature, structure synthesis, physical and chemical properties of a ethers and epoxides and specific reactions mentioned in syllabus.	1,5,8	R, U, An
III	**BSCH303**	**Physical Chemistry-III**	**CO3:** Interpret definitions of different thermodynamic processes and assess thermodynamic applications using First law of thermodynamics.	1,2,3	U, An, A
			CO2: Learn about Hess's law and its applications and Kirchhoff's equation.	1,2	U, R, A
			CO3: Understand fundamentals of electrochemistry.	1,4	U, R, A
			CO4: Enumerate chemical equilibrium; understand the fundamentals of pH and corrosion and correlate with daily life.	1,2,3	U, An, A
III	**BSCH351**	**Chemistry Practical-III**	**CO1:** Identify the organic compounds through the functional group analysis and melting point determination.	1,6,7	R, U, E, An
			CO2: Estimation of hardness of water by complexometric titration.	1,6,7	U, E, A
			CO3: Learn to perform redox titration of ferrous ammonium sulphate against $KMnO_4$.	1,6,7	U, An, R
			CO4: Execute the quantitative estimation of inorganic compounds through gravimetric methods.	1,6,7	U, An
IV	**BSCH401**	**Inorganic Chemistry-IV**	**CO1:** Discuss various methods of chromatography and its applications.	1,6,7	R, U, E, An
			CO2: Understand the concept of Oxidation and Reduction and representation of Redox potential data by Frost, Latimer and Pourbaix diagrams.	1,4	U,R,A
			CO3: Learn classification, preparation, structure and applications	1,4	U, An, R

			of Silicones and Phosphazenes.		
			CO4: Interpret structure and functioning of metalloporphyrin.	1,4	U, An, R
IV	**BSCH402**	**Organic Chemistry-IV**	**CO1:** Familiarize with nomenclature, structure, bonding, preparation, physical and chemical properties of aliphatic carboxylic acids along with relative stability and name reactions mentioned in syllabus.	1,5,8	An, R
			CO2: Learn nomenclature and structure of carboxylic acid derivatives and mechanism of esterification and hydrolysis.	1,5,8	An, R, U
			CO3: Develop the knowledge of preparation and Chemical reactions of nitroalkanes and nitroarenes.	1,5,8	R, U
			CO4: Illustrate chemistry of amine functional group and important name reaction of amines mentioned in syllabus.	1,5,8	An, R, U
IV	**BSCH403**	**Physical Chemistry-IV**	**CO1:** Apply Second Law of Thermodynamics and entropy concepts in analyzing the thermal efficiencies of heat engines such as Carnot cycle, analyze feasibility of chemical reactions and learn about III law of thermodynamics.	1,2,3	U, E,A
			CO2: Understand the principles and phenomena of electrochemistry and knowledge of different types of cells.	1,2,3	U, R, An, A
			CO3: Learn about pH and pka, corrosion and fuel cell.	1,4	U, An, R
			CO4: Explain the knowledge to determine molecular structure by studying physical properties of different compounds.	1,2,3	U, R, A
IV	**BSCH451**	**Chemistry Practical-IV**	**CO1:** Learn experimentally the synthesis of various organic compounds in laboratory using different types of organic reactions.	1,6,7	U, An, A
			CO2: Able to apply basic concept of phase rule to construct phase diagram and to determine critical solution temperature.	1,6,7	U, An, A
			CO3: Estimate the kinetics of hydrolysis of an ester in acid medium.	1,6,7	U, R, A

			CO4: Apply the basic knowledge of thermochemistry in enthalpy determination.	1,6,7	R, A
V	**BSCH501**	**Inorganic Chemistry-V**	**CO1:** Understand geometries of complex compounds and explain stability, magnetic properties and colour of transition compounds, Valence bond theory and its limitations.	1,4,5	U, R, A, An
			CO2: Learn Chemistry of Elements of First Transition Series and Spectral properties of transition metal complexes.	1,4,5	U, R, An
			CO3: Comparison of lanthanides and actinides.	1,4	U, R
			CO4: Implement knowledge of nuclear power in medical treatment, carbon dating and isotope labeling.	1,4,5	R, U
V	**BSCH502**	**Organic Chemistry-V**	**CO1:** Interpret the structure of organic compounds through spectroscopic techniques viz. UV and IR.	1,5,8	U, An
			CO2: Learn preparation, structure and chemical reactions of Grignard reagent and organolithium compounds.	1,5,8	U, An
			CO3: Understand Molecular orbital diagram and Aromatic characteristic of heterocyclic compound (Pyrrole, Furan, Thiophene and Pyridine), their methods of synthesis and chemical reactions.	1,8	U, An, R
			CO4: Discussion of condensed five and six membered hetrocycles.	1,8	U,R
V	**BSCH503**	**Physical Chemistry-V**	**CO1:** Discuss about phase equilibria of two component system, congruent and incongruent melting point.	1,8	U, An, R
			CO2: Learn about phase equilibrium of partial miscible and immiscible liquids.	1,8	U,R
			CO3: Understand schrondinger wave equation and hamiltonian operator.	1,8	U, An, R

			CO4: Get knowledge about basics of adsorption and absorption, freundlich and langmuir adsorption isotherm.	1,8	U, R
V	**BSCH551**	**Chemistry Practical-V**	**CO1:** Learn experimentally the synthesis of various inorganic complexes in laboratory.	1,6,7	U, R, A
			CO2: Understand the concept of Beer- Lambert law by using $KMnO_4/K_2Cr_2O_7$ solution in laboratory.	1,6,7	U, An, R, A
			CO3: Get experimental knowledge of molecular weight determination by Rast method /Beckmann freezing point method.	1,6,7	U, R, A
			CO4: Apply their knowledge to determine the concentration of solutions by lambert beer's law.	1,6,7	U, E, R, A
VI	**BSCH601**	**Inorganic Chemistry-VI**	**CO1:** Elucidate metal ligand bonding in transition metal complexes.	1,6,7	U, R, A
			CO2: Understand the spectral properties of transition metal complexes.	1,6,7	U, An, R, A
			CO3: Demonstrate the thermodynamic and kinetic aspects of transition metal complexes.	1,8	R, U
			CO4: Learn about nomenclature and classification of organometallic compounds.	1,4,5	R, U
VI	**BSCH602**	**Organic Chemistry-VI**	**CO1:** Interpret spectra of basic organic compounds and can design synthetic routes for drugs by NMR spectroscopy.	1,2,3	U, R, An
			CO2: Illustration of structure of carbohydrate and mechanism of muta rotation	1,8	U, A
			CO3: Understand about Nucleic acids and Vitamins, Structure of DNA and RNA, biological importance of different vitamins.	1,8	U, An, R

			CO4: Learn about basics of fats, oils and detergent.	1,4,5	R,U
VI	**BSCH603**	**Physical Chemistry-VI**	**CO1:** Learn about laws of photochemistry and photosensitized reactions	1,4,5	R, U
			CO2: Understand the maxwell bolzmann distribution law and basic knowledge if rotational spectra	1,8	U, An, R
			CO3: Get acquient with basics of IR and raman spectra	1,8	U, An, R
			CO4: Interpret the molecular orbital theory with special reference to quantum mechanics	1,8	U, An, R
VI	**BSCH651**	**Chemistry Practical-VI**	**CO1:** Cultivate confidence for using various equipments like potentiometer, conductometer in laboratory.	1,6,7	U, An
			CO2: Develop skills of separation of organic mixture by using various solvents and their analysis.	1,6,7	U, A
			CO3: Nurture scientific skill to determine specific rotation of any optically active compound by polarimeter.	1,6,7	U, A
			CO4: Apply their skills to analyze oils and fats in terms of Saponification value, iodine value and acid value.	1,6	U, A

Botany

Programme Specific Outcome (PSO's)

PSO-1	Understand the basics of Botany and its different branches. Study of prokaryotes and Eukaryotes, their features and study of cell organelles. Study of Microbes Viz. Bacteria, Virus, Mycoplasma etc.,
PSO-2	Understand the basic concepts of Genetics and Plant Breeding methods, Various national and international organisations of plant breeding
PSO-3	Compare and contrast the characteristics of the different groups of plants such as algae, Lichens, fungi, bryophytes, pteridophytes, gymnosperms and angiosperms
PSO-4	Identify and get relevant information about the plants, so as to recognize their position in the classification systems and at phylogenetic level. Basic Family study.
PSO-5	To study basic concepts of Biotechnology, genetic engineering and molecular biology and their application. Gain Knowledge about Biomolecules, Plant water relations, metabolism and Physiology of Growth with hormones and mechanism of action
PSO-6	Relate the physical features of the environment to the structure of populations, communities, and ecosystems.
PSO-7	Understand Morphology, anatomy (Primary, Secondary and Abnormal structure) and Embryology of Angiosperms.

PSO-8	To gain knowledge about the Plant resource utilisation and conservation strategies. Ethnic groups of Rajasthan and Ethnobotany

Semester	**Course Code**	**Course Title**	**Course Outcomes on completing the course, the student will be able to:**	**Attributes**	
				PSOs addressed	**Cognitive levels**
I	**BSBO101**	**Cell Biology**	**CO1:** Discuss the development, variety, and duplication of cells .	1	U,R
			CO2: Elucidate the significance of compartmentalization and signaling in cellular biology.	1	U,R
			CO3: Analyze and clarify important experiments in the field's history.	1	U,R
			CO4: Assess and utilize understanding of contemporary methods in cellular biology.	1	U,R
I	**BSBO102**	**Microbiology**	**CO1:** Describe diversity of microorganisms, bacterial cell structure and function. Comprehend the Bacterial Microbial Genetics and Recombination.	1	U,R
			CO2: Understand the microbial growth and metabolism, and the ways to control their growth by physical and chemical means.	1	U,R
			CO3: knowledge of various biotechnological applications of microorganisms and will learn of industrially important substances produced by microorganisms.	1	U,R
			CO4: Gain familiarity with the unique role of microbes in genetic modification technologies.	1	U,R
I	**BSBO103**	**Algae and Lichens**	**CO1:** Acknowledge the differences amongst algae. Understand the structure, morphology, and systematics of algae.	3	U,R
			CO2: Describe the life cycle of the algae. Analyze the advantages and disadvantages of algae.	3	U,R

			CO3: They understand the algal diversity and its industrial application.	3	U,R
			CO4: Knows about distinct classes of Lichen and their utilization.	3	U,R
I	**BSBO151**	**Botany Practical: Based on theory papers-I**	**CO1:** Students will be able to observe the division of cells with the help of practical.	1,3	U,R
			CO2: Students will learn about the plant cell and cell organelles.	4,5,6	AN,E,C
			CO3: Students will be able to identify the major groups of microorganisms**.**	1,5,2	R,E,U
			CO4: Students will learn to know the range of thallus structure and morphological study of available plant materials of algae, and lichens.	1,2	R,U
II	**BSBO201**	**Genetics and Plant breeding**	**CO1:** Understand the comprehensive knowledge of the chemical basis of heredity & the information needed for planning, implementing and analyzing genetic experiments results.	**2**	U,R
			CO2: Know about the quantification of heritable traits, which provides insight into cellular and molecular mechanisms.	**2**	U,R
			CO3: Understand the building blocks of a breeding program. Know the requirements for breeding biotic and abiotic stress tolerant cultivars	**2**	U,R
			CO4: Acquire the independent ability to perform analyzes and interpret the results of breeding programs.	**2**	U,R
II	**BSBO202**	**Mycology and Plant Pathology**	**CO1:** Acknowledge the Biodiversity of Fungi Understand the Economic Significance of the Fungi	3	U,R
			CO2: Understand the jargon used in plant pathology.	3	U,R
			CO3: Recognize the significance and breadth of plant pathology	3	U,R

			CO4: Understand how to avoid and control plant diseases as well as how they affect crop productivity.	3	U,R
II	**BSBO203**	**Bryophyta**	**CO1:** Determine the range of morphology found in bryophytes. Recognize the significant economic function of bryophytes.	3	U,R
			CO2: Understand the structure, morphology, and systematics of bryophytes.	3	U,R
			CO3: Acknowledge the Bryophytes' economic significance. The occurrence, taxonomic position, thallus structure, and reproduction of bryophytes.	3	U,R
			CO4: Recognizing the important economic role that bryophytes play.	3	U,R
II	**BSBO251**	**Botany Practical: Based on theory papers-II**	**CO1:** Students will be able to understand genetic problems.	2,3	U,R,A
			CO2: Students will Learn about plant diseases caused by fungi.		
			CO3: Students will learn to study morphological and anatomical features of available plant material of Bryophyta.		
			CO4: Students will learn about plant diseases caused by Viruses, Bacteria, and Fungi.		
III	**BSBO301**	**Molecular Biology**	**CO1:** know the scope and importance of molecular biology. They understand the structure of DNA, Packing of DNA and types of DNA, RNA.	**5**	U,R
			CO2: understand the DNA replication and various enzymes involved in that process.	**5**	U,R
			CO3: know the transcription in prokaryotes and eukaryotes and transcriptional factors	**5**	U,R

			CO4: understand the process of translation, Genetic code, Translational factors and its inhibitors, concept of Operon, regulation of gene expression.	**5**	U,R
III	**BSBO302**	**Biotechnology**	**CO1:** understand the basic concepts of Biotechnology and techniques of sterilization.	5	U,R
			CO2: have the knowledge of various method of Tissue culture, various types of cultures, protoplasm isolation, fusion techniques and their applications.	5	U,R
			CO3: understand the techniques used in recombinant DNA technology and gene transfer Genomic and c-DNA library Application of transgenic plants:	5	U,R
			CO4: to understand the concepts of medical Biotechnology, Disease diagnosis, Endogenous therapeutics, gene therapy and stem cells. Knowledge of Industrial Biotechnology for Large scale productions	5	U,R
III	**BSBO303**	**Plant Physiology-I**	**CO1:** now importance and scope of plant physiology. Understand the plants and plant cells in relation to water.	5	U,R
			CO2: Understand the process of photosynthesis in higher plants with particular emphasis on light and dark reactions, C3 and C4 pathways.	5	U,R
			CO3: Understand the respiration in higher plants with particular emphasis on aerobic and anaerobic respiration.	5	U,R
			CO4: Learn about the movement of sap and absorption of water in plant body and various plant movements.	5	U,R
III	**BSBO351**	**Botany Practical - Based on**	**CO1:** Students will learn to isolate DNA from plant material	5	U,R,A
			CO2: Students will learn about the practical work related to media preparation and sterilization techniques.	6,7,8	U,R,A

		theory papers - III	**CO3:** Students will learn about tissue culture in plants.	1,2	R,U
			CO4: Students will learn to do practical work related to plant physiology.	5,6	E,C
IV	**BSBO401**	**Pteridophyta**	**CO1:** Understand the morphological diversity of Pteridophytes along with various classification.	**3**	U,R
			CO2: know the morphology, anatomy life cycles pattern of Pteridophytes with special reference	**3**	U,R
			CO3: Understand the economic importance of the Pteridophytes and to explore the evolution Pteridophytes.	**3**	U,R
			CO4: to know the anatomy and morphology of various generaalong with their life cycles	**3**	U,R
IV	**BSBO402**	**Gymnosperms and Paleobotany**	**CO1:** Understand the morphological diversity of gymnosperms along with their classification.	3	U,R
			CO2: Gain insight into the variety of Gymnosperms found in India and explore the evolutionary patterns and relationships of these plants based on their external and internal characteristics.	3	U,R
			CO3: Familiarize yourself with the extent of Paleobotany, the diverse types of fossils, its significance in the global economyand the geological time scale.	3	U,R
			CO4: Explore the wide range of fossil genera that depict various fossil groups with the information about types of fossils, theory of fossilization.	3	U,R
IV	**BSBO403**	**Plant Physiology-II and Biochemistry**	**CO1:** Understand the Biochemical nature of cell. Know the chemistry and properties of bio molecules.	5	U,R
			CO2: Structure and general features of enzymes. Concepts of enzyme activity and enzyme inhibition.	5	U,R,E
			CO3: Learn about the movement of sap and absorption of water in plant body.	5	U,R,A

			CO4: Understand the various plant movements, Photopriodism, vernalisation and circadian Rhytham.	5	U,R
IV	**BSBO451**	**Botany Practical - Based on theory papers - IV**	**CO1:** Students will learn to study the morphological and anatomical features of available plant material of Pteridophyta.	3,5	U,R,A
			CO2: Students will gain knowledge about anatomical and life cycle studies of available plant material of Gymnosperms.	6,7,8	U,R,A
			CO3: Students will study vascular tissues and their constituents by sections and maceration, wood anatomy, TS, TLS, and RLS of available plant material of Gymnosperms and will also gain knowledge about fossils.	1,2	R,U
			CO4: Students will learn to do practical work related to plant physiology and to apply biochemical tests.	5,6	E,C
V	**BSBO501**	**Morphology of angiosperms**	**CO1:** To Know Modular Growth of plant, different habitat.	**7**	U,R
			CO2: To study Phyllotaxy, Venations types, arrangement.	**7**	U,R
			CO3: To gain Knowledge about Branching pattern.	**7**	U,R
			CO4: To Gain knowledge about the morphology of Roots, stem and leaf.	**7**	U,R
V	**BSBO502**	**Anatomy of Flowering plant**	**CO1:** To study , meristems, primary structure of Root stem and leaf	7	U,R
			CO2: Acquire knowledge about different tissue systems. To understand the concept of normal and abnormal secondary growth in plants and the factors causing them.	7	U,R
			CO3:.Gain Knowledge about annual Ring wood	7	U,R
			CO4: Student gain knowledge of floral anatomy	7	U,R
V	**BSBO503**	**Plant Systematics**	**CO1:** Understanding of the rules, principles, and recommendations of plant nomenclature that aid in plant identification. Knowledge of terminology of Taxonomy and distinguish features of different families	4	U,R
			CO2: Learn Plant collection, preparation of Herbarium, preservation techniques and identification of plant in field.	4	U,R
			CO3: Familiarize oneself with the various tools used in taxonomy to	4	U,R

			determine the phylogenetic position of plants or taxa based on recent knowledge		
			CO4: Gain Knowledge of taxonomic evidence, Taxonomic literature, taxonomic tools	4	U,R
V	**BSBO551**	**Botany Practical : Based on theory papers - V**	**CO1:** Students will learn to study and describe the morphology of various groups of higher plants.	4,7	U,R,A
			CO2: Students will learn about the primary and secondary, normal and anomalous structures of Monocot and Dicot Roots and Stems in Angiosperms.	6,7,8	U,R,A
			CO3: Study of the families concerning morphological characters using botanical terms, floral formulas, floral diagrams, and classification.	1,2	R,U
			CO4: Students will gain knowledge about the identification of genera and species with the help of flora of the plant materials.	5,6	E,C
VI	**BSBO601**	**Reproductive Biology of Angiosperms**	**CO1:** Gain knowledge about floral parts, microspore genesis and male gametophyte development.	**7**	U,R
			CO2: To study types of Embryo sac and ovules, placentations and other special features.	**7**	U,R
			CO3: To study mode of pollination and procedure of Fertilization, endosperm, and embryogeny of dicot and monocot.	**7**	U,R
			CO4: Explore the knowledge about Apomixis, Polyembryony.	**7**	U,R
VI	**BSBO602**	**Economic Botany and Ethnobotany**	**CO1:** To gain Knowledge about origin of cultivated plants primary and secondary centre of origin.	8	U,R
			CO2: To study Economic Botany of Cereals, Pulses, Spices.	8	U,R
			CO3: Economic Botany of fibres, fruits, vegetable, aromatic plants and medicinal Plants.	8	U,R

			CO4: To study basic knowledge of Etnobotany, Ethnic group.	8	U,R,A
VI	**BSBO603**	**Ecology**	**CO1:** To acquire comprehensive understanding of fundamental ecology concepts. Gain insight into the distinctions in the composition and operation of various ecosystems.	6	U,R
			CO2: Educated on the abiotic and biotic elements that impact the structure of ecosystems, aiding in the comprehension of basic ecological principles, Population Interaction, communities and Succession.	6	U,R,A
			CO3: Acquire knowledge about the conservation stretegies, Red Data book and national and International Organisation.	6	U,R
			CO4: To gain knowledge about Pollutions, Environmental Protocols and Acts.	6	U,R
VI	**BSBO651**	**Botany Practical: Based on theory papers-VI**	**CO1:** Students will understand the structure and development of microsporangium and megasporangium.	6,7,8	U,R,A
			CO2: Students will learn about economically important plants.	1,2	R,U
			CO3: Students will Understand methods of conservation of plant resources and their sustainable use.	5,6	E,C
			CO4: Students can analyze and monitor various physical, chemical, and biological properties of soil water, and air.	3,4,5	A,An,E

BIOTECHNOLOGY

PROGRAMME SPECIFIC OUTCOMES (PSO's)

S. No.	After completion of B.Sc. Pass Course in Biotechnology the student will be able to
POS-1	Develop a foundational understanding of basic biological principles, genetics, microbiology, biochemistry, molecular biology, and cell biology, as they relate to biotechnology
POS-2	Acquire practical laboratory skills in techniques commonly used in biotechnological research and applications, including DNA isolation and manipulation, protein purification, cell culture, and microbial techniques.
POS-3	Gain proficiency in applying biotechnological tools and methodologies to solve problems in various fields such as agriculture, medicine, pharmaceuticals, environmental science, and industrial biotechnology.
POS-4	Develop the ability to critically analyze scientific literature, experimental data, and biological systems to solve complex problems and make informed decisions in biotechnological research and industry.
POS-5	Understand the principles of bioinformatics and utilize bioinformatics tools and databases to analyze biological data, predict protein structures, annotate genomes, and conduct sequence analysis..
POS-6	Appreciate the ethical, legal, and societal implications of biotechnological advancements and adhere to ethical standards and regulatory guidelines in research and applications.
PSO-7	Demonstrate effective communication skills through written reports, oral presentations, and scientific discourse, to convey ideas, research findings, and conclusions to diverse audiences.
PSO-8	Work effectively as part of interdisciplinary teams, collaborate with peers, mentors, and professionals from diverse backgrounds, and contribute positively to group projects and research endeavors.
PSO-9	Develop a lifelong learning mindset, stay updated with advancements in biotechnology, engage in professional development activities, and pursue further education or careers in academia, industry, healthcare, or entrepreneurship.
PSO-10	Students will be able to develop aptitude for formulating research problem and experimental planning, data collection and statistical planning.

Semester	Course Code	CourseTitle	Course Outcomes on completing the course, the student will be able to:	Attributes	
				PSOs addressed	Cognitive levels
I	BSBT101	Paper -I Cell Biology	**CO1:** By the end of the course the student will be able to develop an understanding of the Cytoskeleton and Cell Membrane.	1,2,4,5	A, An, U
			CO2: Would have deeper understanding of cell at structural and functional level. Would have broad knowledge on the molecular interaction between cells.	3,5,6	A, E, C
I	BSBT102	Paper -II Concept of Biotechnology & Bioinformatics	**CO1:** Students will get introduced to the basic concepts of Bioinformatics and its significance in Biological data analysis and Explain about the methods to characterize and manage the different types of Biological data.	2,3,8	An, U, A, C
I	BSBT103	Paper-III Bio techniques	**CO1:** Students will be able to use various instrumentations that are used in the analytical laboratories. This course covers both fundamental and applications of the instruments that are routinely used for the characterization of biomolecules.	1,2,3	E, An
I	BSBT151	Biotechnology Practical: Based on Theory Papers-I	**CO1: S**tudents will gain hands-on experience in fundamental laboratory procedures, and develop the ability to apply molecular biology techniques to analyze cellular processes.	3,5,6	A, E, C
II	BSBT201	Paper-I Genetics	**CO1:** The student will gain a basic understanding on human genetics and hereditary. Student can Study how individual genes or groups of genes are involved in health and disease.	1,2,3,4	U, A
II	BSBT202	Paper-II Biochemical Metabolism	**CO1:** Students will be able to gain knowledge of microorganisms in and around humans, and gain knowledge and skills to: importance of microorganisms.	1,2,3,4,9	An, U, R
II	BSBT203	Paper-III Developmental Biology	**CO1:** Explain the molecular and genetic background of animal and plant development. Describe evolutionary history of complex multicellular life forms. Compare environmental influence on development and homeostasis of animals and plants.	1,2,6	An, U, R

II	**BSBT251**	**Biotechnology Practical: Based on Theory Papers-II**	**CO1:** Students will develop proficiency in genetic analysis techniques. They will also gain hands-on experience in culturing, isolating, and characterizing various microorganisms, enhancing their understanding of microbial diversity and its applications.	3,4,5,6	A, An, E, C
III	**BSBT301**	**Paper- I Molecular Biology**	**CO1:** Students would be able understand of key events of molecular biology comprising of mechanism of DNA Replication, Transcription, Translation and gene regulation in Eukaryotes.	1,2,5,6	U, R, A
III	**BSBT302**	**Paper–II General Microbiology**	**CO1:** After successful completion of this course, the students are expected to: Understand the basics of microbial culture preservation techniques etc. Know the concepts of inoculum development and media sterilization for fermentation process.	1,2,6	U, R, C
III	**BSBT303**	**Paper–III Cellular Biophysics and Biochemistry**	**CO1:** Students will enhance the knowledge of biochemical principles with specific emphasis on Enzyme working and regulation.	1,2,3,8	U, An, R
III	**BSBT351**	**Biotechnology Practical: Based on Theory Papers-III**	**CO1:** Students will acquire practical skills in plant tissue culture and genetic engineering techniques. They will also gain hands-on experience in analyzing cellular processes and biochemical interactions within plant cells.	3, 5, 6	A, E, C
IV	**BSBT401**	**Paper-I Recombinant DNA Technology**	**CO1:** Student of this course will have knowledge on gene manipulation, gene expression, etc. which prepares them for further studies in the area of genetic engineering.	2,3,8,9	C, R, U
IV	**BSBT402**	**Paper-II Immunology**	**CO1:** Students able to gain fundamental knowledge of immunology: include study of the tissues, cells and molecules involved in host defence mechanisms. Immunologists attempt to understand how the immune system develops, how the body defends itself against disease.	1,2,5,6,9	A, U, R

IV	**BSBT403**	**Paper-III Environmental And Agri-Biotechnology**	**CO1:** The major outcome to study the environmental biotechnology is to understand the current applications of biotechnology to environmental quality evaluation, monitoring and remediation of contaminated environments.	2,3,4,6	U, An, R
IV	**BSBT451**	**Biotechnology Practical: Based on Theory Papers-IV**	**CO1:** students will gain hands-on experience in animal cell culture and genetic manipulation techniques. They will also develop practical skills in immunological assays and techniques for studying immune responses	3,5,6	A,E,C
V	**BSBT501**	**Paper-I Animal Biotechnology**	**CO1:** Student will learn that how explain and apply methods in Animal Cell/Tissue Culture, and how antibodies and vaccines will produce.	1,2,3,6,8	An, A, C
V	**BSBT502**	**Paper-II Plant Biotechnology**	**CO1:** Students will understand of the basic principles of the plant sciences and molecular biology, as well as the integration of these disciplines, to provide healthy plants in a safe environment for food, non-food, feed and health applications.	1,3,6,8	U, A, C
V	**BSBT503**	**Paper-III Biostatistics & Computer Applications**	**CO1:** The student will be able to apply basic principles of biology, computer science and mathematics to address complex biological problems.	2,5,9	A, U, C
V	**BSBT551**	**Biotechnology Practical: Based on Theory Papers-V**	**CO1:** Students would develop skills in agricultural improvement, environmental remediation, genetic engineering and recombinant DNA technology for the production of valuable bioproducts, fostering their readiness for careers in diverse biotechnological sectors.	3,4,5	A, An, E
VI	**BSBT601**	**Paper-I Medical Biotechnology**	**CO1:** The students will learn about introduction to the biological revolutions in this field. This course would teach the role of biotechnology in the worldwide market; The students will be able to demonstrate the use of biotechnology in solving various medical problems.	1,2,4,9	C, U. An

VI	**BSBT602**	**Paper-II Industrial Biotechnology**	**CO1:** Students will get the strong foundation in the areas of food engineering, post-harvest practices and value addition of food materials.	2,5,6	U, A, C
VI	**BSBT603**	**Paper-III Biosafety, Bioethics and IPR in Biotechnology**	**CO1:** Students would be able to understand about the ethical and safety concerns in the Biotechnology field with respect to Global and Indian standards and to highlight the current trends and issues of intellectual property rights.	1,5,6,8	R, U, A
VI	**BSBT651**	**Biotechnology Practical: Based on Theory Papers-VI**	**CO1:** Students will master advanced techniques in medical research, bioinformatics, and nanotechnology. Additionally, they will gain insight into ethical practices, biosafety protocols, and intellectual property rights crucial to the biotechnology industry.	3,4,5	A, An, E

MICROBIOLOGY
PROGRAMME SPECIFIC OUTCOME (PSO's)

S. No.	On completing Bachelor of Science, the student will be able to:
PSO-1	The ability for understanding the fundamental ideas underlying the relevant domains of microbiology, which will enable them to assess problems related to microbiology and develop solutions.
PSO-2	Capable of understanding microbial activities that may be applied to the development of biochemical and immunological tools to enhance human life quality
PSO-3	Understanding of the cytology, biochemistry, growth, function of microorganisms in geochemical processes and applications of ecologically and industrially significant microorganisms with a focus on enhancing environmental sustainability and human health.
PSO-4	The ability to use practical knowledge of microbiology, molecular biology, immunology, medical microbiology, and the search for relevant biomolecules in particular professional contexts.
PSO-5	Making use of bioinformatics and molecular taxonomy methods to examine various microbial groups. Assess the purity, safety, and morally righteous application of industrially significant microbial products for the betterment of humanity.
PSO-6	Combine a solid understanding of microbial science with public speaking abilities that include clear articulation and nonverbal communication.
PSO-7	Become an entrepreneur by employing microorganisms to generate bio fertilizers and mushrooms. Acquiring practical, hands-on training to work in laboratories conducting diagnostic, industrial, pharmaceutical, food, and research and development program for practical training in agro-economic activity.
PSO-8	Assurance of quality and testing of pharmaceutically significant products in compliance with internationally recognized standards. Evaluate the popularity of recent consumer products including nutraceuticals, probiotics, and prebiotics.
PSO-9	Concepts of microbial interactions in basic and sophisticated procedures for waste water treatment. Develops healthy hygiene practices into habits. Encourages students to engage in eco-consciousness and trash management.
PSO10	Promotes a research mindset and scientific approach to the development of environmentally friendly bio products employing statistical techniques appropriate to the biological sciences.
PSO-11	Apply advanced approaches to standardize detection and quantification procedures while incorporating biological and physical scientific principles.

Semester	Course Code	Course Title	Course Outcomes on completing the course, the student will be able to:	Attributes	
				PSOs addressed	Cognitive levels
I	BSMB101	Cell Biology	**CO1:** Students will understand the structures and purposes of basic components of prokaryotic and eukaryotic cells and organelles	1,3,5,6	A, An, U
			CO2: Students will understand how these cellular components are used to generate and utilize energy in cells.	1,2	R,U
			CO3: Students will understand the cellular components underlying mitotic cell division.	1,2	R,U
I	BSMB102	Introduction to Microbiology	**CO1:** Students will gain a holistic concept on history, development, scope and aspects of Microbiology. They will also study about the contributions of Microbiologists.	1,3,5,6	U,R
			CO2: Students acquire a fairly good knowledge about the microbial world, diversity of organisms, Understanding the diversity of organisms and about the kingdom and domain concept and they will gain knowledge on General characteristics of Protozoa.	1,2	R,U
			CO3: Students will achieve knowledge on habitat, distribution, nutritional requirements, ultra-structure of algae and fungi.	1,2	R,U
I	BSMB103	Microbial Diversity I	**CO1:** Students get a prominent knowledge on detailed cell organization, arrangement and other characteristic features of a bacterial cell.	1,3,6,11	C,An, A
			CO2: Students will learn about bacterial growth, nutrition, motility and reproduction processes.		
I	BSMB151	Microbiology Practical: Based on Theory Papers-I	**CO1:** Awareness through Demonstration of the techniques of sterilization, sterilization of glassware, learning instruments handling and scientific communication, good understanding of the Microscope	1,3,7,11	U,A,E
			CO2: Students gather practical skills of handing microorganisms in the laboratory for study.	1,2,3	R,U,A
			CO3: Knowledge of preparation of slides for observation under compound microscope and identification of microorganisms, simple staining, Gram's staining of bacteria and basic microbiological techniques.	1,2,3	R,U,A

II	**BSMB201**	**Microbial Diversity II**	**CO1:** Students will have a thorough understanding on structure, capsid symmetry, isolation, purification and cultivation of viruses.	1,3,6	U, An, A
			CO3: Understanding of Lytic and lysogenic cycle of phages	1,3,7,11	U,A,E
			CO3: Student will get good understanding of cyanobacteria and protozoa.	1,2,3	R,U,A
II	**BSMB202**	**Bacteriology**	**CO1:** Explain the procedure of pure culture preparation and different types of plating and streaking techniques. Deliver knowledge on microbial identification methods.	1,6,11	U,A,An, C
			CO2: Understanding of various staining methods for identification of bacteria and preservation of microorganism.	1,2,3	R,U,A
			CO3: Understanding of various sterilization techniques.	3,4,5,6	A,An,E,C
II	**BSMB203**	**Analytical techniques**	**CO1:** Students will understand the principle and working of Autoradiography, centrifugation, light microscope, paper, thin layer and column chromatography.	1,2,3,4,6,11	A, E
			CO2: Features of dark field, phase contrast and electron microscopes. Students will be acquainted with ultra-modern instruments and Biotechniques.	1,2,3	R,U,A
II	**BSMB251**	**Microbiology Practical: Based on Theory Papers-II**	**CO1:** Student will learn handling instruments like Incubator and BOD Incubator, Centrifuge, Colorimeter and Spectrophotometer.	3,4,5,6	A,An,E,C
			CO2: Students gather practical skills of handing bacteria & viruses in the laboratory for study and learn about simple and differential staining process, Serial dilution technique, Media preparation, pure culture and inoculation techniques - isolation of microorganisms by streak plate, spread plate and pour plate method and will learn to perform pure cultures techniques to isolate, study, identify and preserve bacterial strains.	1,2,3,4,5,7,11	A, An, C,E
			CO3: Students perform chromatographic techniques to carry out estimations of biochemical compounds and understand the principle and working of pH meter, paper and thin layer chromatography and Gel electrophoresis.	1,2,3	R,U,A

III	**BSMB301**	**Microbial Diversity III**	**CO1:** Understanding the fundamentals characters and reproduction of algae.	1,3,4,6	U,R,A
			CO2: Knowledge of fungal structures and important members of fungi with their applications.	1,2,3	R,U,A
III	**BSMB302**	**Microbial Genetics**	**CO1:** Students will gain through knowledge on molecular aspects of cell, microbial genetics, and mechanisms of genetic exchange & transposable elements.	1,3,4,6	E
			CO2: They will gain knowledge about phage genetic.	1,2,3	R,U,A
III	**BSMB303**	**Microbial Physiology**	**CO1:** Cognize the regulation of biochemical pathway and possible process modifications for improved control over microorganisms for microbial product synthesis.	3,4,5,6	A,An,E,C
			CO2: In depth knowledge of the energetic and regulation of different metabolic processes in microorganisms.	1,5,6,7,8,9,10,11	U,R,E,An
III	**BSMB351**	**Microbiology Practical: Based on Theory Papers-III**	**CO1:** Identification of different cyanobacteria, fungi and algae through different sources.	1,2,3,4,7,11	U, C,An
			CO2: Plasmid isolation, AMES test, replica plating	1,2,3	R,U,A
			CO3: Estimation of various industrial products. Mushroom identification and cultivation	3,4,5,6	A,An,E,C
IV	**BSMB401**	**Molecular Biology**	**CO1:** This paper would enable students to have an overall knowledge about DNA structure and replication, types of RNA, transcription, post-transcriptional processing and translation of prokaryotes and eukaryotes.	1,4,6	U,An,C,E
			CO2: They will learn about regulation of gene expression. Students will learn about DNA damage and repair mechanism.	1,2,3	R,U,A
IV	**BSMB402**	**Immunology**	**CO1:** Students will have fundamental concept on innate & adaptive immunity, immune cells and organs, epitopes, adjuvants, haptens, MHC.	1,2,4,6,11	C,U,E
			CO2: Students will have knowledge on types, structure, and functions of antibodies.	1,2,3	R,U,A
			CO3: They will gain knowledge on Immunization, vaccine production and will able to perform advanced immunological Techniques.	3,4,5,6	A,An,E,C

IV	**BSMB403**	**Biochemistry**	**CO1:** Recognize the regulation of biochemical pathway and possible process modifications for improved control over microorganisms for microbial product synthesis.	1,3,4,11	U, R,An
			CO2: Structure and applications of different biomolecules		
IV	**BSMB451**	**Microbiology Practical: Based on Theory Papers-IV**	**CO1:** Students will perform Qualitative & Quantitative estimation of, proteins, DNA and RNA.	1,2,3,4,7,11	E,An,A
			CO2: Student will learn to choose appropriate techniques for biochemical investigations associated with qualitative and quantitative analysis of, proteins.	3,4,5,6	A,An,E,C
			CO3: Perform advanced immunological Techniques.	1,5,6,7,8,9,10,11	U,R,E,An
V	**BSMB501**	**Medical Microbiology**	**CO1:** Students will gain through knowledge on various bacterial, viral, fungal & Protozoan diseases.	1,2,3	R,U,A
			CO2: Students will have knowledge on modes of action of Antibacterial, Antifungal and Antiviral agents.	3,4,5,6	A,An,E,C
			CO3: Students will carry out advanced diagnostic procedures.	1,5,6,7,8,9,10,11	U,R,E,An
V	**BSMB502**	**Environmental Microbiology**	**CO1:** Students will study the beneficial and harmful roles of microbes in air, water and soil as well as factors affecting their presence in environment, biogeochemical cycling & microbial interactions also gain advanced knowledge on Waste Management treatment.	1,3,6,7,9,10	E, U, C
			CO2: Student will understand the function and importance of biotic and abiotic environmental factors in the sustenance of plant life and the local ecology.	1,2	R,U
V	**BSMB503**	**Recombinant DNA Technology**	**CO1:** Will be familiar with the use of various cloning vectors, and methods of DNA, RNA and protein analysis and about the methods on gene transfer and screening of recombinants.	1,2,6,7,11	A, An
			CO2: Understand the principles and applications of advanced molecular technique.	3,4,5,6	A,An,E,C

V	**BSMB551**	**Microbiology Practical: Based on Theory Papers-V**	**CO1:** Students will gain knowledge about soil, water and air microflora and perform hands on training on physicochemical properties of different water and soil sources.	1,5,6,7,8,9,10,11	U,R,E,An
			CO2: Students perform chromatographic techniques to carry out estimations of biochemical compounds and understand the principle and working of Gel electrophoresis.	1,2,3	R,U,A
VI	**BSMB601**	**Fermentation Technology**	**CO1:** Students will understand the fundamentals of screening methods, microbiological culture, preservation techniques, etc.	1,3,5,6,7,8,10,11	U,R,C,E
			CO2: Understand the principles of media sterilization and inoculum formation.	1,2,3	R,U,A
			CO3: Students will learn more about synchronous growth, different types of fermentation processes, and the general structure and components of a fermenter. Knowledge of the specific downstream processes involved in the fermentation of significant microbial products.	1,3	R.A
VI	**BSMB602**	**Food and Dairy Microbiology**	**CO1:** Students will study fermenting organisms from different foods and will gain knowledge and hands-on-training on preparation of fermented foods.	1,5,6,7,8	A,An, E
			CO2: Students will have idea on beneficial role of gut probiotics, traditional fermented foods and their wide nutritional values. Students will study different food infections & intoxications.	1,2,3	R,U,A
			CO3: Students will study microbial spoilage of various foods, intrinsic and extrinsic factors of microbial activity and knowledge on physical & chemical methods of food preservation.	1,3	R.A

VI	**BSMB603**	**Soil and Agricultural Microbiology**	**CO1:** Students will learn about microbes for sustainable development of agriculture, will have knowledge on biofertilization, phytostimulation, bioinsecticides, biomanure, biogas, biofuels and on GM crops.	1,3,6,7,9,10	A,E,C
			CO2: Microbial products of commercial value in the field of food, industrial, pharmaceutical, agricultural and environmental Microbiology.	1,3	R.A
			CO3: Students will learn about microbes for sustainable development of agriculture, will have knowledge on biofertilization, phytostimulation, bioinsecticides, biomanure, biogas, biofuels and on GM crops.	1,3	R.A
VI	**BSMB651**	**Microbiology Practical: Based on Theory Papers-VI**	**CO1:** Students will be able to isolate pure cultures of bacteria from various food, soil and agricultural sources, one must be familiar with general bacteriology and microbial procedures.	1,3,5,6,7,8,10,11	A,An, E
			CO2: They will get hands on experience on production of various industrially important microbial products.	1,3	R.A

Maths
Programme Specific Outcome (PSO's)

S. No.	On completing Bachelor of Science, the student will be able to:
PSO-1	A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology.
PSO-2	A student should get adequate exposure to global and local concerns that explore them many aspects of mathematical sciences.
PSO-3	Student is equipped with mathematical modelling ability, problem solving skills,
PSO-4	Student should be able to apply their skills and knowledge that is translate information presented verbally into mathematical form.
PSO-5	Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.
PSO-6	Student will get the creative talent and power of communication necessary for various kinds of employment.
PSO-7	Student should be able to select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion
PSO-8	Recognize the importance and value of Mathematical thinking, training and approach to problems solving on a diverse variety of disciplines.
PSO-9	Ability to learn and apply the computer programming in C

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	Cognitive levels
I	BSMA101	Discrete Mathematics	**CO1:** Analyze logical propositions via truth tables.	1, 4, 8	R, U, AN,
			CO2: Prove mathematical theorems using mathematical induction.	3,5	A, E
			CO3: Understand sets and perform operations and algebra on sets.	1,2,3	R,U,A
			CO4: Determine properties of relations, identify equivalence and partial order relations, sketch relations.	1,4,5	R,An,E
			CO5: Identify functions and determine their properties.	5,6	E,C
I	BSMA102	Calculus-I	**CO1:** Understand the idea of derivative, tangent line to the graph of a function	1, 2, 5	U, A, AN
			CO2: How a derivative can be used to describe the rate of change of one quantity with respect to another	3,5	A, E
			CO3: How to relate the geometric ideas to the analytic ideas.	1,2,3	R,U,A
I	BSMA103	Three Dimensional Geometry and Vector Calculus	**CO1:** Understand the basic applications of coordinate geometry.	3,4, 5, 8	U, A
			CO2: They will develop ability to pursue advanced studies and research in pure and applied mathematical science.	3,5	A, E
			CO3: Determine the derivatives of vectors and their properties	1,2,3	R,U,A
			CO4: Understand the various operators and their applications in vector calculus.	1,4,5	R,An,E
			CO5: Understand the concept of line, surface and volume integration with their relationship.	5,6	E,C
II	BSMA201	Graph Theory	**CO1:** Understand the basics of graph theory and their various properties.	1,4, 5, 7	U, A, An,C
			CO2: Model problems using graphs and to solve these problems algorithmically.	3,5	A, E
			CO3: Apply graph theory concepts to solve real world applications like routing, TSP/traffic control, etc.	1,2,3	R,U,A

II	**BSMA202**	**Calculus-II**	**CO1:** Sketch curves in a plane using its mathematical properties in the different coordinate systems of reference.	7, 4, 1	R, A, E
			CO2: Compute the length of curve, area bounded by the curves, area and volume of surface of solid of revolution	3,5	A, E
II	**BSMA251**	**Maths Practical**	**CO1:** Understand the linear optimization theory and its applications.	2,3,4,5,6,7,8	R, U, A
			CO2: Identify the appropriate methods for the efficient computation of optimal solutions of a problem and a set of linear constraints	3,5	A, E
III	**BSMA301**	**Real Analysis-I**	**CO1:** Describe fundamental properties of the real numbers that lead to the formal development of real analysis.	1,4	U, A, E
			CO2: Comprehend regions arguments developing the theory underpinning real analysis	3,5	A, E
			CO3: Demonstrate an understanding of limits and how it is used in sequences, series and differentiation.	1,2,3	R,U,A
			CO4: Construct rigorous mathematical proofs of basic results in real analysis.	1,4,5	R,An,E
			CO5: Appreciate how abstract ideas and regions methods in mathematical analysis can be applied to important practical problems.	5,6	E,C
III	**BSMA302**	**Differential Equation-I**	**CO1:** Distinguish between linear, nonlinear, partial and ordinary differential equations.	2,3,4,7,8	U, A, C
			CO2: Recognize and solve exact differential equation by use of an integrating factor.	3,5	A, E
			CO3: Solve basic application problems described by first and second order differential equations	1,2,3	R,U,A
III	**BSMA303**	**Numerical Analysis**	**CO1:** Understand the nature and operations of Numerical Analysis, demonstrate familiarity with theories and concepts used in Numerical Analysis	2,3, 5, 6	U, R, A, An
			CO2: Identify the steps required to carry out a piece of research on a topic in Numerical Analysis,	3,5	A, E
			CO3: Apply Numerical Methods to solve algebraic and transcendental equations, integrals and differential equations.	1,2,3	R,U,A

			CO4: Analyzing their convergence rate and performance, applicability of the methods on different test examples.	1,4,5	R,An,E
			CO5: Recognize and apply appropriate theories, principles and concepts relevant to Numerical Analysis.	5,6	E,C
IV	**BSMA401**	**Advanced Analysis and Metric Space**	**CO1:** Develop a reasoned argument in handling problems about functions, especially those that are of bounded variation.	1, 4, 7	R, U, C
			CO2: Develop the ability to reflect on problems that are quite significant in the field of metric space.	1, 4, 7	R, U, C
IV	**BSMA402**	**Differential Equation-II**	**CO1:** Understand that physical systems can be described by differential equations	2,3,4,5,6	U, An, E
			CO2: Understand the practical importance of solving differential equations	3,5	A, E
			CO3: Analytically solve a wide range of differential equations	1,2,3	R,U,A
			CO4: Solve classical linear partial differential equations (PDEs)	1,4,5	R,An,E
IV	**BSMA451**	**Maths Practical**	On successful completion of this course students will be able to **CO1:** Apply well known numerical technique to solve science and engineering problems and evaluate the results.	3,6,9	A, E
V	**BSMA501**	**Abstract Algebra-I**	**CO1:** To construct and compare algebraic structures and substructures and analyze a given structure in detail.	4, 6	U, An, C
			CO2: Understand a new structure based on given structures.	3,5	A, E
V	**BSMA502**	**Complex Analysis-I**	**CO1:** Explain the central importance of complex variables in analysis by comparing and contrasting their use in different areas of mathematics.	1, 3	U, R, An,C
			CO2: Grasped a deeper understanding of differentiation and integration in this setting	3,5	A, E
			CO3: Know the tools and results of complex analysis including Cauchy's Theorem, Cauchy's integral formula	1,2,3	R,U,A

V	**BSMA503**	**Dynamics**	**CO1:** Learn about concept of Velocity and Acceleration.	1, 2	R, U, A
			CO2: Understand the theory of Simple Harmonic Motion and Hooke's law and Motion of elastic strings.	3,5	A, E
			CO3: Know about various topics in dynamics such as Motion in resisting medium and Projectile motion.	1,2,3	R,U,A
			CO3: Learn the concept of motion on smooth curve in vertical plane and inside the circle also.	1,4,5	R,An,E
VI	**BSMA601**	**Abstract Algebra-II**	**CO1:** Understand the concept of ideals, field of quotient, vector space and quotient space.	1,2	U, A
			CO2: Calculate the basis and dimension of vector space.	1,2,3	R,U,A
VI	**BSMA602**	**Complex Analysis-II**	**CO1:** Understand the manipulation-skills in the use of Rouche's theorem, Cauchy-Hadamard theorem,	1,4,7	U, E
			CO2: Evaluate radius of convergence.	1,2,3	R,U,A
			CO3: Understand the Argument Principle, the principle of Analytic Continuation and the concerned results.	1,2,3	R,U,A
VI	**BSMA651**	**Mathematics Practical**	**CO1:** Understand the scope and classification of operation research.	3,5,6,7,8	U, AN, C
			CO2: Optimize the allocation of resources to demand points in the best possible way using various techniques and minimize the cost or time of completion of number of jobs by number of persons.	3,5	A, E
			CO3: Model competitive real-world phenomena using concepts from game theory.	1,2,3	R,U,A
			CO4: Analyse pure and mixed strategy games.	1,4,5	R,An,E

ZOOLOGY PROGRAGRAME SPECIFIC OUTCOME

Programme Specific Outcome (PSO's)

PSO-1	Demonstrate a fundamental understanding of the academic field of Zoology, its different learning areas and applications, and its link with related disciplinary areas/subjects; provides awareness on the divisions in Animal Kingdom, their distribution, relationship among them and with the environment.
PSO-2	Show Procedural knowledge in various professions related to the subject in different fields inclusive of research and development, teaching, government and public services with the help of practical tests in different branches; Use it to analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment.
PSO-3	Exhibit Skills in areas related to their individual specialization like genetic engineering, in relation to current developments and related fields in the domain; helps to apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms.
PSO-4	Able to communicate the concepts, constructs and techniques involved in with ease and in a clear manner based on the animal evolution, animal behaviour, animal development and animal ecology topics.
PSO-5	Techniques and Methodologies discussed in the vital topics like Cell Biology, Genetics, Molecular Biology manifest the knowledge in research specific areas and studies by correlating the physiological processes of animals and relationship with cellular structure.
PSO-6	Understand the environmental conservation processes and its importance, pollution control, protection of endangered species, Wildlife Management, Climatic changes and Global Management are discussed as a paper to improvise the subject knowledge for identifying any problems related and in helping the impacted environment and biodiversity.
PSO-7	Helps advancement in job, trades, and employment with the help of knowledge about of Agro-based Small Scale industries like sericulture, fish farming, butterfly farming and vermicompost preparation and helps create various opportunities in the educational, research and developmental, social entrepreneurial sectors related to the same.
PSO-8	Should be able to create a contextual contents and examples in the real time world based on the applications and discussions carried out in all the subjects like combining clinical laboratory techniques studied as part of Medical Parasitology and behaviours of the microbes studied as part of the Microbiology.
PSO-9	Improve the observational, computational, and analytical ethical skills required for the research and development fields discussed for evolving trends in Genetics, molecular biology, micro-biology, cell biology, etc.

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	Cognitive levels
I	BSZO101	Life and Diversity of Non-Chordata I	**CO1:** Understand the general taxonomic rules on animal classification, the principles and methods of taxonomy and the general characters of phylum Protozoa and understand the protozoan's parasites of human.	2, 3	U,R
			CO2: Classify the phylum Porifera & Coelenterata using examples, Understand the canal system of sponges and Polymorphism in Coelenterates.	2, 3	U,R
			CO3: Phylum helminthes & Annelida with taxonomic keys, and a basic idea of metamerism in Annelids and parasitic adaptations of helminthes.	2, 3	U,R
			CO4: Understand the classification and characteristics of Phylum Arthropoda, mouth parts of insects, the classification and characteristics and economic importance of Phylum Molluscans.	1,4	R,An
			CO5: Classification and characteristics of Phylum Echinodermata & structures and water vascular system and larval forms of echinoderms	2, 3	U,R
I	BSZO102	Developmental Biology	**CO1:** Understand reproductive organs, gametogenesis and fertilization.	3	U,R
			CO2: Illustrate cleavage, blastulation and gastrulation.	1,4	R,An

			CO3: Understanding the phenomenon of organogenesis.	2,3,4	U,A,An
			CO4: Understanding nuclear transplantation methods in frog.	2, 3	U,R
			CO5: Gain knowledge in test tube baby and in vitro fertilization	2, 3	U,R
I	**BSZO103**	**Cell Biology**	**CO1:** Gain knowledge on cell structure and its functions	3	U,R
			CO2: Analyses the functional role of various cellular organelles in the cell.	2, 3	U,R
			CO3: Learn the integrated molecular events.	2, 3	U,R
			CO4: Hypothesize Chromosomes Structure and functions	2, 3	U,R
			CO5: Understand the mechanisms of cell division and control of Cancer mechanisms.	5,2,3,4	U,R, A, An
I	**BSZO151**	**Zoology Practical: Based on Theory Papers-I**	**CO1:** Identify and classify lower invertebrate specimens using morphological characteristics and taxonomic keys.	5,2,3,4	U,R, A, An
			CO2: Prepare and observe histological sections of lower invertebrate tissues under the microscope, identifying different cell types and structures.	2, 3	U,R
			CO3: Conduct experiments to investigate cellular processes such as mitosis, meiosis, and cellular respiration in lower invertebrates.	3	U,R
			CO4: Perform developmental biology techniques, including embryonic staging, manipulation, and observation, to study the life cycles of lower invertebrate species.	5,2,3,4	U,R, A, An

			CO5: Apply ecological sampling methods to assess the abundance, diversity, and distribution of lower invertebrates in different habitats.	2, 3	U,R
II	**BSZO201**	**Life and Diversity of Non-Chordata-II**	**CO1:**Describe general taxonomic rules on animal classification	2	U,R
			CO2: To understand the life history of phylum porifera to annelid. Understanding the parasites of human concern	2	U,R
			CO3: To understand the development of some invertebrates and the economic importance of insects	2	U,R
			CO4: To understand the life history and different respiratory systems	2, 3	U,R
			CO5: Understand the different physiological systems of various higher animals	3	U,R
II	**BSZO202**	**Genetics**	**CO1:** Explain the fundamental concepts of Mendelian genetics, including laws of inheritance, segregation, and independent assortment.	3	U,R
			CO2: Describe the structure, function, and replication of genetic material (DNA and RNA).	4,6	An,C
			CO3: Discuss the molecular basis of gene expression and regulation, including transcription, translation, and epigenetics. **CO4:** Analyze genetic linkage, mapping, and the role of recombination in genetic diversity.	6,1	C,R
			CO5: Apply principles of population genetics to understand the distribution and behavior of genes in populations over time.	2, 3	U,R

II	**BSZO203**	**Molecular Biology**	**CO1:** Explain the structure and function of nucleic acids (DNA and RNA) and their role in the central dogma of molecular biology.	3	U,R
			CO2: Describe the molecular mechanisms of DNA replication, repair, and recombination.	2, 3	U,R
			CO3: Discuss the principles of protein synthesis (translation) and the genetic code.	3	U,R
			CO4: Illustrate the regulation of gene expression in prokaryotes and eukaryotes.	1,4	R,An
II	**BSZO251**	**Zoology Practical: Based on Theory Papers-II**	**CO1:** Demonstrate proficiency in the use of laboratory techniques for analyzing genetic variation and evolutionary relationships among species.	5,2,3,4	U,R, A, An
			CO2: Conduct experiments and field studies to observe and record patterns of natural selection and adaptation in different organisms.	4,6	An,C
			CO3: Analyze fossil specimens and molecular data to reconstruct phylogenetic trees and interpret evolutionary histories.	6,1	C,R
			CO4: Investigate and document evidence of speciation events through comparative anatomy and genetic analysis.	2, 3	U,R
			CO5: Evaluate the impact of environmental changes on evolutionary processes using case studies and experimental data.	3	U,R
III	**BSZO301**	**Molecular Biology**	**CO1:** Explain the structure and function of nucleic acids (DNA and RNA) and their role in the central dogma of molecular biology.	2,7	U,R
			CO2: Describe the molecular mechanisms of DNA replication, repair, and recombination.	4,6	An,C
			CO3: Discuss the principles of protein synthesis (translation) and the genetic code.	6,1	C,R

			CO4: Illustrate the regulation of gene expression in prokaryotes and eukaryotes.	2, 3	U,R
III	**BSZO302**	**Microbiology & Parasitology**	**CO5:** Apply techniques of molecular cloning, including the use of vectors, restriction enzymes, and PCR.	3	U,R
			CO2: Describe the diversity of microorganisms, including bacteria, viruses, fungi, and protozoa, and their roles in infectious diseases and environmental processes.	4,6	An,C
			CO3: Discuss the mechanisms of microbial pathogenesis, including virulence factors, host-pathogen interactions, and immune responses.	6,1	C,R
			CO4: Analyze the epidemiology and transmission of infectious diseases, including the role of vectors and reservoirs in disease spread.	2, 3	U,R
			CO5: Identify and characterize medically important parasites, including protozoa, helminths, and arthropods, and their life cycles, pathogenesis, and control strategies.	3	U,R
III	**BSZO303**	**Physiology -I**	**CO1:** Explain the basic principles of animal physiology, including homeostasis, and the roles of various organ systems.	2,7	U,R
			CO2: Describe the structure and function of the nervous and endocrine systems, and their roles in regulating physiological processes.	1,2,3,4,5,6	R,U,A,An,E,C
			CO3: Discuss the mechanisms of muscle contraction and the physiology of the muscular system.	4,6	An,C
			CO4: Analyze the processes involved in cardiovascular and respiratory systems, including circulation, gas exchange.	6,1	C,R

			CO5: Investigate the principles of renal physiology and osmoregulation, including the structure and function of the excretory system.	2, 3	U,R
Practical's	**BSZO351**	**Zoology Practical: Based on Theory Papers-III**	**CO1:** Demonstrate proficiency in laboratory techniques for studying various aspects of animal anatomy, physiology, and behavior.	5,2,3,4	U,R, A, An
			CO2: Conduct experiments and observations to investigate the diversity and adaptations of different animal groups, including vertebrates and invertebrates.	1,2,3,4,5,6	R,U,A,An,E,C
			CO3: Analyze and interpret data collected from practical exercises to draw conclusions about biological phenomena and ecological relationships.	4,6	An,C
			CO4: Apply taxonomic keys and classification techniques to identify different animal species and understand their evolutionary relationships.	6,1	C,R
			CO5: Develop skills in scientific communication by effectively documenting experimental procedures, observations, and findings in laboratory reports.	1,2,3,4,5,6	R,U,A,An,E,C
IV	**BSZO401**	**Life and Diversity of Chordate-II**	**CO1:** Explain the structural and functional similarities and differences among vertebrate groups, including fishes, amphibians, reptiles, birds, and mammals.	2	U,R
			CO2: Describe the anatomical features of major vertebrate organ systems, including the nervous, circulatory, respiratory, digestive, and reproductive systems.	6, 7	U,R
			CO3: Analyze the evolutionary adaptations of vertebrates to different environments and ecological niches.	4,5,6	An,E,C

			CO4: Discuss the phylogenetic relationships and evolutionary trends within the vertebrate lineage, based on comparative anatomical and molecular data.	2,1,5,6	U,R,E,C
			CO5: Apply comparative anatomical principles to identify vertebrate specimens and infer their ecological roles and evolutionary histories.	6, 7	U,R
IV	**BSZO402**	**Biochemistry**	**CO1:** Explain the fundamental concepts of biochemistry, including the structure and function of biomolecules such as proteins, carbohydrates, lipids, and nucleic acids.	6, 7	U,R
			CO2: Describe the biochemical pathways involved in metabolism, including glycolysis, Krebs cycle, and oxidative phosphorylation.	1,2	R,U
			CO3: Analyze the regulation of gene expression at the molecular level, including transcriptional and translational control mechanisms.	6, 7	U,R
			CO4: Discuss the biochemical basis of diseases and disorders, including metabolic diseases, genetic disorders, and cancer.	4,5,6	An,E,C
			CO5: Apply biochemical techniques, such as chromatography, electrophoresis, and spectrophotometry, to analyze and characterize biomolecules and metabolic pathways.	2,1,5,6	U,R,E,C

IV	**BSZO403**	**Physiology II**	**CO1:** Explain advanced concepts in animal physiology, including neurophysiology, endocrinology, and integrative physiology.	6, 7	U,R
			CO2: Describe the mechanisms of neuronal signaling, including action potentials, synaptic transmission, and sensory processing.	6, 7	U,R
			CO3: Analyze the regulation of physiological processes by endocrine glands and hormones, including feedback mechanisms and hormone interactions.	4,5,6	An,E,C
			CO4: Discuss the principles of muscle physiology, including excitation-contraction coupling, muscle metabolism, and muscle fatigue.	2,1,5,6	U,R,E,C
			CO5: Investigate physiological adaptations of animals to extreme environments, such as high altitude, deep-sea, and polar regions, and their implications for survival and function.	6, 7	U,R
IV	**BSZO451**	**Zoology Practical: Based on Theory Papers-IV**	**CO1:** Demonstrate advanced laboratory techniques for studying the anatomy, physiology, and immunology of vertebrate animals.	4,5,6	An,E,C
			CO2: Conduct experiments and investigations to explore physiological adaptations of vertebrates to their environments and evaluate their implications for animal health and survival.	2,1,5,6	U,R,E,C
			CO3: Apply immunological techniques, such as ELISA and flow cytometry, to analyze immune responses in vertebrates and assess their significance in disease resistance and immunity.	2,1,5,6	U,R,E,C

			CO4: Utilize comparative anatomical approaches to identify and compare anatomical structures among vertebrate groups and infer their evolutionary relationships.	6, 7	U,R
			CO5: Integrate knowledge from applied zoology to propose solutions for practical issues related to wildlife conservation, veterinary medicine, and sustainable management of animal populations.	4,5,6	An,E,C
V	**BSZO501**	**Ethology**	**CO1:** Explain the fundamental concepts of biochemistry, including the structure and function of biomolecules such as proteins, carbohydrates, lipids, and nucleic acids.	2	U,R
			CO2: Describe the biochemical pathways involved in metabolism, including glycolysis, Krebs cycle, and oxidative phosphorylation.	6, 7	U,R
			CO3: Analyze the regulation of gene expression at the molecular level, including transcriptional and translational control mechanisms.	4,5,6	An,E,C
			CO4: Discuss the biochemical basis of diseases and disorders, including metabolic diseases, genetic disorders, and cancer.	2,1,5,6	U,R,E,C
			CO5: Apply biochemical techniques, such as chromatography, electrophoresis, and spectrophotometry, to analyze and characterize biomolecules and metabolic pathways.	6, 7	U,R

V	**BSZO502**	**Instrumentation & Bioinformatics**	**CO1:** Understand the principles and applications of biotechnological techniques, including DNA cloning, PCR, DNA sequencing, and recombinant DNA technology.	2	U,R
			CO2: Describe the instrumentation used in biotechnology research, including spectrophotometers, centrifuges, electrophoresis systems, and PCR machines.	1,2,3,4,5,6	R,U,A,An,E,C
			CO3: Analyze biological data using bioinformatics tools and databases to study genetic sequences, protein structures, and metabolic pathways.	4,6	An,C
			CO4: Develop practical skills in biotechnological laboratory techniques, including DNA extraction, gel electrophoresis, and bioinformatics analysis.	6,1	C,R
			CO5: Apply biotechnological methods and bioinformatics tools to address research questions in various fields, including medicine, agriculture, environmental science, and forensics.	1,2,3,4,5,6	R,U,A,An,E,C
V	**BSZO503**	**Immunology and biotechnology**	**CO1:** Explain the basic principles of the immune system, including innate and adaptive immunity, antigen recognition, and immune cell activation.	2	U,R
			CO2: Describe the cellular and molecular components of the immune system, including lymphocytes, antibodies, cytokines, and antigen-presenting cells.	1,2,3,4,5,6	R,U,A,An,E,C
			CO3: Discuss the potential applications of animal biotechnology in agriculture, medicine, conservation, and biopharmaceutical production.	4,6	An,C

			CO4: Develop practical skills in animal biotechnology, including tissue culture, gene manipulation, and recombinant protein expression, to address research questions and industry needs.	6,1	C,R
V	**BSZO551**	**Zoology Practical: Based on Theory Papers-V**	**CO1:** Demonstrate practical skills in biochemical techniques, including spectrophotometry, chromatography, and electrophoresis, for analyzing biomolecules and metabolic pathways.	1,2,3,4,5,6	R,U,A,An,E,C
			CO2: Apply knowledge of wildlife conservation and management principles to design and implement field surveys and monitoring programs aimed at assessing wildlife populations and habitats.	4,6	An,C
			CO3: Utilize biotechnological tools and instrumentation, such as PCR machines and bioinformatics software, to analyze genetic sequences, protein structures, and metabolic pathways in wildlife and apicultural contexts.	1,2,3,4,5,6	R,U,A,An,E,C
			CO4: Develop practical skills in apiculture, including hive management, colony inspection, disease diagnosis, and honey extraction, to support sustainable beekeeping practices and ensure bee health.	4,6	An,C
			CO5: Integrate knowledge from biochemistry, wildlife conservation, biotechniques, and apiculture to propose interdisciplinary approaches for addressing practical issues related to wildlife health, biodiversity conservation, and sustainable agriculture.	1,2,3,4,5,6	R,U,A,An,E,C

VI	**BSZO601**	**Evolution & Biostatistics**	**CO1:** By biological evolution we could understand that many of the organisms that inhabit theEarth today are different from those that inhabited it in the past.	7	U,R
			CO2: Understood that the four propositions underlying Darwin's theory of evolution.	1,2,3,4,5,6	R,U,A,An,E,C
			CO3: Analyze and understand genetic drift and speciation.	4,6	An,C
			CO4: Interpret research findings and draw valid conclusions based on statistical analysis and critical evaluation of evidence.	6,1	C,R
			CO5: Apply research methodology and biostatistics principles to design and conduct scientific investigations, evaluate research literature, and communicate research findings effectively.	1,2,3,4,5,6	R,U,A,An,E,C
VI	**BSZO602**	**Economic Zoology**	**CO1:** Understand the principles of zoology and their applications in various fields such as agriculture	7	U,R
			CO2: Identify and classify different species of animals	1,2,3,4,5,6	R,U,A,An,E,C
			CO3:: Apply knowledge of animal physiology and anatomy to understand their functions	4,6	An,C
			CO4:: Analyze the impact of human activities on animal populations	6,1	C,R
VI	**BSZO603**	**Ecology & Environmental Biology**	**CO1:** Demonstrated an Understood of ecological relationships between organisms and their environment.	2,7	U, R
			CO2: Presented an overview of diversity of life forms in an ecosystem	1,2,3,4,5,6	R,U,A,An,E,C
			CO3: Explained and identified the role of the organism in energy transfers	4,6	An,C

			CO4: Described the Habitat ecology and Resource ecology.	6,1	C,R
			CO5: Understood the Environmental Pollution and their management.	1,2,3,4,5,6	R,U,A,An,E,C
VI	**HSZO651**	**Zoology Practical: Practical Training & dissertation-VI**	**CO1:** Demonstrate practical skills in animal biotechnology techniques, such as tissue culture, gene manipulation, and training. recombinant protein expression, through hands-on laboratory.	5,2,3,4	U,R, A, An
			CO2: Apply knowledge of environmental health principles and public health policies to design and implement research projects aimed at assessing the impact of environmental factors on animal health and welfare.	1,2,3,4,5,6	R,U,A,An,E,C
			CO3: Utilize research methodology and biostatistics principles to develop research proposals, collect and analyze data, and draw valid conclusions in zoological research contexts.	1,2,3,4,5,6	R,U,A,An,E,C
			CO4: Design and conduct independent research projects or experiments in zoology, integrating theoretical concepts from physics and biology to investigate ecological, physiological, or biotechnological questions.	4,6	An,C
			CO5: Present research findings in written dissertation reports or oral presentations, following standard scientific communication formats and conventions, and defend the research outcomes in a scholarly forum.	6,1	C,R

B.Sc. (Psychology)
Programme Specific Outcome (PSO's)

PSO-1	Develop sound knowledge about the fundamental concepts in Psychology related to various sub fields of Psychology.
PSO-2	Develop critical thinking skills and distinguish between concepts studied in different courses.
PSO-3	Apply appropriate concepts and methods of Psychology to solve problems.
PSO-4	Develop positive attributes such as empathy, compassion, effective communication skills like listening, speaking and observational skills.
PSO-5	Be committed towards the health and wellbeing of different stakeholders.
PSO-6	Appreciation and tolerance towards different behavioral patterns.
PSO-7	Analyze social problems, social dynamics and create solutions to manage them effectively.
PSO-8	Develop a strong theoretical foundation of research methodology used in Psychology and apply the knowledge to conduct research in an ethical way.

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	Cognitive levels
I	BSPY 101	Basic Psychological Process	**CO1:** Define and differentiate among various subfields of Psychology. Distinguish between different scientific methods that are used to carry out a scientific inquiry in psychology.	1	R,U,A,An,E
			CO2: Recognize the influence of biological factors on human behavior.	1,5	R,U,A,An,E
			CO3: Differentiate between the cognitive processes such as sensation, attention and perception.	1,3,7	R,U,A,An,E
			CO4: Identify various components of learning. Describe different theories of learning.	1,3,4	R,U,A,An,E,C
I	BSPY102	Social Psychology	**CO1:** Demonstrate fundamental knowledge about need and domains of Social Psychology. Be aware of the brief history and relationship of Social Psychology with other fields. Understand different types and theories of leadership.	1	R,U,A,An,E
			CO2: Describe different social processes of social dynamics.	1,2,3	R,U,A,An,E,
			CO3: Identify and utilize social cues to make judgments about people.	1,4	R,U,A,An,E,
			CO4: Understand different types and theories of leadership.	1,5	R,U,A,An,E,
			CO5: Effective use of communication.	8	R,U,A,An,E,

II	**BSPY201**	**Basic Psychological process**	**CO1:** Understand the motive behind behavior. Understand memory process and causes of forgetting	1,2	R,U,A,An,E,
			CO2: Explain the emotional expression of oneself and others and the physiological aspects.	2,3	R,U,A,An,E,
			CO3 : Explain different types of intelligence processes which can help in understanding different behaviours which are related to intelligence	1,4,5	R,U,A,An,E,
			CO4: Analyze different types of personality traits which can be beneficial in dealing with human behaviour.	1,6	R,U,A,An,E,
			CO5: Critically evaluate different types of personality theories effectively.	5,6,	R,U,A,An,E,C
			CO6: Construct an action plan based on SWOT analysis for one's life.	8	R,U,A,An,E,C
II	**BSPY 202**	**Social Psychology**	**CO1:** Analyze different attitudes and causes of prejudices and accordingly be able to suggest appropriate measures to control them.	1,6	R,U,A,An,E,
			CO2: Differentiate different kinds of relationship patterns of interpersonal attraction.	2,3	R,U,A,An,E,
			CO3: Examine different theories of aggression.	3,5	R,U,A,An,E,
			CO4: Justify why a pro-social behavior happen differently in different situations.	6,7	R,U,A,An,E,
			CO5: Propose appropriate preventive measures dealing with aggression.	3,5	R,U,A,An,E,
III	**BSPY 301**	**Psychopathology**	**CO1:** Identify different disorders which help in diagnosing a disorder.	3,5	R,U,A,An,E,
			CO2: Compare different paradigms of psychopathology.	3,6	R,U,A,An,E,
			CO3: Infer a particular psychological disorder based on the knowledge of different clinical symptoms.	2,3	R,U,A,An,E,

			CO4: Write appropriate case history based on the mental state examination of a client.	4,6,7	R,U,A,An,E,
III	**BSPY 302**	**Psychological Statistics**	**CO1:** The students will be able to develop an understanding of various statistical techniques.	3,8	R,U,A,An,E,
			CO2: Developing skills to use quantitative techniques such as measures of central tendency, variability, and correlation.	1,2	R,U
			CO3: Identify and distinguish the analysis techniques that can be used in research.	1,2	R,U
			CO4: Application of SPSS.	1,2	R,U
IV	**BSPY 401**	**Psychopathology**	**CO1:** Understand different types of mood and psychoactive mood disorders.	1,2	R,U,A,An,E,
			CO2: Understand Schizophrenia in detail.	3,5	R,U,A,An,E,
			CO3: Understand various clinical interventions.	5,6	R,U,A,An,E,
			CO4: Know about the various personality disorders.	6	R,U,A,An,E,
IV	**BSPY 402**	**Psychological Statistics**	**CO1:** Understand the concept of hypothesis and its testing.	1,2	R,U,A,An,E,
			CO2: Understand the use of parametric tests.	8	R,U,A,An,E,
			CO3: Understand the application of ANOVA.	8	R,U,A,An,E,
			CO4: Familiarized with the use of SPSS	3,8	R,U,A,An,E,
V	**BSPY 501**	**Positive Psychology**	**CO1:** Understand about the emergence of a new field of Psychology.	1,3	R,U,A,An,E,
			CO2: Understand the theoretical viewpoints of happiness.	5	R,U,A,An,E,
			CO3: Understand different positive cognitive states.	2,4	R,U,A,An,E,
			CO4: Identify personal strengths	4	R,U,A,An,E,
V	**BSPY 502**	**Psychometrics**	**CO1:** Understand the need and origin of psychological testing.	1,3	R,U,A,An,E
			CO2: Understand the use of tests in different fields.	1	R,U,A,An,E

			CO3: Understand various ethical aspects in testing.	3,8	R,U,A,An,E
			CO4: Understand the procedure of test construction	8	R,U,A,An,E
VI	**BSPY 601**	**Positive Psychology**	**CO1:** Understand the resilient behavior in different ages.	3,4,6	R,U,A,An,E
			CO2: Understand self-regulation and self-control and its application.	6,7	R,U,A,An,E
			CO3: Understand mental health and wellbeing and promote the same for achieving life satisfaction.	4,5	R,U,A,An,E
			CO4: Understand the components and theories of emotional intelligence and pro social behaviour**.**	6,7	R R,U,A,An,E
VI	**BSPY 602**	**Psychometrics**	**CO1:** Understand the characteristics of a good test.	2,8	R,U,A,An,E
			CO2: Understand the standardization of tests.	2,4	R,U,A,An,E
			CO3: Understand the use of different types of tests to measure different attributes.	4	R,U,A,An,E

B.Sc. (Geography)

Programme Specific Outcome (PSO's)

PSO-1	The students may be able to read and understand maps and topographic features to look at the various aspects on the space.
PSO-2	Evaluate critical aspects of spatial phenomenon from global to local level on various time scales.
PSO-3	Analyse co-relationship of physical condition, cultural condition, population, efficiency, education, science, policy, religion, health, ethics, various philosophical schools etc.
PSO-4	Understand the basic statistical analysis and its application in geography.
PSO-5	The students learn about different geographical, geomorphological, climatic and hydrological Processes and methods and also gain knowledge interrelated phenomenon

Semester	Course Code	Course Title	Course Outcomes on completing the course, the student will be able to:	Attributes	
				PSOs addressed	Cognitive levels
I	BSGE101	Physical Geography -I (Lithosphere)	**CO1:** Understand earth's form and relationships between its physical components.	1, 2	U,An
			CO2: Learn fundamental understanding of the main physical aspects of the Earth, earth's structure and dynamic processes.	1, 2, 5	U ,An ,E
			CO3: Understand about the earth's physical environment and to comprehend the relationships between geomorphologic landforms, concepts, and processes.	1,2,3,4,5	U,An,E .A
I	BSGE102	Geography of Rajasthan : Physical and Human Attributes	**CO1:** Rajasthan and its geographical and physio-graphical features	1, 2, 5	U,An,A
I	BSGE151	Practical's	**CO2:** Learn about climate, water, soil human, resources and other significant aspects and interrelated phenomenon	1,2	U, An
			CO3: Gain in-depth knowledge and comprehensive overview of arid and semi-arid region of the country.	1,5	U,An,E,A
			CO1: The basic concepts of drawing scales and different methods of representation of scales, reading scale on maps and its uses	1,4	An
			CO2: The basic methods of drawing Profiles and uses	4	E,An,
			CO3: Methods of interpolation of contour, contours and relief representation.	4	E, An

II	**BSGE201**	**Physical Geography-II (Climatology and Oceanography)**	**CO1:** Understand various elements of Climate and the factors influencing the distribution of temperature and pressure	2	U,R
			CO2: Learn about the Heat budget, Insolation, Air masses, Fronts, cyclones and weather phenomenon	2,5	U,C,R,A
			CO3: Study world climate types and evaluate co-relationship between various weather elements	2,4,5	U,C,E
			CO4: Study oceans ,oceanic circulation and movements Also understand relationship between atmosphere and oceans	5	C,U,E,An
			CO5: Evaluate the utilities of marine resources and significance of corals in marine ecology	2,5	U,R
II	**BSGE202**	**Geography of Rajasthan-II (Economic Aspects)**	**CO1:** Identify and understand the economy of natural resources and learned about the significance of cattle's growth and development in Rajasthan.	2,5	R,U,E,A,An
			CO2: Gain knowledge about institutional factors in Rajasthan with special reference to irrigation projects.	2,5	U,R
			CO3: Understand the distribution and characteristics of majors crops of Rajasthan in view of learning about the involvement of agriculture inputs in state's economy.		U,R,A,An
			CO4: knows the role of industries and industrialization in the rea of globalization and liberalization and its stake in Nation's GDP.	2,5	U,R,A,An,E

II	**BSGE251**	**Geography Practical-II**	**CO1:**Read and interpret the weather Maps	2,3	U,C,R,A
III	**BSGE301**	**Geography of India -I**	**CO2:** Learn to draw isotherm and isobar maps	1,2,3	U,R
			CO3: Sketch the land use Maps by using different methods of surveying	2,3	U,C,R,A
			CO4: Create a plan for a small area	1,2,3	U,C,E
			CO5: Read and interpret the weather Maps.	1,2,3,4, 5	C,U,E,An
III	**BSGE302**	**Human Geography-I**	**CO1:** Critically understand the various school of thoughts of geography with respect to the human-environment interactions.	1,2	U,R,An
			CO2: Understand and Identify the chronological development of human civilization, its impact and influence on the surrounding environment	1,2,3	U,R,An
			CO3: learn about the various habitat of the human along with the knowledge of the process of their adjustment to the surrounding easily available resources	1,2	U,R,E,An
			CO4: Study about the habitat, distribution and socio culture of the major tribes of the world	1,2	U,R
III	**BSGE351**	**Geography Practical-III**	**CO1:** Read and interpret the weather Maps	1,2	U,R
IV	**BSGE401**	**Geography of India -II**	**CO1:** learn about the various economic, Socio-cultural and environmental aspects of India with reference to policies and planning for development	1,2,3	U,R
			CO2: Explain and identify the characteristics and attributes of Regional Development and Planning Multi-level planning, Analyse Planning for backward areas. Identify local to global perspectives.	2,3	U,C,R,A

			CO3: Expose to demographic and population characteristics	1,2,3	U,C,E
			CO4: Evaluate the impact of human process on the environment with special reference to India.	4, 5	C,U,E,An
IV	**BSGE402**	**Human Geography-II**	**CO1:** Learn the qualitative aspects of Polulation which is useful in demographic and population studies. This gives insight in the dynamics of social processes and structure	1,2,4	C,U,E,An
			CO2: know the direction of the movement and flow of people and evaluate the various processes and implications	1,2,4	U,C,E,
			CO3: Understand and analyse the types and patterns of arrangement of people on the space in time	1,2	C,U,E,An,A
			CO4: understand the concepy of regions and its indicators over the space	1,2,3	U,EAN,E
IV	**BSGE451**	**Geography Practical-IV**	**CO1:** Represent data using different types of diagrams.	3, 4, 5	U, An, A
			CO2: Acquire knowledge of different types of maps and cartography techniques to represent the data.	4	U, An, A, E
			CO3: Apply statistical techniques to the data for further analysis.	3, 4	U, An, A, C
			CO4: Learn the basic concepts of applying statistical tools in geographical analysis.	2,3,5	U, C,An, A

V	**BSGE501**	**Evolution of Geographical Thought**	**CO1:** Acquire the knowledge about the development of Philosophical and Theoretical aspect of geography by studying the various thinkers	1,2,3	U,R
			CO2: learn the chronological development of geography from the ancient to medieval and from medieval to modern/post-modern	1,2,3	U,C,R,A
			CO3: Study the difference between Dualisms and Dichotomy and it's associate philosophies , model and theories	1,2	U,C,E
			CO4: Compare the ideas and Philosophies of scholars of modern school of thought and Paradigm shift	1,2,3	C,U,E,An
V	**BSGE502**	**World Geography**	**CO1:** Know the world in terms of natural regions and resources	1,2	C,U,E,An
			CO2: learn the distribution, and sustainable development of agriculture and minerals resources.	1,2,4	U, C,E
			CO3: Study about energy resources, its distribution and conservation.	1,2	C,U,E,An,A
			CO4: Develop the ability to evaluate the environment process, evolution and implications of degradation on society.	1,2,3	U,C,E
V	**BSGE551**	**Geography Practical-V**	**CO1:** Represent data using different types of diagrams.	3, 4, 5	U, An, A
			CO2: Acquire knowledge of different types of maps and cartography techniques to represent the data.	4	U, An, A, E
			CO3: Apply statistical techniques to the data for further analysis.	3, 4	U, An, A, C
			CO4: Learn the basic concepts of applying statistical tools in geographical analysis.	2,3,5	U, C,An, A

VI	**BSGE601**	**Geographical Methodologies**	**CO1:**Acquire the knowledge of concept of research and research methodology	2,3	U,R,A,An,E,C
			CO2: learn to formulate research design and data collection techniques.	2,3,4	U,C,R,A
			CO3: Understand the application of statistical techniques in geographical studies	1,2,3	U,C,E
			CO4: gain knowledge about the applied aspect research methodology in spatial analysis	4, 5	C,U,E,An
VI	**BSGE602**	**World Geography-II**	**CO1:**Sstudy India and international relationships and policies of trade	1,2,4	C,U,E,An
			CO2: Enhance their knowledge on Contemporary issues in changing economies of the world	1,2,4	U,C,E
			CO3: Understand the relevance of industrial operation over the space with respect to major industries	1,2	C,U,E,An,A
			CO4: Learn and discuss about the International and regional organization and global environmental issues	1,2,3	U,C,E,An,A
VI	**BSGE651**	**Geography Practical-VI**	**CO1:** Represent data using different types of diagrams.	3, 4, 5	U, An, A
			CO2: Acquire knowledge of different types of maps and cartography techniques to represent the data.	4	U, An, A, E
			CO3: Apply statistical techniques to the data for further analysis.	3, 4	U, An, A, C
			CO4: Learn the basic concepts of applying statistical tools in geographical analysis.	2,3,5	U, C,An, A
			CO5: Represent data using different types of diagrams.	3, 4, 5	U, An, A

B.Sc. (Economics)

Programme Specific Outcome (PSO's)

PSO-1	Prepare students for pursuing research or careers that provide employment through entrepreneurship and innovative methods. Because today's unemployment problem can also be solved by developing the micro and small entrepreneurship
PSO-2	Prepare students to develop own thinking /opinion regarding current national or international policies and issues.
PSO-3	Create awareness to become a rational and an enlightened citizen so that they can take the responsibility to spread the governments' initiatives/schemes to the rural areas for the upliftment of the poor or vulnerable section of the society for inclusive growth.
PSO-4	At the end of the programme, the students will have adequate competency in the frontier areas of economic theory and methods.
PSO-5	They will be able to use common software for analysis of economic data. Besides, students will be able to execute in-depth analysis of economic issues based on their understanding of economic theory.
PSO-6	The course will not only widen their opportunities for employment, but also helps them to pursue their doctoral studies.
PSO-7	The students will acquire additional specialization through optional courses.

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	**Cognitive levels**
I	**BSEC101**	**Micro Economics-I**	**CO1:** develop a sound understanding of the core concepts that economists use to understand the world of business, trade and public policy.	1,2,4	R,A,U
			CO2: familiarize with the mathematical techniques that economists routinely use in their analysis.	2,6	U,An,E
			CO3: usefulness of the abstract ideas and concepts introduced in the course with the aid of suitable applications to real world problems.	3,4,5,7	A,An,C
I	**BSEC102**	**Indian Economy-I**	**CO1:** a deeper understanding of What causes aggregate output and employment levels in an economy to fluctuate /change over time? How effective are government policies in stabilizing the economy and/or generating steady growth?	1,2,4,8	R,U,A,An,E
			CO2: evaluate various macroeconomic policies and their implications on the basis of coherent theoretical frameworks.	4,7	A,An,E,C
II	**BSEC 201**	**Micro Economics-II**	**CO1:** Approach of the course will be analytical	1,2,6	R,U,A
			CO2: Modelling and analyzing economic problems.	1,2,3,4,6,7	An,E,C
			CO3: Understand the main optimization and other tools used in a variety of economic applications	2,3,6,7	U,A,An,E,C
II	**BSEC202**	**Indian Economy-II**	**CO1:** To understand meaning, nature, scope and importance of Indian economy.	1,9	U,R
			CO2: To understand Relationship between development and population growth.	1,2,9	U,An
			CO3: Understand various theories of population and their implications for India	1,2,3,4,9	U,An,A

III	BS**EC301**	**Macro Economics-I**	**CO1:** Learn to select basic mathematical tools that are used by economic theorists.	1,2,6,7,9	R,U,A,An
			CO2: Applications of these tools to some areas of economic theory.	2,3,6,7,8,9	A,An,E,C
III	**BSEC302A**	**Introduction to statistics and mathematics for economics-I**	**CO1:** develop a sound understanding of the core concepts that economists use to understand the world of business, trade and public policy.	1,2,4,7,8	U,An
			CO2: familiarize with the mathematical techniques that economists routinely use in their analysis.	1,2	U,An,A,E
			CO3: usefulness of the abstract ideas and concepts introduced in the course with the aid of suitable applications to real world problems.	1,2,3,4,5,7,8	A,E,C
III	**BSEC302B**	**History of economic thought-I**	**CO1:** To develop critical thinking skills to analyze and critique different economic theories and paradigms	1,4,9	U,An,E
IV	**BSEC401**	**Macro Economics-II**	**CO1:** To understand meaning, nature, scope and importance of Indian economy.	1,9	U,R
			CO2: To understand Relationship between development and population growth	1,2,9	U,An
			CO3: Understand various theories of population and their implications for India	1,2,3,4,9	U,An,A
IV	**BSEC402A**	**Introduction to statistics and mathematics for economics-II**	**CO1:** Learn the fundamental statistical concepts	1,2	U
			CO2: Analyze and interpret data using descriptive statistics	1,2,7	An,A,E,
IV	**BSEC402B**	**History of economic thought-II**	**CO1:** To develop critical thinking skills to analyze and critique different economic theories and paradigms	1,4,9	U,An,E

V	**BSEC501**	**International trade and development economics**	**CO1:** analyze historical as well as contemporary issues in trade theory and policy using a variety of lenses provided in the course:	2,3,4,5	U,An,A,E
V	**BSEC502A**	**Application of mathematics in economics-I**	**CO1:** Acquiring a deep understanding of economic theory and advanced mathematical techniques used in economic analysis	1,2,4,9	U,An,A
V	**BSEC502C**	**Economy of Rajasthan-I**	**CO1:** Students gain insight into current Rajasthan economic matters, enhancing their readiness for professional endeavors.	1,2,4,9	U,An,A
VI	**BSEC601**	**Public finance**	**CO1:** Students gain critical insight into public finance, enhancing analytical skills in assessing government taxes, fostering comprehensive understanding of fiscal operations.	1,3,4	A,An,E
VI	**BSEC602A**	**Application of mathematics in economics-II**	**CO1:** Acquiring a deep understanding of economic theory and advanced mathematical techniques used in economic analysis	1,2,4,9	U,An,A
VI	**BSEC602B**	**Environmental economics-II**	**CO1:** Students gain insight into current environment economic matters, enhancing their readiness for professional endeavors.	1,3,4	A,An,E
VI	**BSEC602C**	**Economy of Rajasthan-II**	**CO1:** Students gain insight into current Rajasthan economic matters, enhancing their readiness for professional endeavors.	1,3,4	A,An,E

Computer Application (BCA)

PROGRAMME SPECIFIC OUTCOME (PSO's)

PSO-1	Demonstrate the ability to apply theoretical knowledge to various fields.
PSO-2	Develop language proficiency to meet the demands of corporate communication.
PSO-3	Prepare students in various technology disciplines, including computer applications, computer networking, software engineering, JAVA, database concepts, and programming.
PSO-4	Introduce the concept of project development using the technologies learned during the semester to enhance programming skills in young IT professionals.
PSO-5	Improve logical ability and programming concepts through practical implementation in the programming lab.
PSO-6	Prepare students for the future by fostering creativity, social awareness, and general knowledge.
PSO-7	Encourage students to transform their start-up ideas into reality through implementation.
PSO-8	Ability to understand changes and future trends in the field of computer applications.
PSO-9	Identify, formulate, analyze, and solve programming problems using different programming languages.

Semester	Course code	Course Title	Course Outcomes On completing the course, the student will be able to:	Attributes	
				PSOs addressed	Cognitive levels
I	BPCA101	Computer Organization	**CO1:** Gain a comprehensive understanding of the working principle of computers and their memory systems.	1	U, R, E
			CO2: Acquire knowledge about the functions and uses of input and output devices.	1, 3, 5, 9	U, R, An
			CO3: Differentiate between software types and hardware components and comprehend their interaction.	1, 3, 5, 9	U, R, An
			CO4: Understand various mediums of data transmission and evaluate their respective advantages and disadvantages.	1	U, R, E
			CO5: Comprehend the internet, its applications, and the importance of internet security.	1	U, R, E
I	BPCA102	Programming in C	**CO1:** Understand the concept of Algorithms and different symbols used in flowcharts	1, 3, 5, 9	U, R, An
			CO2: Develop conditional and iterative statements to write C programs.	1, 3, 5, 9	U, R, An
			CO3: Utilize user-defined functions to solve real-time problems.	1, 3, 5, 9	U, R, An
			CO4: Create C programs that utilize pointers to access arrays, strings, and functions.	1	U, R, E
			CO5: Apply user-defined data types, including structures and unions, to solve problems.	1, 3, 5, 9	U, R, An

			CO6: Demonstrate the concept of file handling to showcase input and output operations in C programs.	1, 3, 5, 9	U, R, An
I	**BPCA103**	**Language and Communication**	**CO1:** Emphasize the significance of English as the global language of communication.	2	U, R, E
			CO2: Enhance reading and writing skills using effective mediums,	1, 3, 5, 9	U, R, An
			CO3: Refine communication skills by employing proper grammar usage.	2	U, R, E
			CO4: Enhance communication skills to meet the requirements of business and professional contexts.	1, 3, 5, 9	U, R, An
I	**BPCA104**	**Elementary Physics and Digital Electronics**	**CO1:** Demonstrate an understanding of various number systems and codes.	1	U, R, E
			CO2: Apply Boolean laws and rules to simplify simple expressions.	1, 3, 5, 9	U, R, An
			CO3: Analyze and design different combinational and sequential circuits, including Flip-Flops, Registers, and Counters.	2	U, R, E
			CO4: Gain proficiency in systematically reducing Boolean expressions using K-Maps.	1, 3, 5, 9	U, R, An
			CO5: Interpret logic gates and understand their operations.	2	U, R, E
I	**BPCA151**	**Office Management Lab.**	**CO1:** Able to use MS Office (word processor, spreadsheet and power point) professionally.	5	A, An, C
			CO2: Develop understanding about the writing of effective business letters in computer through word processing.	1, 3, 5, 9	U, R, An

			CO3: Able to use spreadsheet program for business data processing.	2	U, R, E
			CO4: Acquire skills for development and presentation of power point report.	1, 3, 5, 9	U, R, An
I	**BPCA152**	**Programming in C Lab.**	**CO1:** Develop a C program based on a given task or algorithm.	3, 5, 9	A, An, C
			CO2: Read, comprehend, and trace the execution of C programs.	1, 3, 5, 9	U, R, An
			CO3: Implement C programs using arrays, pointers, decision-making statements, and looping statements.	1, 3, 5, 9	U, R, An
			CO4: Write programs that perform operations utilizing derived data types.	2	U, R, E
			CO5: Develop and implement modular applications in C by effectively utilizing functions.	1, 3, 5, 9	U, R, An
			CO6: Develop applications in C that leverage structures and pointers.	2	U, R, E
I	**BPCA153**	**Communication Skills Lab.**	**CO1:** Foster confidence and encourage students to adopt a positive outlook on life, promoting the creation of positive energy.	2	A, E
			CO2: Enhance health and leadership skills while reducing stress levels.	1, 3, 5, 9	U, R, An
			CO3: Equip students with a solid conceptual and practical foundation to build, develop, and manage teams effectively.	2	U, R, E
			CO4: Cultivate overall personality development, thereby enhancing career prospects.	1, 3, 5, 9	U, R, An
			CO5: Strengthen students' commitment to personal growth, analytical thinking, adaptability, and inculcate the value of time management.	2	U, R, E

II	**BPCA201**	**Object Oriented Programming through C++**	**CO1:** Understand the concepts of OOPs.	3, 5, 9	U, R, An, C
			CO2: Understand the use of constructors, destructors and functions.	1, 3, 5, 9	U, R, An
			CO3: Create programs based on arrays, And Strings.	2	U, R, E
			CO4: Implementation of polymorphism, inheritance, exception handling.	2	U, R, E
			CO5: Understand the concept of file management.	3, 5, 9	U, R, An, C
II	**BPCA202**	**Internet & Web Technologies**	**CO1:** Understand the fundamentals of Internet, and the principles of web design.	1, 3, 5, 9	U, R, An
			CO2: Able to construct websites using HTML and Cascading Style Sheets.	2	U, R, E
			CO3: Able to build dynamic web pages with validation using Java Script objects.	7, 8, 9	U, An, A, E, C
			CO4: Implement the event handling mechanisms.	7, 8, 9	U, An, A, E, C
II	**BPCA203**	**Desktop Publishing (DTP)**	**CO1:** Understand the fundamentals & concepts of Adobe Photoshop.	5	U, R, An, C
			CO2: Get a hands-on experience on Page Maker.	2	U, R, E
			CO3: Able to work with multiple layers.	3, 5, 9	U, R, An, C
			CO4: Understand the basic tools of Coral Draw	1, 3, 5, 9	U, R, An
II	**BPCA204**	**Discrete Mathematics**	**CO1:** Demonstrate the application of discrete mathematics knowledge relevant to the discipline.	1	U, R, A, E
			CO2: Analyze and solve problems related to matrices and determinants.	2	U, R, E
			CO3: Comprehend statistics and its practical applications, including the ability to calculate measures such as mean, median, and mode.	3, 5, 9	U, R, An, C
			CO4: Apply and comprehend sequences, series, and progressions.	1, 3, 5, 9	U, R, An

			CO5: Understand different types of matrices and their properties.	2	U, R, E
II	**BPCA251**	**C++ Lab.**	**CO1:** Implement various programming constructs of C++	3, 5, 9	A, An, E, C
			CO2: Create classes and objects	2	U, R, E
			CO3: Implement polymorphism and inheritance with classes and objects	3, 5, 9	U, R, An, C
			CO4: Understand concept of virtual classes and exception handling	1, 3, 5, 9	U, R, An
II	**BPCA252**	**Internet & Web Lab.**	**CO1:** Creating webpages using basic HTML tags	2	U, R, E
			CO2: Styling Webpages using CSS	3, 5, 9	U, R, An, C
			CO3: Creating dynamic web pages using Javascript	1, 3, 5, 9	U, R, An
			CO4: Implementation of DOM objects	2	U, R, E
			CO5: Creating web pages implementing event handling, form Validation etc.	3, 5, 9	U, R, An, C
II	**BPCA 253**	**Desktop Publishing Lab.**	**CO1:** Acquiring a new perspective on Printing	1, 3, 5, 9	U, R, An
			CO2: Improving and extending the range of Publishing	2	U, R, E
			CO3: To give students the skills to create book works, building booklets	3, 5, 9	U, R, An, C
			CO4: Building skills to create business cards, pamphlets, banners, calendars, logos etc.	1, 3, 5, 9	U, R, An
III	**BPCA301**	**Database Management System**	**CO1:** Gain a solid understanding of the fundamental concepts of database management systems, including data models, data independence, database architecture, and components.	2	U, R, E
			CO2: Learn the principles and techniques involved in relational database management systems.	3, 5, 9	U, R, An, C
			CO3: Ability to transform user requirements into efficient and well-structured database schemas.	1, 3, 5, 9	U, R, An
			CO4: Develop proficiency in SQL	2	U, R, E

III	**BPCA302**	**Programming in Java**	**CO1:** Understand the concepts of OOPs	3, 4, 5, 9	U, R, A, E
			CO2: Knowledge of basic programming constructs of Java	2	U, R, E
			CO3: Understand and Implement the concepts of Classes and Objects	3, 5, 9	U, R, An, C
			CO4: Implement Polymorphism, Inheritance, and Multithreading	3, 5, 9	U, R, An, C
			CO5: Enlighten the use of Interfaces, Packages and Exception Handling	1,2,3	U, R, An
			CO6: Perform Database Connectivity through JDBC	1,2,3	U, R, An
			CO7: Understand String & Math Classes and their functions	1,2,3	U, R, An
III	**BPCA 303**	**Data Structure & Algorithms**	**CO1:** Analyze the concepts of algorithm evaluation and find time and space complexities for searching and sorting algorithms.	2	U, R, E
			CO2: Implement linear data structure such as stacks, queues, linked lists and their applications.	3, 5, 9	U, R, An, C
			CO3: Implement basic operations on binary trees	1, 3, 5, 9	U, R, An
			CO4: Demonstrate the representation and traversal techniques of graphs and their applications	2	U, R, E
III	**BPCA 304**	**System Analysis & Design**	**CO1:** Understand the principles and tools of systems analysis and design	3, 5, 9	U, R, An, C
			CO2: Understand the professional and ethical responsibilities of practicing the computer professional including understanding the need for quality	1, 3, 5, 9	U, R, An
			CO3: Solve a wide range of problems related to the analysis, design and construction of information systems	2	U, R, E
			CO4: Analysis and Design of systems of small sizes	3, 5, 9	U, R, An, C
III	**BPCA351**	**DBMS Lab.**	**CO1:** Write both simple and complex SQL queries to retrieve information from databases with many tables to support business decision making.	3, 4, 5	A, An, E, C

			CO2: Write SQL DDL to create, modify and drop objects within a relational database.	2	U, R, E
			CO3: Retrieve and store information in a relational database using SQL in a multi-user environment.	3, 5, 9	U, R, An, C
III	**BPCA352**	**Java Lab.**	**CO1:** Able to implement the basic concepts such as function Overloading, array and string manipulation in Java	3, 4, 5, 9	A, An, E, C
			CO2: Use utility classes in the real time applications	2	U, R, E
			CO3: Understand the types of inheritance	3, 5, 9	U, R, An, C
			CO4: Implement packages, manipulate threads and exception handling techniques	3, 4, 5	A, An, E, C
			CO5: Connect databases with Java programs	2	U, R, E
III	**BPCA 353**	**Data Structure & Algorithms Lab.**	**CO1:** Understand the concept of data structures, and apply algorithm for solving problems like Sorting, searching, insertion and deletion of data through C language.	3, 5, 9	A, An, E, C
			CO2: Understand linear data structures for processing of ordered or unordered data.	3, 5, 9	U, R, An, C
			CO3: Implement various operations in C program on dynamic data structures like single linked list, circular linked list and doubly linked list.	3, 4, 5, 9	A, An, E, C
			CO4: Explore the concept of nonlinear data structures such as trees and graphs through C programming.	2	U, R, E
IV	**BPCA 401**	**Operating System**	**CO1:** Analyze various scheduling algorithms.	1	U, R, A, E
			CO2: Understand deadlock, prevention and avoidance algorithms.	3, 5, 9	U, R, An, C
			CO3: Compare and contrast various memory management schemes.	3, 4, 5, 9	A, An, E, C

			CO4: Understand the functionality of file systems. **CO5:** Understand the Open source operating system and basic Linux commands	2	U, R, E
IV	**BPCA402**	**PHP Programming**	**CO1:** Understand the differences between Server-side and Client-Side Scripting	1, 3, 5	U, R, A, E
			CO2: Learn basic programming constructs of PHP	3, 4, 5, 9	A, An, E, C
			CO3: Understand differences between get and post methods and use of superglobal variables.	2	U, R, E
			CO4: Able to implement cookies and manage session	1, 3, 5	U, R, A, E
			CO5: Understand various functions of arrays and strings	3, 4, 5, 9	A, An, E, C
			CO6: Able to understand Database handling concepts	2	U, R, E
IV	**BPCA403**	**Advance Database Concepts**	**CO1:** Explore transaction management concepts, including transaction states, ACID properties (Atomicity, Consistency, Isolation, Durability), and transaction processing protocols.	1, 3, 5	U, R, A, E
			CO2: Students will understand the challenges of concurrent access to databases and learn techniques to manage concurrency control.	1, 3, 5	U, R, A, E
			CO3: Understanding of different types of databases which are currently available their advantages and disadvantages.	3, 4, 5, 9	A, An, E, C
			CO4: Understanding the concept of how to use PL/SQL programming with the database.	2	U, R, E

IV	**BPCA 404**	**Data Communication and Networking**	**CO1:** Able to understand network communication using the layered concept, Open System Interconnect (OSI) and TCP/IP Model.	1, 3	U, R, A, E
			CO2: Understand various types of transmission media, network devices; and parameters of evaluation of performance for each media and device.	1, 3, 5	U, R, A, E
			CO3: Understand the concept of flow control, error control and LAN protocols	3, 4, 5, 9	A, An, E, C
			CO4: Understand the working principles of LAN and the concepts behind physical and logical addressing, subnetting and supernetting.	2	U, R, E
			CO5: Understand the functions performed by a Network Management System and to analyze connection establishment and congestion control with respect to TCP Protocol.	1, 3, 5	U, R, A, E
			CO6: Able to understand the principles and operations behind various application layer protocols like HTTP, SMTP, FTP.	3, 4, 5, 9	A, An, E, C
IV	**BPCA451**	**Linux Lab**	**CO1:** Able to understand working environment of Linux	3, 5	A, An, E, C
			CO2: Implement basic Linux Commands	1, 3, 5	U, R, A, E
			CO3: Implements Various filter commands	3, 4, 5, 9	A, An, E, C
			CO4: Create shell scripts	2	U, R, E
			CO5: Understand and implement various administrative commands of Linux	1, 3, 5	U, R, A, E
IV	**BPCA452**	**PHP Lab**	**CO1:** Learn installation of X app Server and execution of PHP scripts	3, 4, 5	A, An, E, C
			CO2: Implement different programming constructs of PHP	1, 3, 5	U, R, A, E
			CO3: Create PHP scripts for arrays and string handling	3, 4, 5	A, An, E, C

			CO4: Perform file and database handling in PHP	3, 4, 5, 9	A, An, E, C
			CO5: Implement cookies through PHP scripts	2	U, R, E
			CO6: Manage sessions in PHP	1, 3, 5	U, R, A, E
IV	**BPCA 453**	**PL/SQL Lab**	**CO1:** Understand Oracle environment to run queries	3, 4, 5	A, An, E, C
			CO2: Run SQL queries to retrieve data from single or multiple tables based on various conditions	1, 3, 5	U, R, A, E
			CO3: Create, Modify and delete tables with constraints	3, 4, 5, 9	A, An, E, C
			CO4: Execute Update, commit and rollback commands	2	U, R, E
V	**BPCA 501**	**Computer Graphics**	**CO1:** Able to understand the basics of computer graphics, different graphics systems and also learn various applications of computer graphics.	1, 5	U, R, A, E
			CO2: Understand various algorithms for scan conversion and filling of basic objects and their comparative analysis.	1, 3, 5	U, R, A, E
			CO3: Use of geometric transformations on graphics objects	3, 4, 5, 9	A, An, E, C
			CO4: Extract scene with different clipping methods and its transformation to graphics display device.	2	U, R, E
			CO5: Understand projections and visible surface detection techniques for display of 3D scene on 2D screen.	1, 5	U, R, A, E
V	**BPCA 502**	**Dot Net Technologies**	**CO1:** Understand how to create dynamic web pages using ASP.NET.	3, 4, 5	U, R, A, E
			CO2: Configure an ASP.NET application using .config files.	1, 3, 5	U, R, A, E
			CO3: Create a user interface on an ASP.NET page using standard and advanced web server controls.	3, 4, 5, 9	A, An, E, C
			CO4: Add a user control and a custom server control to an ASP.NET page.	2	U, R, E

			CO5: Create and enhance websites with master pages and themes.	1, 5	U, R, A, E
			CO6: Identify and fix bugs in an ASP.NET application.	1, 3, 5	U, R, A, E
			CO7: Display dynamic data from a data source using ADO.NET and data binding.		
			CO8: Deploy an ASP.NET application to a production web server.	4, 5, 8, 9	U, R, A, E, An
V	**BPCA 503**	**Programming in Python**	**CO1:** Understand and use Python control flow statements with ease, as well as the language's basic syntax and semantics. **CO2:** Ability to understand of how to handle strings and functions.	4, 5, 8, 9	U, R, A, E, An
			CO3: Learn how to use data structures like lists, dictionaries, tuples, and sets to develop and manipulate Python programs.	4, 5, 8, 9	U, R, A, E, An
			CO4: Determine the regular expression and file system operations that are most frequently used.	4, 5, 8, 9	U, R, A, E, An
			CO5: Understand the Python-specific terms for Object-Oriented Programming, such as encapsulation, inheritance, and polymorphism.	4, 5, 8, 9	U, R, A, E, An
V	**BPCA 504**	**Software Engineering**	**CO1:** Ability to break down a given project into multiple phases within its lifecycle.	1, 4	U, R, A, E
			CO2: Select the most suitable process model based on user requirements.	1, 4	U, R, A, E
			CO3: Demonstrate proficiency in executing diverse lifecycle activities, including analysis, design, implementation, testing, and maintenance.	1, 4	U, R, A, E

			CO4: Acquire knowledge about the multitude of processes employed throughout each stage of product development.	1, 4	U, R, A, E
V	**BPCA 551**	**Computer Graphics Lab.**	**CO1:** Implementation of various line drawing algorithms through "C" language	1, 5	A, An, E, C
			CO2: Create "C" programs to implement circle and ellipse drawing algorithms.	1, 4	U, R, A, E
			CO3: Gain proficiency in performing 2D transformations, including translation, rotation, reflection, shearing, and scaling.	1, 5	A, An, E, C
			CO4: Learn the concepts of homogeneous coordinate representation and understand how to apply these transformations to manipulate and manipulate 2D graphics objects.		
V	**BPCA 552**	**Dot Net Lab**	**CO1:** Create a user interface on an ASP.NET page using standard and advanced web server controls.	3, 4, 5, 9	A, An, E, C
			CO2: Add a user control and a custom server control to an ASP.NET page.	1, 4	U, R, A, E
			CO3: Implementation of master pages and themes for enhancing websites	1, 5	A, An, E, C
			CO4: Perform Database operations using ADO.NET and data binding.		
			CO8: Deploy an ASP.NET application to a production web server.	3, 4, 5, 9	A, An, E, C
V	**BPCA 553**	**Python Lab**	**CO1:** Understand core programming basics and program design using Python language. Understand the basic concepts of scripting and the contributions of scripting language.	3, 4, 5, 8, 9	A, An, E, C
			CO2: Write, Test and Debug Python Programs.	1, 4	U, R, A, E

			CO3: Implement Conditionals and Loops for Python Programs.	1, 4	U, R, A, E
			CO4: Use functions and represent Compound data using Lists, Tuples and Dictionaries.	1, 5	A, An, E, C
			CO5: Understand a range of Object-Oriented Programming, as well as in-depth data and information processing techniques.	1, 4	U, R, A, E
			CO6: Understand the high-performance programs designed to strengthen the practical expertise	3, 4, 5, 9	A, An, E, C
VI	**BPCA 601**	**E-Commerce Application Development**	**CO1:** Determine the constituent elements of electronic commerce.	1, 7	U, R, A, E
			CO2: Recognize the advantages of conducting online sales.	1, 4	U, R, A, E
			CO3: Acquire knowledge on optimizing and ensuring safety during online selling.	1, 5	A, An, E, C
			CO4: Develop a comprehensive e-commerce strategy tailored to your business.		
			CO5: Comprehend the risks associated with cyber security in online trading and business transactions.	3, 4, 5, 9	A, An, E, C
			CO6: Familiarize yourself with methods to safeguard your online business, including securing your accounts and being vigilant about cybercrime.	1, 4	U, R, A, E
VI	**BPCA 602**	**Cyber Security**	**CO1:** Comprehend the concepts of cybercrime and information security.	1, 6	U, R, A, E
			CO2: Identify different types of cybercriminals and understand the classification of cybercrimes.	1, 4	U, R, A, E

			CO3: Examine various tools and methods employed in cybercrime, including phishing and identity theft.	1, 5	A, An, E, C
			CO4: Analyze the methods and techniques of identity theft, including password cracking, keyloggers, spyware, backdoors, steganography, DoS (Denial of Service) attacks, SQL injection, and buffer overflow.	3, 4, 5, 9	A, An, E, C
			CO5: Explore the security challenges posed by mobile and wireless devices in the context of cybercrime.	3, 4, 5, 9	A, An, E, C
			CO6: Familiarize with cyber laws, including the Indian IT Act and its implications.	1, 4	U, R, A, E
			CO7: Understand the concept of digital signatures and its relvance in the IT Act.	1, 6	U, R, A, E
VI	**BPCA 603**	**Data Warehousing and Data Mining**	**CO1:** Gain an understanding of Data Warehousing, including its introduction, characteristics, and scope.	1	U, R, A, E
			CO2: Comprehend the technology of Data Cubes and their role in Data Warehousing.	1, 4	U, R, A, E
			CO3: Learn about the planning process involved in designing a Data Warehouse.	1, 5	A, An, E, C
			CO4: Explore different approaches to Data Warehouse design.	3, 4, 5, 9	A, An, E, C
			CO5: Understand the various delivery methods of Data Warehousing.	3, 4, 5, 9	A, An, E, C
			CO6: Analyze the process architecture of Data Warehousing.	1, 4	U, R, A, E

			CO7: Identify and understand different database schema types, such as Fact tables, Dimension tables, Star Schema, Snow Flake Schema, Star flake schema, and Multi-dimensional schemas.	1, 6	U, R, A, E
			CO8: Learn about Data Marts and the different types of Data Marts.	3, 4, 5, 9	A, An, E, C
			CO9: Gain an understanding of Data Mining concepts, including its characteristics and scope and architecture.	1, 4	U, R, A, E
			CO10: Analyze the architecture of Data Mining and its methodologies.	3, 4, 5, 9	A, An, E, C
			CO11: Learn about data preprocessing techniques, including data cleaning, data reduction, and data transformation.		
VI	**BPCA 604-A Elective I**	**Artificial Intelligence and Expert Systems**	**CO1:** Understand the concept and significance of Artificial Intelligence (AI) and its various areas of application.	1, 8	U, R, A, E
			CO2: Learn different search techniques, such as depth-first search and breadth-first search, and their role in problem-solving.	3, 4, 5, 9	A, An, E, C
			CO3: Understand heuristic search methods and their applications, including hill climbing, best-first method, and graph search.	1, 4	U, R
			CO4: Able to gain insight view of knowledge representation schemes, including semantic nets, frames, conceptual dependency, and scripts.	1, 4	U, R
			CO5: Understand different types of reasoning, such as logical reasoning, statistical reasoning, and fuzzy logic.	1, 8	U, R, A, E
			CO6: Learn the concept of learning in AI, knowledge acquisition methods, and the stages involved in developing expert systems.	3, 4, 5, 9	A, An, E, C

VI	**BPCA 604-B**	**Animation and Multimedia**	**CO1:** Understand the history and desirable features of Multimedia Systems, and categorize different types of multimedia applications.	1, 3, 6, 8	U, R, A, E
			CO2: Gain proficiency in using Flash software, including navigating the interface, working with stages, timelines, and keyframes.	1, 4	U, R
			CO3: Apply basic drawing tools, gradients, layers, and motion tweens to create animations.	1, 4	U, R
			CO4: Organize scenes, utilize frame labels, and control the speed of motion in animations.		
			CO5: Develop animation concepts using frame-by-frame animation, shape animation, motion tween animation, and motion guide animation.	1, 4	U, R
VI	**BPCA 651**	**Project**	**CO1:** Apply acquired technical skills to real-world IT or CS projects effectively.	7, 8, 9	U, An, A, E, C
			CO2: Demonstrate proficiency in project planning, organization, and execution, including setting milestones and managing resources. Work collaboratively with professionals in an industrial setting, showcasing strong communication and teamwork skills.	7, 8, 9	U, An, A, E, C
			CO3: Analyze complex problems, apply critical thinking skills, and develop innovative solutions in the IT or CS field. Gain hands-on experience in the complete software development lifecycle, from requirements gathering to deployment, following industry best practices.	7, 8, 9	U, An, A, E, C

Statistics

Programme Specific Outcome(PSO's)

PSO-1	This course exposes the students to the beautiful world of Statistics and how it affects each and every aspect of our daily life.
PSO-2	The course is designed to equip students with all the major concepts of Statistics along with the tools required to implement them.
PSO-3	Introduction to computer software helps them in the analysis of data by making optimum usage of time and resources. This software give them the necessary support and an edge when progressing to their professional careers.
PSO-4	Exposure to the plethora of real-life data helps in honing their analytical skills.
PSO-5	Having a practical component with every paper invokes their exploratory side and the interpretation abilities. Such a pedagogy goes a long way in giving them the required impetus and confidence fine-tunes for consultancy startups/jobs in near future
PSO-6	The structure of the course also motivates/helps the students to pursue careers in related disciplines, especially the data sciences, financial statistics and actuarial sciences.

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs Addressed	Cognitive levels
I	BSST101	Probability Theory	**On completing the course, the student will be able to:** **CO1:** Probability theory and its applications.	1,2,	R, U, A, An, E
			CO2: The fundamental concepts of Mathematical Statistics.	1,2	R,U
			CO3: Basic concept of random variable and its types.	3,4,5	A,An,E
			CO4: Properties of random variables like expectation, moment generating function, cumulative generating function etc.	4,5,6	An,E,C
			CO5: Marginal and conditional probability distributions.	5,6	E,C
I	BSST102	Descriptive Statistics	After completing this course, students should have developed a clear understanding of: **CO1**: The fundamental concepts of statistical population and sample.	1,2,5	R, U, A, An, E
			CO2: Handling various types of data and their graphical representation.	3,4,5	A,An,E
			CO3: Measures of location and dispersion.	3,4,5	A,An,E
I	BSST151	Statistics Practical Paper-I Practical Paper	**CO1:** After completing this course, students should have developed a clear understanding of the skill to select appropriate methods to present data and gain the skills to calculate probabilities for various types of events.	1,2,3,4,5,6	R, U, A, An, E
II	BSST201	Statistical Analysis of Bivariate Data & finite Difference	**CO1**: To know about official statistical system in India and functions of different agencies.	1,2,3,4,5,6	R, U, A, An, E
			CO2: Statistical Organisation in India	1,2	R,U
			CO3: Bivariate data. Significance of various coefficients of correlation.	3,4,5	A,An,E
			CO4: Fitting of linear and nonlinear curve.	4,5,6	An,E,C
			CO5: Theory of Attributes.	5,6	E,C

II	**BSST202**	**Univariate Distribution**	**CO1:** After completing this course, students should have developed a clear understanding of - Various discrete and continuous probability distributions like Bernoulli, Binomial, Poisson, Geometric, Negative Binomial, Hypergeometric, Normal, Uniform, Exponential, Cauchy, Beta and Gamma distributions.	1,2,3,4,5,6	R, U, A, An, E
II	**BSST251**	**Statistics Practical Paper-II Practical Paper**	**CO1:** After completing this course, students should have developed a clear understanding of analyzing the behavior of the data by fitting discrete and continuous distributions. Students are able to measure simple correlation, regression and Attributes.	1,2,3,4,5,6	R, U, A, An, E
III	**BSST301**	**Applied Statistics (I)**	**CO1:** After completing this course, students will possess the ability to appreciate, formulate solutions, analyze use of time series, Demand Analysis to real world problems and understanding of Statistical Quality Control by Control charts for variables and attributes.	1,2,3,4,5,6	R, U, A, An, E
III	**BSST302**	**Applied Statistics (II)**	**CO1:** Distinction between Vital Statistics and Demography.	1,2,3,4,5,6	R, U, A, An, E
			CO2: Sources of data collection on Vital Statistics and errors there in.	1,2	R,U
			CO3: Measurement of Population.	3,4,5	A,An,E
			CO4: Basic measures of Mortality.	4,5,6	An,E,C
			CO5: Concepts of Stable and Stationary Populations.	5,6	E,C
			CO6: Concept of Life Tables, their construction and uses.	1,2,3,4,5	R,U,A,An,E
			CO7: Basic measures of Fertility.	3,4,5	A,An,E
			CO8: Measures of Population Growth.	3,4,5	A,An,E
			CO9: Index numbers: Definition, Applications uses.	1,2	R,U
			CO10: Construction of Index numbers.	3,4,5	A,An,E
III	**BSST351**	**Statistics Practical Paper-III Practical Paper**	**CO1:**After completing this course, students should have developed a clear understanding of specialized averages under the domain of Index numbers, be aware of the concept of Time Series and are familiar with simple measures of trend and seasonal variation. Perform basic demographic analyses using various techniques and ensure their comparability across populations.	1,2,3,4,5,6	R,U, A, An, E

IV	**BSST401**	**Statistical Inference**	**CO1:** Basic concepts of hypothesis testing, including framing of null and alternative hypothesis	1,2,3,4,5,6	R,U, A, An,E
			CO2: Developing/ constructing best/most powerful statistical tests to test hypotheses regarding unknown population parameters (Using Neyman-Pearson Lemma).	2,4,5,6	U,A,An,E
			CO3: Characteristics of a good estimator, different methods of estimation.	2,4,5,6	U,A,An,E
			CO4: Demonstrate use of these techniques in data analysis.	2,4,5,6	U,A,An,E
IV	**BSST402**	**Sampling Distribution & Stochastic Convergence**	**CO1:** Parameter, statistic, standard error, sampling distribution of a statistic.	1,2,3,4,5,6	R,U, A, An,E
			CO2: Sampling distributions of chi-square, t and F and their applications.	2,4,5,6	U,A,An,E
IV	**BSST451**	**Statistics Practical Paper-IV Practical Paper**	**CO1:** After completing this course, students should have developed a clear understanding of the concept of 'Testing of Hypothesis' and in particular for 'Test of hypothesis for Large Samples' and Estimation Theory.	1,2,3,4,5,6	R,U, A, An,E
V	**BSST501**	**Sample Survey (I)**	**CO1:** The fundamental concepts of population and sample. (or the basic concepts of survey)	1,2,3,4,5,6	R, U, A, An, E
			CO2: The principles of sample survey and the steps involved in selecting a sample.	2,4,5,6	U,A,An,E
			CO3: Simple random sampling.	4,5,6	An,E,C
			CO4: Stratified random sampling.	5,6	E,C
			CO5: Systematic sampling.	4,5,6	An,E,C
V	**BSST502**	**Design of Experiment**	**CO1:** One-way and two-way analysis of variance.	1,2,3,4,5,6	R, U, A, An, E
			CO2: Basic concepts of design of experiments.	2,3,5	U,A,E
			CO3: Completely randomized design.	1,2	R,U
			CO4: Randomized design.	2,3,5	U,A,E
			CO5: Latin square design	1,2	R,U

V	**BSST551**	**Statistics Practical Paper-V Practical Paper**	**CO1:** After completing this course, students should have developed a clear understanding of various sampling techniques & apply these techniques in real life situations.	1,2,3,4,5,6	R,U, A, An,E
VI	**BSST601**	**Sample Survey-II**	**CO1:** Cluster Sampling.	1,2,3,4,5,6	R,U, A, An,E
			CO2: Ratio Sampling.	2,3,5	U,A,E
			CO3: Regression	1,2	R,U
			CO4: Two Stage Sampling	2,3,5	U,A,E
VI	**BSST602**	**Design of Experiment & Computation Technique**	**CO1**: Missing plot techniques.	1,2,3,4,5,6	R,U, A, An,E
			CO2: Factorial experiments.	1,2,4	R,U,An
			CO3: Confounding	2,3,5	U,A,E
			CO4: BIBD	1,2	R,U
VI	**BSST651**	**Statistics Practical Paper-VI Practical Paper**	**CO1:** Regression method of estimation, Ratio methods of estimation, Cluster sampling.	1,2,3,4,5,6	R, U, A, An, E, C
			CO2: Students will be able to Estimate the mean and variance in Regression, Ratio methods of estimation, and Cluster sampling.	1,2	R,U

B.A. PROGRAMME OUTCOME (PO'S)

1. The under graduate students of humanities will be acquainted with the social, economic, historical, geographical, political, ideological, literal and philosophical tradition and thinking.

2. After completing graduation in humanities with the streams of Arts such as economics, geography, Statistics, English, political sciences, public administration, music, Sanskrit, and MSW, the learner will be able to acquire following Skills and Abilities.

3. Analytical and critical thinking skills to evaluate information and ideas effectively.

4. Evaluate critical aspects of spatial phenomenon from global to local level on various time scale.

5. As a part of career avenues assists in learning in various fields like teaching, research and Administration with the ability to evaluate programmes effectively.

6. Develop the skill of interpretation and analysis of various concepts and theories.

7. Use scientific logic as they explore a wide range of contemporary subjects spanning various aspects of Physical, Human, Regional, Environmental, economic, cartographic aspects of social sciences.

8. Contribute effectively to pursue innovative solutions to human – environment problems.

9. Learn the concepts, methods with interdisciplinary approach.

B.A. Hindi

Programme Specific Outcome (PSO's)

1. वैश्वीकरण के युग में शिक्षा–जगत के समक्ष आ रही चुनौतियों का समाधान करने के उद्देश्य से।
2. विद्यार्थियों की अभिरूचि, उनकी ग्राह्य क्षमता एवं रोजगारोन्मुखी–लचीली–शिक्षण–व्यवस्था निर्मित करने हेतु।
3. विद्यार्थियों के भाषायी विकास और उसे समुन्नत बनाने हेतु।
4. विद्यार्थियों की सृजनात्मक प्रतिभा को बढ़ाना।
5. विद्यार्थियों में साहित्यिक और अन्य मौलिक रचनाओं के प्रति उनकी समझ व रूचि विकसित करने के उद्देश्य से।
6. साहित्य के माध्यम से विद्यार्थियों को अपनी भारतीय संस्कृति और परम्परा का ज्ञान कराना।
7. साहित्य के माध्यम से विद्यार्थियों में अच्छे–बुरे की पहचान की क्षमता विकसित करना तथा जीवन–मूल्यों को आत्मसात करने की प्रेरणा देना।
8. हिन्दी भाषा को शुद्ध बोलने तथा शुद्ध लिखने का ज्ञान देना।
9. हिन्दी भाषा में स्पष्ट रूप से अपने भाव और अनुभूतियों एवं विचारों को व्यक्त करना सिखाना।

Semester	Course Code	Course Title	Course Outcomes on Completing the course, the student will be able to :	Attributes	
				PSOs Addressed	Cognitive Levels
I	BAHI101	हिन्दी काव्य–प्राचीन एवं मध्यकालीन काव्य–I	1. प्राचीन एवं मध्यकालीनकाव्य प्रश्न–पत्र पढ़ने से विद्यार्थियों को उस दौर के काव्य एवं कवियों के विषय में ज्ञान प्राप्त होता है, जिससे विद्यार्थियों में सत्य, प्रेम, शान्ति, सद्भाव, परोपकार, नैतिकता, सादगी, सहिष्णुताजैसेमानवीय गुणों का विकास होता है जिससे उनका चरित्र–निर्माण हो सकेगा।	1, 2	A, U
			2.. इससे विद्यार्थियों में भाषा कौशल विकसित हो सकेगा।	4,5	An,E
I	BAHI102	हिन्दी कहानी	1. हिन्दी गद्य की विविध विधाओं जैसे कहानी, उपन्यास, नाटक, निबंध, जीवनी, आत्मकथा आदि के अध्ययन से विद्यार्थियों में परिवार, समाज एवं राष्ट्र के प्रति नवीन दृष्टिकोण स्थापित हो सकेगा।	1, 2	U, C
			2.. विद्यार्थियों में लेखन कौशल विकसित हो सकेगा।	1,2,3	R,U,A
			3. प्रतियोगी परीक्षाओं एवं रोजगार की दृष्टि से भी यह अध्ययन महत्त्वपूर्ण एवं प्रासंगिक है।	1,2	R,U
II	BAHI201	हिन्दी काव्य–प्राचीन एवं मध्यकालीन काव्य–II	1. प्राचीन एवं मध्यकालीन काव्य प्रश्न–पत्र पढ़ने से विद्यार्थियोंको उस दौर के काव्य एवं कवियों के विषय में ज्ञान प्राप्त होता है, जिससे विद्यार्थियों में सत्य, प्रेम, शान्ति, सद्भाव, परोपकार, नैतिकता, सादगी, सहिष्णुता जैसे मानवीय गुणों का विकास होता है जिससे उनका चरित्र–निर्माण हो सकेगा।	1, 2	A, U
			2. इससे विद्यार्थियों में भाषा कौशल विकसित हो सकेगा।	1, 2	U, C
II	BAHI202	हिन्दी उपन्यास	1. हिन्दी गद्य की विविध विविध विधाओं जैसे कहानी, उपन्यास, नाटक, निबंध, जीवनी, आत्मकथा आदि के अध्ययन से विद्यार्थियों में परिवार, समाज एवं राष्ट्र के प्रति नवीन दृष्टिकोण स्थापित हो सकेगा।	1, 2	U, C
			2. विद्यार्थियों में लेखन कौशल विकसित हो सकेगा।	1, 2	R,U
			3. प्रतियोगी परीक्षाओं एवंरोजगार की दृष्टि से भी यह अध्ययन महत्त्वपूर्ण एवं प्रासंगिक है।	1, 2	R,U
III	BAHI301	प्रयोजनपरक हिन्दी–I	1. यह पाठ्यक्रम वर्तमान की आवश्यकता है। यह विद्यार्थियों के लिए रोजगारपरक है।	1, 2, 3	C, A
			2. विद्यार्थी इस पाठ्यक्रम का गहनतापूर्वक अध्ययन कर प्रिंट मीडिया, इलेक्ट्रॉनिक मीडिया, इंटरनेट और तकनीक के क्षेत्र में रोजगार प्राप्त कर सकते हैं।	1,2,3,4	R,U,A,An

III	**BAHI302**	**हिन्दी निबंध**	1. हिन्दी गद्य की विविध विविध विधाओं जैसे कहानी, उपन्यास, नाटक, निबंध, जीवनी, आत्मकथा आदि के अध्ययन से विद्यार्थियों म परिवार, समाज एवं राष्ट्र के प्रति नवीन दृष्टिकोण स्थापित हो सकेगा।	1, 2	U, C, E
			2. विद्यार्थियों में लेखन कौशल विकसित हो सकेगा।	1, 2, 3	C, A
			3. प्रतियोगी परीक्षाओं एवं रोजगार की दृष्टि से भी यह अध्ययन महत्त्वपूर्ण एवं प्रासंगिक है।	1,2,3,4	R,U,A,An
IV	**BAHI401**	**प्रयोजनपरक हिन्दी–II**	1. यह पाठ्यक्रम वर्तमान की आवश्यकता है। यह विद्यार्थियों के लिए रोजगारपरक है।	1, 2, 3, 4	C, A
			2. विद्यार्थी इस पाठ्यक्रम का गहनतापूर्वक अध्ययन कर प्रिंट मीडिया, इलेक्ट्रॉनिक मीडिया, इंटरनेट और तकनीक के क्षेत्र में रोजगार प्राप्त कर सकते हैं।	1, 2, 3	C, A
			3. आज का दौर सूचनाओं, खबरों का है, मीडिया का है जो भविष्य में भी विस्तारित होगा और नौकरियों के द्वार खोलेगा, जो युवापीढ़ी हेतु हितकर है।	1,2,3,4	R,U,A,An
			4. प्रयोजनपरक हिन्दी के साथ–साथ अनुवाद के क्षेत्र में भी रोजगार की असीम सम्भावनाएँ हैं। आज श्रेष्ठ अनुवादक, द्विभाषिय समाचारवाचक, उदद्योषक आदि की महती आवश्यकता है।	4,5,6	An,E,C
IV	**BAHI402**	**हिन्दी नाटक**	1. हिन्दी गद्य की विविध विविध विधाओं जैसे कहानी, उपन्यास, नाटक, निबंध, जीवनी, आत्मकथा आदि के अध्ययन से विद्यार्थियों में परिवार, समाज एवं राष्ट्र के प्रति नवीन दृष्टिकोण स्थापित हो सकेगा।	1, 3	C, A
			2. विद्यार्थियों में लेखन कौशल विकसित हो सकेगा।	1, 2, 3	C, A
			3. प्रतियोगी परीक्षाओं एवं रोजगार की दृष्टि से भी यह अध्ययन महत्त्वपूर्ण एवं प्रासंगिक है।	1,2,3,4	R,U,A,An
V	**BAHI501**	**हिन्दीकाव्य –आधुनिक हिन्दी काव्य –I**	1. आधुनिक हिन्दी काव्य प्रश्न–पत्र से विद्यार्थियों को हिन्दी साहित्य में आधुनिकता, नवजागरण, प्रकृति अध्यात्म, राष्ट्रीयता, देशप्रेम की भावना का ज्ञान प्राप्त होता है।	1, 2	C, U
			2. इससे विद्यार्थियों में भाषा कौशल विकसित हो पायेगा।	1, 2, 3	C, A
V	**BAHI502**	**हिन्दी भाषा व्याकरण और साहित्य सिद्धान्त–I**	1. यह एक रोजगारपरक पाठ्यक्रम हैं। हाल के वर्षों में विभिन्न उद्योगों में भाषा–विज्ञानियो की बेहद माँग है।	1, 2	A, E, U
			2. हिन्दी भाषा के उद्भव और विकास का अध्ययन कर विद्यार्थी इस क्षेत्र में अपना करिअर बना सकते हैं।	1, 2, 3	C, A

V		**व्यावसायिक सम्प्रेषण हेतु हिन्दी कौशल**	1. यह एक रोजगारपरक पाठ्यक्रम हैं इसका अध्ययन कर विद्यार्थी अपना भविष्य निर्माण कर सकता हैं।	1, 2	C, A
			2. व्यक्ति के सामाजिक जीवन में गतिशीलता लाना भी इसका एक उद्देश्य है।	1, 2, 3	C, A
			3. व्यावसायिक संचार के उद्देश्यों में सूचित करना, मनाना और सद्भावना को बढ़ावा देना।	1,2,3,4	R,U,A,An
V	**BAHI503**	**हिन्दीकाव्य –आधुनिक हिन्दी काव्य –II**	1. आधुनिक हिन्दी काव्य प्रश्न–पत्र से विद्यार्थियों को हिन्दी साहित्य में आधुनिकता, नवजागरण, प्रकृति अध्यात्म, राष्ट्रीयता, देशप्रेम की भावना का ज्ञान प्राप्त होता हैं।	1, 2	C, U
			2. इससे विद्यार्थियों में भाषा कौशल विकसित हो पायेगा।	3,4,5	A,An,E
VI	**BAHI601**	**हिन्दीभाषाव्याकरणऔरसाहित्य सिद्धान्त–II**	1. यह एक रोजगारपरक पाठ्यक्रम है। हाल के वर्षों में विभिन्न उद्योगों में भाषा–विज्ञानियो की बेहद माँग हैं।	1, 2	A, U
			2. हिन्दी भाषा के उद्भव और विकास का अध्ययन कर विद्यार्थी इस क्षेत्र में अपना करिअर बना सकते हैं।	5,6	E,C
VI	**BAHI602**	**हिन्दीलेखनकौशल**	1. विद्यार्थियों में नये ज्ञान का निर्माण करना।	1, 3	C. A, U
			2. विद्यार्थियों में भावनाओं और संवेगों का विकास करना।	1, 2	A, U
			3. विद्यार्थियों में शारीरिक और शारीरिक कौशल को बढ़ाना।	5,6	E,C
VI	**BAHI603**	**अनिवार्य विषय – सामान्य हिन्दी**	1. सामान्य हिन्दी (अनिवार्य हिन्दी) को पढ़ाने का प्रतिफल यह है कि हिन्दी भाषा में सम्प्रेषण कौशल बढ़ता हैं, विषय की जानकारी प्राप्त कर विद्यार्थी इस क्षेत्र में भविष्य निर्माण कर पायेगा।	1, 2, 3	C, A
			2. विद्यार्थी व्याकरण की विभिन्न इकाईयों का ज्ञान प्राप्त कर पायेगा एवं विभिन्न प्रतियोगी परीक्षाओं में हिन्दी साहित्य और व्याकरण से सम्बन्धित प्रश्नों का उत्तर दे सकेगा।	1,2,3,4	R,U,A,An

B.A Political Science

Programme Specific Outcome (PSO's)

PSO-1	Students will understand the need for a constitution and explain the role of constitution in a democratic society.
PSO-2	Students can demonstrate an understanding of the concepts & central themes of the political ideologies examined for the welfare of the society.
PSO-3	Students will be able to explain the Governmental mechanism from Gram panchayat to Parliament and can suggest solutions over various issues in its functioning and implementation.
PSO-4	Students can work as political analyst, political adviser, as a research scholar or can be a free-lance political thinker and writer.
PSO-5	Students will be able to explain parliamentary system in India and critically analyze and apply the basic principles of Indian and western political thinkers.
PSO-6	Students will be able to understand the composition and functions of Election Commission and can work as an observer.
PSO-7	Students will be able to understand the concept of International Relations and develop to identify issues and problems relating to the human rights.

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	Cognitive levels
I	BAPO101	**Paper I** : **Foundations of Political Science-I**	**CO1:** The students will be able to learn nature, importance, and relationship with other social sciences, understand the traditional and modern approaches.	1,2,3,4	U,A,An,E
			CO2: Know the origin and evolution of the state, Comprehend the development of social contract theory, understand the birth of modern state, understand the equality and liberty	1,2,3,4,5	R,U,A,An,E
I	BAPO102	**Paper II: Representative Indian Political Thought-I**	**CO1:** Enriches about variety of ancient Indian political thoughts.	2,4,5	R,An,E
			CO2: Understands the contributions of Kautilya.	1,2	R,U
			CO3: Creates awareness on political ideologies of 19th century social reformers.	1,2,3,4,5	R,U,A,An,E
			CO4: Familiarizes the political philosophy of socio-religious reformers	2,4,5	R,An,E
II	BAPO201	**Paper I: Foundations of Political Science-II**	**CO1:** The students will be able to learn the significance of concepts, understanding of political ideologies, comprehend the structure and functioning of different branches or organs of a political system.	1, 2,3, 4	U,A,An,E
II	BAPO202	**Paper II: Representative Indian Political Thought-II**	**CO1:** It aims to provide students with a strong foundation in modern Indian political thought, enabling them to critically engage with political ideas and theories in the Indian context.	2, 4, 5	U,A,An,E

			CO2: aims to achieve knowledge of key thinkers, understanding of Ideological Frameworks and compare and contrast modern Indian political thought with other global political theories.	1,2,3,4,5	R,U,A,An,E
III	**BAPO301**	**Paper I: Selected Political System-I**	**CO1:** Students will be able to evaluate political and policy problems, deliver meaningful and well-articulated presentations of comparative research study findings.	4, 5,, 7	U,A,An,E
			CO2: Analyze contemporary problems of UK, USA and Japan, able to access info net, Discuss and evaluate the National and State institutional structure and operations with their pros and cons.	1,2,3,4,5	R,U,A,An,E
III	**BAPO302**	**Paper II : Indian Political System-I**	**CO1:** Develops understanding about national movement in India and the fight of the political leaders that times.	1, 3, 4, 5, 6	U,A,An,E
			CO2: Gives knowledge about the journey of the Indian constitution and its philosophical foundations.	1,2,3,4,5	R,U,A,An,E
IV	**BAPO401**	**Paper I: Selected Political System-I**	**CO1:** The students will be able to learn about Political Systems of China, Switzerland and France. Thereby their analytical and comparative skills will be enhanced.	4, 5,, 7	U,A,An,E
IV	**BAPO402**	**Paper II : Indian Political System-II**	**CO1:** The students will attain an in-depth understanding of political system of India, its federal mechanism, Party system, centre-state relations etc.	1, 3, 4, 5, 6	U,A,An,E
			CO2: They also learn about structures and functions of state administrations.	1,2,3,4,5	R,U,A,An,E
V	**BAPO501**	**Representative Western Political Thinkers-I**	**CO1:** The students shall learn nature and importance of western thinkers and contemporary relevance of their thought in the present era.	2, 4, 5, 7	U,A,An,E
			CO2: They will be able have a broad overview an	1,2,3,4,5	R,U,A,An,E

			worldwide developments based on western political ideas and philosophies.		
V	**BAPO502**	**International Relation Since World War-II-I**	**CO1:** It aims to provide students with a strong foundation in rational analysis of international events and an in depth understanding of reasons and outcomes of international wars and other happenings around the globe.	4, 7	U,A,An,E
VI	**BAPO601**	**Representative Western Political Thinkers-II**	**CO1:** Students will be able to learn western political ideas of various political thinkers of the modern era and be able to relate the present political scenario with to reference to their political ideas.	2, 4, 5, 7	U,A,An,E
VI	**BAPO602**	**International Relation Since World War-II-II**	**CO1:** The students will be able to have a futuristic vision and enlightened understanding about the world politics.	4, 7	U,A,An,E
			CO2: They will be able to understand the contemporary international events in a better way.	1,2,3,4,5	R,U,A,An,E

B.A. (History)

Programme Specific Outcome (PSO's)

PSO-1	Create key terminology, concepts, and periods in Indian history.
PSO-2	Critically evaluate the reliability and validity of historical sources pertaining to Indian history.
PSO-3	Analyze the complexities of historical narratives and interpretations concerning Indian history.
PSO-4	Analyze the complexities of historical narratives and interpretations concerning Indian history.
PSO-5	Understanding the significance of historical events, movements, and cultural developments in Indian history.
PSO-6	Remembering basic historical facts, events, dates, and figures related to Indian history.

Semester	Course Code	Course Title	Course Outcomes	PSOs addressed	Cognitive levels
I	**BAHS101**	**Paper I: History Of India (From Beginning To 1200 A.D.): Part-I**	**CO1:** Understanding the major ancient civilizations that emerged in India, such as the Indus Valley Civilization (Harappan Civilization), and the early Vedic period, including their social, economic, and political structures.	5,6	U, R,
			CO2: Remembering of the political history of ancient India, including the rise and fall of major dynasties such as the Mauryas, Guptas, and regional kingdoms, and an understanding of the socio-political dynamics of each period.	1,2	R,U
I	**BAHS102**	**Paper Ii: History Of Rajasthan (From Earliest Times To 1956 A.D.): Part-I**	**CO1:** On completion of this paper, students will be able to remember the key historical features of Rajasthan, Helps student in understanding contribution of Rajputs women through performing Jauhar.	5,2	U, E,
			CO2: Understand and evaluate the emergence of ancient, medieval, and modern politics and feudal institutions, explain the trends in the late medieval and modern economy and their impact on social, cultural and religious life.	3,4	A,An
II	**BAHS201**	**Paper I: History Of India (From Beginning To 1200 A.D.): Part-II**	**CO1:** On completion of this paper, students will be able to have a fair knowledge about the prehistory, proto-history, and the sources of Ancient Indian History. The paper ensures that the students remember the changes in political, social, economic, and cultural scenario happening during this chronological span.	5,6	U, R,
			CO2: It will make them understand how to study sources to the changing historical processes.	1,2,3	R,U,A

II	**BAHS202**	**Paper II: History Of Rajasthan (From Earliest Times To 1956 A.D.): Part-II**	**CO1:** On completion of this paper, students will be able to understand the complete History of Modern Rajasthan from 1818 till Independence,	5,3,2	U,An,E
			CO2: Analyse the rise and the transition to state formation in Rajasthan and evaluate the development of various spiritual, literary, and broader urban traditions.	3,6,5	A,C,E
III	**BAHS301**	**Paper I: History Of Medieval India (1200-1526): Part-I**	**CO1:** On completion of this paper, students will be able to understand sources and historiography of Medieval Indian History.	5,3,2	U,An,E
			CO2: Analyze The Causes of Muslim invasions and the role of Different Muslim Dynasties, their society, administration, culture, economy, etc. Students develop skills in critically evaluating historical sources, including inscriptions, manuscripts, chronicles, travelers' accounts, and archaeological evidence, to reconstruct the history of medieval India.	5,3,2	U,An,E
III	**BAHS302**	**Paper Ii: Main Trends In The Cultural History Of India: Part-I**	**CO1:** To Understand Main Religious Ideas and Institution of India, contribution of Indian poet and scholars and Socio – religious reform Movements of the 19th and 20th centuries. Paper focusses on human values quoted in our historical works and scriptures. Also the status of women since ancient times	5,2	U, E,
			CO2: The course would likely to evaluate the rich tapestry of cultural, linguistic, religious, and social diversity within India, exploring how these elements have coexisted and influenced each other.	5,3,2	U,An,E

IV	**BAHS401**	**Paper I: History Of Medieval India (1526-1761 A.D.): Part-Ii**	**CO1:** On completion of this paper, students will able to get deep understanding of sources and historiography of the Mughal Period, Mughal policy towards different kingdoms, Their society, culture, and administration.	5,6	U, R,
			CO2: Students will remember various political systems and structures that existed in medieval India, including the rise and fall of empires, the feudal system, and the administration of kingdoms.	5,3	U, An,
IV	**BAHS402**	**Paper II: Main Trends In The Cultural History Of India: II**	**CO1:** Examine the development in architecture in India with reference to male and female paintings, their expressions and different poses in ancient Indian temples and rock cut caves, mosques, forts, and colonial buildings and explain the traditions of painting in India with reference to Mural, miniature, Mughal and Rajputs.	5,3	U, An,
			CO2: critically analyse the impact of British colonialism on Indian culture, including the changes and adaptations in cultural practices, the rise of nationalist movements, and the post-independence cultural renaissance.	5,3	U, An,
V	**BAHS501**	**Paper I: History Of Modern India (1761-1971): Part - I**	**CO1:** Students should gain a comprehensive understanding of key events, movements. Paper will also help student understand the role of women in national movement	5,3	U, An
			CO2: Students should be able to analyse historical contexts, including political, social, economic, and cultural factors that shaped modern Indian history.	5,3	U, An,
V	**BAHS502**	**History Of Modern World Up To Second World War-I**	**CO1:** On completion of this paper Students have understood the relation between Modernity and Nationalism and its implications; it will help them in understanding the process of colonialism in different part of world, National Unification of Germany, and Italy etc.	5,3,2	U, An,E,

			CO2: Students should be able to analyse and evaluate key themes and concepts in world history, including but not limited to globalization, imperialism, colonialism, revolution, migration, cultural exchange, and technological innovation.	1,2	R,U
			CO3:: Students should explore the diversity of social structures, hierarchies, and identities across different societies and historical periods.	1,2	R,U
VI	**BAHS601**	**Paper I: History Of Modern India (1761-1971): Part – II**	**CO1:** Students will remember the impact of colonialism and imperialism on Indian society, economy, and culture.	5,6	U, R,
			CO2: Understanding of Key Events: Students should gain a comprehensive understanding of key events, movements, and developments in modern Indian history.	1,2	R,U
VI	**BAHS602**	**History of Modern World up to Second World War–II**	**CO1:** On completion of this paper Student will get a deeper knowledge of world wars, its impact on other countries, The Russian Revolution of 1917, and the formation of the UNO. They will understand the causes, dynamics, and consequences of global conflicts, wars, revolutions, and diplomatic negotiations throughout history, and analyze their impact on geopolitics and international relations.	5,6	U, R,

B.A (Geography)

Programme Specific Outcome (PSO's)

PSO-1	The students may be able to read and understand maps and topographic features to look at the various aspects on the space.
PSO-2	Evaluate critical aspects of spatial phenomenon from global to local level on various time scales.
PSO-3	Analyse co-relationship of physical condition, cultural condition, population, efficiency, education, science, policy, religion, health, ethics, various philosophical schools etc.
PSO-4	Understand the basic statistical analysis and its application in geography.
PSO-5	The students learn about different geographical, geomorphological, climatic and hydrological Processes and methods and also gain knowledge interrelated phenomenon.

Semester	Course Code	Course Title	Course Outcomes on completing the course, the student will be able to:	Attributes	
				PSOs addressed	Cognitive levels
I	BAGE101	Physical Geography - I (Lithosphere)	**CO1:** Understand earth's form and relationships between its physical components.	1, 2	U,An
			CO2: Learn fundamental understanding of the main physical aspects of the Earth, earth's structure and dynamic processes.	1, 2, 5	U ,An ,E
			CO3: Understand about the earth's physical environment and to comprehend the relationships between geomorphologic landforms, concepts, and processes.	1,2,3,4,5	U,An,E .A
I	BAGE102	Geography of Rajasthan : Physical and Human Attributes	**CO1:** Rajasthan and its geographical and physio-graphical features	1, 2, 5	U,An,A
I	BAGE151	Practical's	**CO2:**Learn about climate, water, soil human, resources and other significant aspects and interrelated phenomenon	1,2	U, An
			CO3: Gain in-depth knowledge and comprehensive overview of arid and semi-arid region of the country.	1,5	U,An,E,A
			CO1: The basic concepts of drawing scales and different methods of representation of scales, reading scale on maps and its uses	1,4	An
			CO2: The basic methods of drawing Profiles and uses	4	E,An,
			CO3: Methods of interpolation of contour , contours	4	E, An

			and relief representation		
II	**BAGE201**	**Physical Geography-II (Climatology and Oceanography)**	**CO1:** Understand various elements of Climate and the factors influencing the distribution of temperature and pressure.	2	U,R
			CO2: learn about the Heat budget, Insolation, Air masses, Fronts, cyclones and weather phenomenon.	2,5	U,C,R,A
			CO3: Study world climate types and evaluate co-relationship between various weather elements.	2,4,5	U,C,E
			CO4: Study oceans, oceanic circulation and movements Also understand relationship between atmosphere and oceans.	5	C,U,E,An
			CO5: Evaluate the utilities of marine resources and significance of corals in marine ecology.	2,5	U,R
II	**BAGE202**	**Geography of Rajasthan-II (Economic Aspects)**	**CO1:** Identify and understand the economy of natural resources and learned about the significance of cattle's growth and development in Rajasthan.	2,5	R,U,E,A,An
			CO2: Gain knowledge about institutional factors in Rajasthan with special reference to irrigation projects.	2,5	U,R
			CO3: Understand the distribution and characteristics of majors crops of Rajasthan in view of learning about the involvement of agriculture inputs in state's economy.		U,R,A,An
			CO4: knows the role of industries and industrialization in the era of globalization and liberalization and its stake in Nation's GDP.	2,5	U,R,A,An,E
II	**BAGE251**	**Geography Practical-II**	**CO1:** Read and interpret the weather Maps.	1,2	R,U

III	**BAGE301**	**Geography of India -I**	**CO2:** Learn to draw isotherm and isobar maps.	1,2,3	U,R
			CO3: Sketch the land use Maps by using different methods of surveying.	2,3	U,C,R,A
			CO4: Create a plan for a small area.	1,2,3	U,C,E
			CO5: Read and interpret the weather Maps.	1,2,3,4, 5	C,U,E,An
III	**BAGE302**	**Human Geography-I**	**CO1:** Critically understand the various school of thoughts of geography with respect to the human-environment interactions.	1,2	U,R,An
			CO2: Understand and Identify the chronological development of human civilization, its impact and influence on the surrounding environment.	1,2,3	U,R,An
			CO3: learn about the various habitat of the human along with the knowledge of the process of their adjustment to the surrounding easily available resources.	1,2	U,R,E,An
			CO4: Study about the habitat, distribution and socio culture of the major tribes of the world.	1,2	U,R
III	**BAGE351**	**Geography Practical-III**	**CO1:** Read and interpret the weather Maps.	2,3	U,A
IV	**BAGE401**	**Geography of India -II**	**CO1:** learn about the various economic, Socio-cultural and environmental aspects of India with reference to policies and planning for development.	1,2,3	U,R
			CO2: Explain and identify the characteristics and attributes of Regional Development and Planning Multi-level planning, Aanalyse Planning for backward areas. Identify local to global perspectives.	2,3	U,C,R,A
			CO3: Expose to demographic and population characteristics.	1,2,3	U,C,E
			CO4: Evaluate the impact of human process on the environment with special reference to India.	2,4, 5	C,U,E,An

IV	**BAGE402**	**Human Geography-II**	**CO1:** Learn the qualitative aspects of Population which is useful in demographic and population studies. This gives insight in the dynamics of social processes and structure.	1,2,4	C,U,E,An
			CO2: know the direction of the movement and flow of people and evaluate the various processes and implications.	1,2,4	U,C,E,
			CO3: Understand and analyse the types and patterns of arrangement of people on the space in time.	1,2	C,U,E,An,A
			CO4: understand the concept of regions and its indicators over the space.	1,2,3	U,EAN,E
IV	**BAGE451**	**Geography Practical-IV**	**CO1:** Represent data using different types of diagrams.	3, 4, 5	U, An, A
			CO2: Acquire knowledge of different types of maps and cartography techniques to represent the data.	4	U, An, A, E
			CO3: Apply statistical techniques to the data for further analysis.	3, 4	U, An, A, C
			CO4: Learn the basic concepts of applying statistical tools in geographical analysis.	2,3,5	U, C,An, A
V	**BAGE501**	**Evolution of Geographical Thought**	**CO1:** Acquire the knowledge about the development of Philosophical and Theoretical aspect of geography by studying the various thinkers.	1,2,3	U,R
			CO2: learn the chronological development of geography from the ancient to medieval and from medieval to modern/post-modern.	1,2,3	U,C,R,A
			CO3: Study the difference between Dualisms and Dichotomy and it’s associate philosophies, model and theories.	1,2	U,C,E

			CO4: Compare the ideas and Philosophies of scholars of modern school of thought and Paradigm shift.	1,2,3	C,U,E,An
V	**BAGE502**	**World Geography**	**CO1:** Know the world in terms of natural regions and resources.	1,2	C,U,E,An
			CO2: learn the distribution, and sustainable development of agriculture and minerals resources.	1,2,4	U, C,E
			CO3: Study about energy resources, its distribution and conservation.	1,2	C,U,E,An,A
			CO4: Develop the ability to evaluate the environment process, evolution and implications of degradation on society.	1,2,3	U,C,E
V	**BAGE551**	**Geography Practical-V**	**CO1:** Represent data using different types of diagrams.	3, 4, 5	U, An, A
			CO2: Acquire knowledge of different types of maps and cartography techniques to represent the data.	4	U, An, A, E
			CO3: Apply statistical techniques to the data for further analysis.	3, 4	U, An, A, C
			CO4: Learn the basic concepts of applying statistical tools in geographical analysis.	2,3,5	U, C,An, A
VI	**BAGE601**	**Geographical Methodologies**	**CO1:** Acquire the knowledge of concept of research and research methodology.	2,3	U,R,A,An,E,C
			CO2: learn to formulate research design and data collection techniques.	2,3,4	U,C,R,A
			CO3: Understand the application of statistical techniques in geographical studies.	1,2,3	U,C,E

			CO4: gain knowledge about the applied aspect research methodology in spatial analysis.	4, 5	C,U,E,An
VI	**BAGE602**	**World Geography-II**	**CO1:** Study India and international relationships and policies of trade	1,2,4	C,U,E,An
			CO2: Enhance their knowledge on Contemporary issues in changing economies of the world	1,2,4	U,C,E
			CO3: Understand the relevance of industrial operation over the space with respect to major industries	1,2	C,U,E,An,A
			CO4: Learn and discuss about the International and regional organization and global environmental issues.	1,2,3	U,C,E,An,A
VI	**BAGE651**	**Geography Practical-VI**	**CO1:** Represent data using different types of diagrams.	3, 4, 5	U, An, A
			CO2: Acquire knowledge of different types of maps and cartography techniques to represent the data.	4	U, An, A, E
			CO3: Apply statistical techniques to the data for further analysis.	3, 4	U, An, A, C
			CO4: Learn the basic concepts of applying statistical tools in geographical analysis.	2,3,5	U, C,An, A
			CO5: Represent data using different types of diagrams.	3, 4, 5	U, An, A

B.A. (Economics)

Programme Specific Outcome (PSO's)

PSO-1	Prepare students for pursuing research or careers that provide employment through entrepreneurship and innovative methods. Because today's unemployment problem can also be solved by developing the micro and small entrepreneurship
PSO-2	Prepare students to develop own thinking /opinion regarding current national or international policies and issues
PSO-3	Create awareness to become a rational and an enlightened citizen so that they can take the responsibility to spread the governments' initiatives/schemes to the rural areas for the upliftment of the poor or vulnerable section of the society for inclusive growth.
PSO-4	At the end of the programme, the students will have adequate competency in the frontier areas of economic theory and methods.
PSO-5	They will be able to use common software for analysis of economic data. Besides, students will be able to execute in-depth analysis of economic issues based on their understanding of economic theory.
PSO-6	The course will not only widen their opportunities for employment, but also helps them to pursue their doctoral studies.
PSO-7	The students will acquire additional specialization through optional courses.

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	**Cognitive levels**
I	**BAEC101**	**Micro Economics-I**	**CO1:** develop a sound understanding of the core concepts that economists use to understand the world of business, trade and public policy.	1,2,4	R,A,U
			CO2: familiarize with the mathematical techniques that economists routinely use in their analysis.	2,6	U,An,E
			CO3: usefulness of the abstract ideas and concepts introduced in the course with the aid of suitable applications to real world problems.	3,4,5,7	A,An,C
I	**BAEC102**	**Indian Economy-I**	**CO1:** a deeper understanding of What causes aggregate output and employment levels in an economy to fluctuate/ change over time? How effective are government policies in stabilizing the economy and/or generating steady growth?	1,2,4,8	R,U,A,An,E
			CO2: evaluate various macroeconomic policies and their implications on the basis of coherent theoretical frameworks.	4,7	A,An,E,C
II	**BAEC201**	**Micro Economics-II**	**CO1:** Approach of the course will be analytical	1,2,6	A,An,E,C
			CO2: Modelling and analyzing economic problems.	1,2,3,4,6,7	A,An,E,C
			CO3: Understand the main optimization and other tools used in a variety of economic applications	2,3,6,7	U,A,An,E,C

II	**BAEC202**	**Indian Economy-II**	**CO1:** To understand meaning, nature, scope and importance of Indian economy.	1,9	U,R
			CO2: To understand Relationship between development and population growth	1,2,9	U,An
			CO3: Understand various theories of population and their implications for India	1,2,3,4,9	A,An,E,
III	**BAEC301**	**Macro Economics-I**	**CO1:** Learn to select basic mathematical tools that are used by economic theorists	1,2,6,7,9	A,An,E,C
			CO2: Applications of these tools to some areas of economic theory	2,3,6,7,8,9	A,An,E,C
III	**BAEC302A**	**Introduction to statistics and mathematics for economics-I**	**CO1:** develop a sound understanding of the core concepts that economists use to understand the world of business, trade and public policy.	1,2,4,7,8	A,An,E,C
			CO2: familiarize with the mathematical techniques that economists routinely use in their analysis.	1,2	A,An,E,C
			CO3: usefulness of the abstract ideas and concepts introduced in the course with the aid of suitable applications to real world problems.	1,2,3,4,5,7,8	A,An,E,C
III	**BAEC302B**	**History of economic thought-I**	**CO1:** To develop critical thinking skills to analyze and critique different economic theories and paradigm	1,4,9	A,An,E
IV	**BAEC401**	**Macro Economics-II**	**CO1:** To understand meaning, nature, scope and importance of Indian economy.	1,9	A,An,E,C
			CO2: To understand Relationship between development and population growth	1,2,9	A,An,E,C
			CO3: Understand various theories of population and their implications for India	1,2,3,4,9	A,An,E,C

IV	**BAEC402A**	**Introduction to statistics and mathematics for economics-II**	**CO1:** Learn the fundamental statistical concepts	1,2	A,An,E,C
			CO2: Analyze and interpret data using descriptive statistics	1,2,7	A,An,E,C
IV	**BAEC402B**	**History of economic thought-II**	**CO1:**: To develop critical thinking skills to analyze and critique different economic theories and paradigms	1,4,9	U,A,An,E,C
V	**BAEC501**	**International trade and development economics**	**CO1:**: analyse historical as well as contemporary issues in trade theory and policy using a variety of lenses provided in the course:	2,3,4,5	U,A,An,E,C
V	**BAEC502A**	**Application of mathematics in economics-I**	**CO1:**: Acquiring a deep understanding of economic theory and advanced mathematical techniques used in economic analysis	1,2,4,9	U,A,An,E,C
V	**BAEC502C**	**Economy of Rajasthan-I**	**CO1:** Students gain insight into current Rajasthan economic matters, enhancing their readiness for professional endeavours.	1,2,4,9	U,A,An,E,C
VI	**BAEC601**	**Public finance**	**CO1:** Students gain critical insight into public finance, enhancing analytical skills in assessing government taxes, fostering comprehensive understanding of fiscal operations.	1,2,4,9	U,A,An,E,C

B.A (Statistics)

Programme Specific Outcome (PSO's)

PSO-1	This course exposes the students to the beautiful world of Statistics and how it affects each and every aspect of our daily life.
PSO-2	The course is designed to equip students with all the major concepts of Statistics along with the tools required to implement them.
PSO-3	Introduction to computer software helps them in the analysis of data by making optimum usage of time and resources. This software give them the necessary support and an edge when progressing to their professional careers.
PSO-4	Exposure to the plethora of real-life data helps in honing their analytical skills.
PSO-5	Having a practical component with every paper invokes their exploratory side and the interpretation abilities. Such a pedagogy goes a long way in giving them the required impetus and confidence fine-tunes for consultancy startups/jobs in near future.
PSO-6	The structure of the course also motivates/helps the students to pursue careers in related disciplines, especially the data sciences, financial statistics and actuarial sciences.

Semester	Course Code	Course Title	Course Outcomes on Completing the course, the students will be able to :	Attributes	
				PSOs addressed	Cognitive levels
I	BAST101	Probability Theory	**CO1:** Probability theory and its applications.	1,2,	R,U,A,An,E
			CO2: The fundamental concepts of Mathematical Statistics	1,2	R,U,A,An,E
			CO3: Basic concept of random variable and its types.	1,2,	R,U,A,An,E
			CO4: Properties of random variables like expectation, moment generating function, cumulative generating function etc	1,2,	R,U,A,An,E
			CO5: Marginal and conditional probability distributions.	1,2,	R,U,A,An,E
I	BAST102	Descriptive Statistics	**CO1:** The fundamental concepts of statistical population and sample.	1,2,5	R,U,A,An,E
			CO2: Handling various types of data and their graphical representation.	1,2,	R,U,A,An,E
			CO3: Measures of location and dispersion.	1,2,	R,U,A,An,E
I	BAST151	Statistical Practical-I	After completing this course, students should have developed a clear understanding of the skill to select appropriate methods to present data and gain the skills to calculate probabilities for various types of events.	1,2,3,4,5,6	R,U,A,An,E
II	BAST201	Statistical Analysis of Bivariate Data and Finite Difference	**CO1:** To know about official statistical system in India and functions of different agencies.	1,2,3,4,5,6	R,U,A,An,E
			CO2: Statistical Organisation in India	1,2,3,4,5,6	R,U,A,An,E
			CO3: Bivariate data. Significance of various coefficients of correlation.	1,2,3,4,5,6	R,U,A,An,E
			CO4: Fitting of linear and nonlinear curve.		
			CO5: Theory of Attributes.	1,2,3,4,5,6	R,U,A,An,E

II	**BAST202**	**Univariate Distribution**	**CO1:** After completing this course, students should have developed a clear understanding of - Various discrete and continuous probability distributions like Bernoulli, Binomial, Poisson,	1,2,3,4,5,6	R,U,A,An,E
			CO2: Developed a clear understanding of Geometric, Negative Binomial, Hypergeometric, Normal, Uniform, Exponential, Cauchy,	1,2,3,4,5,6	R,U,A,An,E
			CO3: Developed a clear understanding of Beta and Gamma distributions.	1,2,3,4,5,6	R,U,A,An,E
II	**BAST251**	**Statistical Practical-II**	**CO1:** After completing this course, students should have developed a clear understanding of analyzing the behavior of the data by fitting discrete and continuous distributions.	1,2,3,4,5,6	R,U,A,An,E
			CO2: Students are able to measure simple correlation, regression and Attributes.	1,2,3,4,5,6	R,U,A,An,E
III	**BAST301**	**Applied Statistics-(I)**	**CO1:**After completing this course, students will possess the ability to appreciate, formulate solutions, analyze use of time series, Demand	1,2,3,4,5,6	R,U,A,An,E
			CO2: Analysis to real world problems and understanding of Statistical Quality Control by Control charts for variables and attributes.	1,2,3,4,5,6	R,U,A,An,E
III	**BAST302**	**Applied Statistics (II)**	**CO1:** Distinction between Vital Statistics and Demography.	1,2,3,4,5,6	R,U,A,An,E
			CO2: Sources of data collection on Vital Statistics and errors therein.	1,2,3,4,5,6	R,U,A,An,E
			CO3: Measurement of Population.	1,2,3,4,5,6	R,U,A,An,E
			CO4: Basic measures of Mortality.	1,2,3,4,5,6	R,U,A,An,E
			CO5: Concepts of Stable and Stationary Populations. Co6• Concept of Life Tables, their construction and uses.	1,2,3,4,5,6	R,U,A,An,E
			CO7: Basic measures of Fertility.	1,2,3,4,5,6	R,U,A,An,E
III	**BAST 303**	**Practical Paper**	**CO1:**:After completing this course, students should have developed a clear understanding of specialized averages under the domain of Index numbers, be aware of the concept of Time Series and are familiar with simple measures of trend and seasonal variation. Perform basic demographic analyses using various techniques and ensure their comparability across populations.	1,2,3,4,5,6	R,U,A,An,E

IV	**BAST 401**	**Statistical Inference**	**CO1:** Basic concepts of hypothesis testing, including framing of null and alternative hypothesis	1,2,3,4,5,6	R,U,A,An,E
			CO2: Developing/ constructing best/most powerful statistical tests to test hypotheses regarding unknown population parameters (Using Neyman-Pearson Lemma).	1,2,3,4,5,6	R,U,A,An,E
			CO3: Characteristics of a good estimator, different methods of estimation.	1,2,3,4,5,6	R,U,A,An,E
			CO4: Demonstrate use of these techniques in data analysis.	1,2,3,4,5,6	R,U,A,An,E
IV	**BAST 402**	**Sampling Distribution**	**CO1:** Parameter, statistic, standard error, sampling distribution of a statistic.	1,2,3,4,5,6	R,U,A,An,E
			CO2: Sampling distributions of chi-square, t and F and their applications.	1,2	R,U
IV	**BAST 403**	**Practical Paper**	**CO1:** After completing this course, students should have developed a clear understanding of the concept of 'Testing of Hypothesis' and in particular for 'Test of hypothesis for Large Samples' and Estimation Theory.	1,2,3,4,5,6	R,U,A,An,E
V	**BAST 501**	**Sample Survey (I)**	**CO1:** The fundamental concepts of population and sample. (or the basic concepts of survey)	1,2,3,4,5,6	R,U,A,An,E
			CO2: The principles of sample survey and the steps involved in selecting a sample.	1,2,3,4,5,6	R,U,A,An,E
			CO3: Simple random sampling.	1,2,3,4,5,6	R,U,A,An,E
			CO4: Stratified random sampling.	1,2,3,4,5,6	R,U,A,An,E
			CO5: Systematic sampling.	1,2,3,4,5,6	R,U,A,An,E
V	**BAST 502**	**Design of Experiment (II)**	**CO1:** One-way and two-way analysis of variance.	1,2,3,4,5,6	R,U,A,An,E
			CO2: Basic concepts of design of experiments. **CO3:•** Completely randomized design.	1,2,3,4,5,6	R,U,A,An,E
			CO4: Randomized design.	1,2,3,4,5,6	R,U,A,An,E
			CO5: Latin square design	1,2,3,4,5,6	R,U,A,An,E

V	**BAST 503**	**Econometrics**	**CO1:** The fundamental concepts of econometrics.	1,2,3,4,5,6	R,U,A,An,E An
			CO2: Specification of the model.	1,2,3,4,5,6	R,U,A,An,E
			CO3: Multiple Linear Regressions.	1,2,3,4,5,6	R,U,A,An,E
			CO4: Multicollinearity.	1,2,3,4,5,6	R,U,A,An,E
			CO5: Heteroscedasticity.	1,2,3,4,5,6	R,U,A,An,E An
			CO6: Autocorrelation. CO7• Autoregressive and Lag models.	1,2,3,4,5,6	R,U,A,An,E
V	**BAST 504**	**Practical Paper**	After completing this course, students should have developed a clear understanding of various sampling techniques & apply these techniques in real life situations.	1,2,3,4,5,6	R,U,A,An,E
VI	**BAST 601**	**Sample Survey-II**	**CO1:** Cluster Sampling.	1,2,3,4,5,6	R,U,A,An,E
			CO2: Ratio Sampling.	1,2,3,4,5,6	R,U,A,An,E
			CO3: Regression	1,2,3,4,5,6	R,U,A,An,E
			CO4: Two Stage Sampling	1,2,3,4,5,6	R,U,A,An,E
VI	**BAST 602**	**Design of Experiment (II)**	**CO1:** Missing plot techniques.	1,2,3,4,5,6	R,U,A,An,E
			CO2: Factorial experiments.	1,2,3,4,5,6	R,U,A,An,E
			CO3: Confounding	1,2,3,4,5,6	R,U,A,An,E
			CO4:• BIBD	1,2,3,4,5,6	R,U,A,An,E
VI	**BAST 603**	**Project**	**CO1:** The project work will provide hands on training to the students to deal with data and relate it to some theoretical concepts.	1,2,3,4,5,6	R,U,A,An,E
VI	**BAST 604**	**Practical Paper**	**CO1:** After completing this course, students should have developed a clear understanding of -Regression method of estimation, Ratio methods of estimation, Cluster sampling.	1,2,3,4,5,6	R,U,A,An,E
			CO2: Students will be able to Estimate the mean and variance in Regression, Ratio methods of estimation, and Cluster sampling.	1,2,3,4,5,6	R,U,A,An,E

B.A (Public Administration)

Programme Specific Outcome (PSO's)

PSO1.Graduates should be able to analyze complex problems, policies, and administrative issues using various Qualitative and Quantitative methods. Students will understand the need for Good Administration and Will be Able to Understand the Role of Administrative Institution in Democratic Socialistic Society

PSO2.Students will be proficient in valuating existing Policies and Programs proposing new ones, and understanding the implications of Policy decisions.

PSO3. Students will be able to explain the Governmental mechanism from Gram Panchayat to Parliament and can Suggest solutions over various issues In its functioning and Implementation.

PSO4.Students can work as Administrative analyst, Administrative adviser, as a Research scholar or can be a Administrative thinker and writer.

PSO5.StudentsCan understand the comparative differences between the Administrative Systems of different countries

PSO6. Students will be able to understand The composition and functions of Various Administrative Institutions

PSO7.Students can understand the institutions Working for redressal of public Grievances in different Countries and Their functioning.

Semester	Course Code	Course Title	Course Outcomes on Completing the course, the students will be able to :	PSOs addressed	COGNITIVE LEVELS
I	BAPA101	Elements of Public Administration-1	**CO1:** The students will be able to learn nature, importance of Public Administration and relationship with other social sciences, understand the traditional and Modern Approaches.	1,2,5,6	U,R,An
			CO2:.To provide detailed information about various Approaches and Principles to the study of Public administration	1,2,5,6	U,R,An
I	BAPA102	Public Administration in India-1	**CO1:**.To provide historical information about the development of Indian Administration	1,2,5	U,R
			CO2: To introduce the features of present Indian administration	1,2,5	U,R
			CO3: To Explore the role and functions of president and prime minister of India	1,2,5	U,R
II	BAPA201	Elements of Public Administration-II	**CO1:** To examine differences between line and Staff Agencies, leadership styles, management techniques, and decision- Making processes with government organizations.	1,2,5,6	U,R,An
			CO2: To explain the importance of motivation and morale in administration.	1,2,5,6	U,R,An
			CO3: To introduce the concept of personnel administration and the role of Public Services in Administration	1,2,5,6	U,R,An
II	BAPA202	Public Administration in india-II	**CO1:** Clearing the concept of budget	1,2,4	U,An,E
			CO2: Explain the role of the Comptroller and Auditor General and parliamentary committees in financial matters.	1,2,4	U,An,E
			CO3: To clarify the methods of control over administration	1,2,4	U,An,E
			CO4: Explaining the importance of Right to Information	1,2,4	U,An,E
			CO5: To present a comparative study of the major recommendations of the First and Second Administrative Reforms Commission.	1,2,4	U,An,E

III	**BAPA301**	**Administrative institutions in India-I**	**CO1:** To Understand the Concept of Social Welfare State, Public Welfare State and Laissez Faire State	1,2,4	U, An,E
			CO2: To provide information about the All three organs of government and their mutual relations.	1,2,4	U, An,E
			CO3: To understand the features of Democratic Administration	1,2,4	U, An,E
			CO4: To Develop the Comprehension about Political Parties and Pressure Groups	1,2,4	U, An,E
III	**BAPA302**	**State Administration in India-I**	**CO1:** Comprehend about the Organization and Working of NITI Aayog, National Commission of human rights and Central Vigilance Commission	1,2,4	U, An,E
			CO2:.To Provide Knowledge about Election Commission, Union Public Service Commission and University Grants Commission	1,2,4	U, An,E
			CO3:.To Acquaint the Knowledge about the organization and working of various Institutions like Human Rights Commission, Railway board, Reserve Bank of India and Central Social Welfare Board	1,2,4	U, An,E
IV	**BAPA401**	**Administrative institutions in India-II**	**CO1:** Student will be able to get the knowledge of various board and Companies in Rajasthan like Revenue Board, Rajasthan State Electricity Companies etc.	1,2,4	U,An,E
			CO2: To Aware about the Machinery of Public Grievances Redressed	1,2,4	U, An,E
			CO3: To provide knowledge about Rajasthan State human Rights Commission	1,2,4	U, An,E
			CO4: To provide in-depth knowledge of subjects related to personnel administration.	1,2,4	U, An,E
			CO5: To introduce the role of District Collector and other officials working in district administration	1,2,4	U, An,E
IV	**BAPA402**	**State Administration in India-II**	**CO1:** To Acquaint the knowledge of State Administration	1,2,4	U,An,E
			CO2:.To Provide Knowledge of Governor and his relations with Chief Minister and Council of Ministers		

			CO3:.To Understand the Role of Chief Secretary in Respective State provide information about relationships and Differences between Directorate and Commissionerate	1,2,4	U, An,E
V	**BAPA501**	**Comparative Administrative Systems-I**	**CO1:** Students will get basic knowledge of Comparative Public Administration	1,2,5,6	U,R,An
			CO2: To provide detailed information on various approaches related to comparative public administration.	1,2,5,6	U,R,An
			CO3: To Provide Knowledge about Constitution of Various Countries like UK, USA, France and Switzerland.	1,2,5,6	U,R,An
			CO4: Providing detailed information on parliamentary, presidential and Plural Executive System of governance	1,2,5,6	U,R,An
V	**BAPA502**	**Local Administration-I**	**CO1:** Students will be able to get deeper knowledge historical Evolution of Local Self Government of India	1,2,5,6	U,R,An
			CO2: To Acquaint the Knowledge about th**e** 73rd and 74th Constitutional Amendment Act	1,2,5,6	U,R,An
			CO3: To provide knowledge about organizational Structure and functions of Rural and Urban Local Self Government	1,2,5,6	U,R,An
			CO4: Explain Utility of Democratic Decentralization in theory and practice	1,2,5,6	U,R,An
VI	**BAPA601**	**Comparative Administrative Systems-II**	**CO1:**.Explain the Role of Various Determinants in policy formulation	1,2,5,6	U,R,An
			CO2: Students will be able to get the knowledge of Policy Making Process and Implementation process.	1,2,5,6	U,R,An
			CO3:.To Input deeply Knowledge about Public Policy and Explain the Role of Public Policy in Planning and Decision Making Process	1,2,5,6	U,R,An
			CO4:.To provide detailed information about various Models of Policy Analysis Students will be able to know about the Role of All Three Branches of The Government in Policy Formulation or Implementation	1,2,5,6	U,R,An

VI	**BAPA602**	**Local Administration-I**	**CO1:** Students will be able to get deeper knowledge historical Evolution of Local Self Government of India	1,2,5,6	U,R,An
			CO2: To Acquaint the Knowledge about th**e** 73rd and 74th Constitutional Amendment Act	1,2,5,6	U,R,An
			CO3: To provide knowledge about organizational Structure and functions of Rural and Urban Local Self Government	1,2,5,6	U,R,An
			C04Explain Utility of Democratic Decentralization in theory and practice	1,2,5,6	U,R,An

B.A. (Philosophy)

Programme Specific Outcome (PSO's)

PSO-1	Students will synthesize various philosophical ideas and perspectives to develop their own original arguments and theories.
PSO-2	Students will evaluate the ethical implications of philosophical theories, considering their consequences for individuals and society.
PSO-3	Students will critically analyze philosophical arguments, identifying strengths, weaknesses, and underlying assumptions
PSO-4	Students will apply philosophical theories to real-world situations and contemporary issues, demonstrating their relevance and practicality.
PSO-5	Students will interpret and clarify complex philosophical concepts using clear and coherent language.
PSO-6	Students will memorize significant historical events and philosophical texts.

Semester	Course Code	Course Title	Course Outcomes	PSOs addressed	Cognitive levels
I	BAPL101	Indian Philosophy-I	**CO1:** Students will be able to show that they have a thorough understanding of Indian philosophy.	5,4,3	U, A,AN
			CO 2: Students will be able to apply philosophical concepts and theories to analyze and interpret texts, artifacts, and cultural practices within Indian philosophy.	5,4,3	U, A,AN
			CO 3: Students will be able to analyze the significance and relevance of different philosophical perspectives within Indian philosophy, considering their implications for contemporary issues and debates.	5,4,3	U, A,AN
I	BAPL102	Western Philosophy-I	**CO1:** To help students understand how crucial the idea of potentiality is to metaphysics	5,6,2	U, R,E
			CO 2: Students will recall key philosophical concepts, theories, and historical figures within the Western philosophical tradition.	5,4,3	U, A,AN
			CO3: Students will evaluate the strengths and weaknesses of different philosophical perspectives within Western philosophy, considering their implications for ethics, politics, metaphysics, and epistemology.	5,4,3	U, A,AN
II	BAPL201	Indian Philosophy-II	**CO1:** Students will demonstrate comprehension of the major philosophical ideas, schools of thought, and their historical and cultural contexts in India.	6,5.1	R,U,C
			CO2: Students will be able to recall key concepts, theories, and historical figures in Indian philosophy.	5,4,3	U, A,AN
			CO3: Students will synthesize ideas from various Indian philosophical traditions to develop their own coherent arguments and interpretations, contributing to the ongoing discourse in the field.		

II	**BAPL202**	**Western Philosophy-II**	**CO1:** Students will demonstrate comprehension of major philosophical movements, ideas, and their historical contexts in Western philosophy.	5,43	U, A,AN
			CO2: Students will apply philosophical concepts and theories to analyse and interpret texts, arguments, and real-world phenomena within Western philosophy.	5,4,3	U, A,AN
			CO3: Students will critically analyse philosophical texts, arguments, and interpretations within the context of Western philosophy, identifying underlying assumptions and evaluating their logical coherence	5,4,3	U, A,AN
III	**BAPL301**	**Indian Ethics**	**CO1:** Students will recall key ethical principles, theories, and historical figures within the Indian ethical tradition, such as dharma, karma, and ahimsa.	6,5,4	R, U,A
			CO 2: Students will demonstrate comprehension of major ethical concepts, theories, and their cultural and religious contexts in Indian ethics	5,4,3	U, A,AN
			CO3: Students will apply ethical principles and theories from Indian philosophy to analyze and evaluate moral dilemmas, ethical practices, and social issues within Indian society and beyond.	5,4,3	U, A,AN
III	**BAPL302**	**Western Logic-I**	**CO1:** Students will recall key concepts, principles, and terminology in formal logic, such as propositional logic, predicate logic, and logical fallacies.	6,5,4	R, U,A
			CO2: Students will demonstrate comprehension of the principles and rules of inference in formal logic, including truth tables, deduction, induction, and syllogistic reasoning.	5,4,3	U, A,AN
			CO3: Students will apply logical principles and techniques to analyze and construct valid arguments, identify logical fallacies, and solve logical puzzles and problems.	5,4,3	U, A,AN

IV	**BAPL401**	**Western Ethics**	**CO1:** Students will apply ethical theories and principles to analyse and evaluate moral dilemmas, ethical decision-making, and social issues within Western society and global contexts.	4,3,2	A,AN,E
			CO2: Students will critically analyse ethical arguments, texts, and case studies within the context of Western ethics, identifying underlying assumptions, ethical reasoning, and evaluating the implications of different ethical perspectives.	5,4,3	U, A,AN
			CO3: Students will evaluate the strengths and weaknesses of different ethical theories and approaches within Western ethics, considering their implications for personal conduct, social justice, and moral reasoning.	5,4,3	U, A,AN
IV	**BAPL402**	**Western Logic-II**	**CO1:** Students will critically analyse complex arguments and logical structures, deconstructing them into their component parts, and evaluating their validity and soundness.	3,2,1	AN,E,C
			CO2: Students will evaluate the strengths and weaknesses of different logical systems and approaches, considering their applicability to various domains, such as mathematics, philosophy, computer science, and everyday reasoning.	5,4,3	U, A,AN
			CO3: Students will synthesize ideas from formal logic to construct their own logical arguments, proofs, and models, demonstrating proficiency in logical reasoning and problem-solving skills.	5,4,3	U, A,AN
V	**BAPL501**	**Indian Logic**	**CO1:** Students will recall key concepts, principles, and terminology in Indian logic, such as Nyaya, Vaisheshika, and the contributions of notable logicians like Gautama and Kanada.	6,5,4	R,U,A
			CO2: Students will understand comprehension of the principles and methods of inference (anumāna), classification (padārtha), and debate (vāda) in Indian logic	5,4,3	U, A,AN
			CO3: Students will apply logical principles and techniques from Indian logic to analyze and evaluate arguments, classify knowledge, and engage in reasoned debate within Indian philosophical texts and contemporary discourse.	5,4,3	U, A,AN

V	**BAPL502**	**Philosophy of Religion**	**CO1:** Students will recall key concepts, theories, and historical developments in the philosophy of religion.	6,4,3	R, A,AN,
			CO2: Students will apply philosophical theories and methods to analyses and interpret religious texts, practices, and beliefs, as well as contemporary religious phenomena and debates.	5,4,3	U, A,AN
			CO3: Students will critically analyses arguments for and against the existence of God, the nature of religious language, and the rationality of religious belief,	5,4,3	U, A,AN
V	**BAPL503**	**Panchkosha and Ethical ideas: Holistic Development of Personality-I**	**CO1:** Students will recall the concept of Panchkosha and its significance in understanding the layers of human existence according to Vedanta philosophy.	6,4,2	R, A,E
			CO2: Students will apply ethical principles and insights derived from the study of Panchkosha to analyse and reflect on personal experiences, moral dilemmas, and ethical decision-making	5,4,3	U, A,AN
			CO3: Students will evaluate the compatibility and coherence of different ethical perspectives with the holistic framework provided by Panchkosha,	5,4,3	U, A,AN
V	**BAPL504**	**Applied Ethics-I–**	**CO1:** Students will recall key ethical theories, principles, and case studies within various domains of applied ethics, such as bioethics, environmental ethics, business ethics, and social justice.	6,4,2	R, A,E
			CO2: Students will apply ethical theories and frameworks to analyze and evaluate real-world ethical problems and decision-making processes, proposing reasoned solutions and ethical guidelines for addressing those issues.	5,4,3	U, A,AN
			CO3: Students will evaluate the ethical dimensions of policies, practices, and behaviors within various fields, considering their consequences for individuals, communities, and the environment.	5,4,3	U, A,AN

VI	**BAPL601**	**Samkhya Yoga**	**CO1:** Students will recall the foundational concepts, principles, and terminology of Sankhya and Yoga philosophy, including purusha, prakriti, gunas, and the eight limbs of yoga.	6,4,3	R, A,AN
			CO2: Students will apply Sankhya and Yoga principles and practices to analyze and address personal challenges, cultivate self-awareness, and promote holistic well-being and spiritual growth.	5,4,3	U, A,AN
			CO3: Students will critically analyze Sankhya and Yoga texts, teachings, and practices, deconstructing their philosophical arguments and methodologies, and evaluating their relevance and applicability to contemporary life.	5,4,3	U, A,AN
VI	**BAPL602**	**Socio-Political Philosophy**	**CO1:** Students will recall key concepts, theories, and historical developments in social and political philosophy, including ideas related to justice, rights, power, authority, and the nature of the state.	6,4,3	R,A,AN
			CO2: Students will apply social and political theories to analyse and evaluate contemporary social and political problems, proposing ethical and just solutions to issues such as inequality, oppression, democracy, and global governance.		
			CO3: Students will critically analyze social and political texts, arguments, and ideologies, deconstructing them into their component parts and evaluating their coherence, validity, and ethical implications.	5,4,3	U, A,AN
VI	**BAPL603**	**Panchkosha and Ethical ideas: Holistic Development of Personality-I**	**CO1:** Students will recall the concept of Panchkosha and its significance in understanding the layers of human existence according to Vedantic philosophy.	6,5,4	R,U,A
			CO2: Students will understand comprehension of the Panchkosha model and its relationship to ethical ideas, understanding how ethical principles influence the development of each sheath and contribute to holistic personality development	5,4,3	U, A,AN

			CO3: Students will apply ethical principles and insights derived from the study of Panchkosha to analyse and reflect on personal experiences, moral dilemmas, and ethical decision-making, integrating them into their daily lives for personal growth.	5,4,3	U, A,AN
VI	**BAPL604**	**Applied Ethics-II**	**CO1:** Students will recall key ethical theories, principles, and case studies within various domains of applied ethics, such as bioethics, environmental ethics, business ethics, and social justice.	6,4,2	R,A,E
			CO2: Students will apply ethical theories and frameworks to analyse and evaluate real-world ethical problems and decision-making processes, proposing reasoned solutions and ethical guidelines for addressing those issues.	5,4,3	U, A,AN
			CO3: Students will evaluate the ethical dimensions of policies, practices, and behaviours within various fields, considering their consequences for individuals, communities, and the environment, and assessing their alignment with ethical principles and values.	5,4,3	U, A,AN

B.A (Psychology)
Programme Specific Outcome (PSO's)

PSO-1	Develop sound knowledge about the fundamental concepts in Psychology related to various sub fields of Psychology.
PSO-2	Develop critical thinking skills and distinguish between concepts studied in different courses.
PSO-3	Apply appropriate concepts and methods of Psychology to solve problems.
PSO-4	Develop positive attributes such as empathy, compassion, effective communication skills like listening, speaking and observational skills.
PSO-5	Be committed towards the health and wellbeing of different stakeholders.
PSO-6	Appreciation and tolerance towards different behavioural patterns.
PSO-7	Analyze social problems, social dynamics and create solutions to manage them effectively.
PSO-8	Develop a strong theoretical foundation of research methodology used in Psychology and apply the knowledge to conduct research in an ethical way.

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	Cognitive levels
I	BAPY 101	Basic Psychological Process	**CO1:** Define and differentiate among various subfields of Psychology. Distinguish between different scientific methods that are used to carry out a scientific inquiry in psychology	1	R,U,A,An,E
			CO2: Recognize the influence of biological factors on human behavior.	1,5	R,U,A,An,E
			CO3: Differentiate between the cognitive processes such as sensation, attention and perception.	1,3,7	R,U,A,An,E
			CO4: Identify various components of learning. Describe different theories of learning.	1,3,4	R,U,A,An,E
I	BAPY 102	Social Psychology	**CO1:** Demonstrate fundamental knowledge about need and domains of Social Psychology. Be aware of the brief history and relationship of Social Psychology with other fields. Understand different types and theories of leadership.	1	R,U,A,An,E
			CO2: Describe different social processes of social dynamics	1,2,3	R,U,A,An,E
			CO3: Identify and utilize social cues to make judgments about people.	1,4	R,U,A,An,E
			CO4: Understand different types and theories of leadership.	1,5	R,U,A,An,E
			CO5: Effective use of communication.	8	R,U,A,An,E
II	BAPY 201	Basic Psychological process	**CO1:** Understand the motive behind behavior. Understand memory process and causes of forgetting	1,2	R,U,A,An,E
			CO2: Explain the emotional expression of oneself and others and the physiological aspects.	2,3	R,U,A,An,E
			CO3: Explain different types of intelligence processes which can help in understanding different behaviours which are related to intelligence	1,4,5	R,U,A,An,E

			CO4: Analyze different types of personality traits which can be beneficial in dealing with human behaviour	1,6	R,U,A,An,E
			CO5: Critically evaluate different types of personality theories effectively	5,6,	R,U,A,An,E
			CO6: Construct an action plan based on SWOT analysis for one's life	8	R,U,A,An,E C
II	**BAPY 202**	**Social Psychology**	**CO1:** Analyze different attitudes and causes of prejudices and accordingly be able to suggest appropriate measures to control them.	1,6	R,U,A,An,E
			CO2: Differentiate different kinds of relationship patterns of interpersonal attraction.	2,3	R,U,A,An,E
			CO3: Examine different theories of aggression.	3,5	R,U,A,An,E
			CO4: Justify why a pro-social behavior happen differently in different situations.	6,7	R,U,A,An,E
			CO5: Propose appropriate preventive measures dealing with aggression.	3,5	R,U,A,An,E
III	**BAPY 301**	**Psychopathology**	**CO1:** Identify different disorders which help in diagnosing a disorder.	3,5	R,U,A,An,E
			CO2: Compare different paradigms of psychopathology.	3,6	R,U,A,An,E
			CO3: Infer a particular psychological disorder based on the knowledge of different clinical symptoms.	2,3	R,U,A,An,E
			CO4: Write appropriate case history based on the mental state examination of a client	4,6,7	R,U,A,An,E
III	**BAPY 302**	**Psychological Statistics**	**CO1:** The students will be able to develop an understanding of various statistical techniques.	3,8	R,U,A,An,E
			CO2: Developing skills to use quantitative techniques such as measures of central tendency, variability, and correlation.	8	R,U,A,An,E
			CO3: Identify and distinguish the analysis techniques that can be used in research	8	R,U,A,An,E
			CO4: Application of SPSS	8	R,U,A,An,E

IV	**BAPY 401**	**Psychopathology**	**CO1**: Understand different types of mood and psychoactive mood disorders.	1,2	R,U,A,An,E
			CO2: Understand Schizophrenia in detail.	3,5	R,U,A,An,E
			CO3: Understand various clinical interventions.	5,6	R,U,A,An,E
			CO4: Know about the various personality disorders	6	R,U,A,An,E
	BAPY 402	**Psychological Statistics**	**CO1:** Understand the concept of hypothesis and its testing.	1,2	R,U,A,An,E
			CO2: Understand the use of parametric tests	8	R,U,A,An,E
			CO3: Understand the application of ANOVA	8	R,U,A,An,E
			CO4: Familiarized with the use of SPSS	3,8	R,U,A,An,E
V	**BAPY 501**	**Positive Psychology**	**CO1:** Understand about the emergence of a new field of Psychology	1,3	R,U,A,An,E
			CO2: Understand the theoretical viewpoints of happiness.	5	R,U,A,An,E
			CO3: Understand different positive cognitive states.	2,4	R,U,A,An,E
			CO4: Identify personal strengths	4	R,U,A,An,E
V	**BAPY 502**	**Psychometrics**	**CO1:** Understand the need and origin of psychological testing.	1,3	R,U,A,An,E
			CO2: Understand the use of tests in different fields.	1	R,U,A,An,E
			CO3: Understand various ethical aspects in testing.	3,8	R,U,A,An,E
			CO4: Understand the procedure of test construction	8	R,U,A,An,E
VI	**BAPY 601**	**Positive Pychology**	**CO1:** Understand the resilient behavior in different ages.	3,4,6	R,U,A,An,E
			CO2: Understand self-regulation and self-control and its application.	6,7	R,U,A,An,E
			CO3: Understand mental health and well-being and promote the same for achieving life satisfaction.	4,5	R,U,A,An,E
			CO4: Understand the components and theories of emotional intelligence and pro social behaviour**.**	6,7	R,U,A,An,E
VI	**BAPY 602**	**Psychometrics**	**CO1:** Understand the characteristics of a good test.	2,8	R,U,A,An,E
			CO2: Understand the standardization of tests.	2,4	R,U,A,An,E
			CO3: Understand the use of different types of tests to measure different attributes.	4	R,U,A,An,E,An

B.A. (English Literature)

Programme Specific Outcome (PSO's)

S. No.	On completing B.A. in English Literature, the student will be able to
PSO 1	1. Enhance critical thinking as well as cultivate language skills of students by introducing them to structures of language through a wide variety of literary works. To understand Indian writings in English and draw the characteristics of the particular era. It will help in seeking jobs in the Academia as lecturers and teachers, as Journalists – both in Print and Electronic media, Copyrighters, Communication experts, Bloggers, Script writers, Content writers, Novelists, Poets and Dramatists.
PSO 2	2. This Course enables students to understand the history of literature in English language
PSO 3	3. To provide a holistic personality development by enabling the students to acquire a critical mindset and robust communication skills.
PSO 4	4. To understand Indian writings in English and draw the characteristics of the particular era..
PSO 5	5. It will help in seeking jobs in the Academia as lecturers and teachers, as Journalists – both in Print and Electronic media, Copyrighters, Communication experts, Bloggers, Script writers, Content writers, Novelists, Poets and Dramatists.

Semester	Course Code	Course Title	Course Outcomes	Pso Adressed	Cognitive Levels
I	BAEN101	Paper I : Poetry and Drama-I	**CO1:** Critically compare Metaphysical poetry and Renaissance poetry	1,2	R,U
			CO2:.Develop a thorough understanding of Shakespearean drama Students will be able to demonstrate broad academic knowledge of history of India as well as the world.	1,2	R,U
	BAEN102	Paper II Prose and Fiction –I	**CO1:**.Critically analyze various elements of story(plot, style & setting)	1,2	R,U
			CO2: Discuss the development of novel as a genre in the era		
II	BAEN201	Paper I : Poetry and Drama-II	**CO1:** Chart the development of Augustan sensibility and differentiate it from Pre- Romantic period	1,2,	R,U
			CO2: Identify and practice various poetic meters	1,2,	R,U
II	BAEN202	Paper II Prose and Fiction –II	**CO1:** Situate the key themes of the prose of the era-class, poverty, nature and freedom in their social context	1,2,	R,U
			CO2: Express themselves effectively through correct use of tenses.	1,2,3	R,U,A
III	BAEN301	Paper I : Poetry and Drama-III	**CO1:**.Demonstrate a comparative idea of the Romantic and Victorian period	1,2,3	R,U,A
			CO2:.Critically discusses realism and the concept of New Woman.	1,2,3	R,U,A
III	BAEN302	Paper II Prose and Fiction – III	**CO1:**.Develop an understanding of allegory as a literary style	1,2,3	R,U,A
			CO2: Identify and effectively practice parts of grammar like Modal, Speech and Voice	1,2,3	R,U,A
IV	BAEN401	Paper I : Poetry and Drama-IV	**CO1:** Explain socio- political scenario and larger framework of modernist writings like alienation, symbolism and individualism	1,2,3	R,U,A
			CO2: Demonstrate a comprehensive account of the development of American literature.		

IV	**BAEN402**	**Paper II Prose and Fiction –IV**	**CO1:** Correlate experimentation and modernist prose	1,2,3	R,U,A
			CO2: Develop an understanding of Non Linear narratives	1,2,3	R,U,A
V	**BAEN501**	**Paper I: Poetry and Drama-V**	**CO1:**.To interpret the text with the help of Literary terms	1,2,3,4	R,U, An
			CO2: Interpret pre-independence Indian literature in its socio- political context	1,2,3,4	R,U, An
			CO 3: Analyze Indian English poetry and prose	1,2,3,4	R,U, An
V	**BAEN502**	**Paper II: Prose and Fiction-V**	**CO1:** To make students aware of prominent Indian English prose writers.	1,2,3,4	U, An, E
			CO2: Analyze complex interconnections of gender, race, class, in context of Indian society.	1,2,3,4	U, An, E
			CO3: To learn the art of proofreading and editing using grammatical tools	1,2,3,4	U, An, E
VI	**BAEN601**	**Paper I: Poetry and Drama-VI**	**CO1:** To enhance the understanding of various poetic devices and their effective use and application for the analytical understanding of the literary piece	1,2,3,4,5	U, An, E
			CO2: Demonstrate a comprehensive understanding of the contemporary Indian literature in English.	1,2,3,4,5	U, An, E
			CO3: Discuss the impact of Socio- Political milieu in shaping Indian English literature of the period.	1,2,3,4,5	U, An, E
VI	**BAEN602**	**Paper II: Prose and Fiction-VI**	**CO1:** To develop competence in the students to read and understand different forms of prose (fiction and nonfiction) while building ability to comment critically on its various elements (style, plot, setting, irony etc.)	1,2,3,4,5	U, An, E
			CO2: To familiarize students with the various writers of the modern period of Indian English Literature and their characteristic works	1,2,3,4,5	U, An, E
			CO3: To improves communication skill with basic understanding of phonetics.	1,2,3,4,5	U, An, E

B.A. Sociology
Programme Specific Outcome (PSO's)

PSO-1	Demonstrate Advanced Sociological Knowledge: Acquire a comprehensive understanding of advanced sociological theories, concepts, and methodologies relevant to various subfields within sociology.
PSO-2	Critically Evaluate Sociological Perspectives: Develop the ability to critically evaluate and compare different sociological perspectives, theories, and research findings, fostering a nuanced understanding of sociological debates and controversies.
PSO-3	Apply Sociological Insights to Real-world Issues: Apply sociological theories and methodologies to analyze and address complex social issues such as inequality, globalization, social change, and environmental sustainability, demonstrating the relevance of sociology to contemporary challenges.
PSO-4	Cultivate Empathy and Interpersonal Skills: Foster empathy, cultural competence, and effective interpersonal skills to engage ethically and respectfully with individuals and communities from diverse backgrounds, facilitating meaningful sociological research and practice.
PSO-5	Conduct Advanced Sociological Research: Gain proficiency in designing, conducting, and analyzing advanced sociological research projects using both qualitative and quantitative methods, contributing to the advancement of sociological knowledge.
PSO-6	Communicate Complex Ideas Effectively: Develop advanced written and oral communication skills to effectively communicate complex sociological ideas, research findings, and analyses to diverse audiences, including academic, professional, and lay audiences.
PSO-7	Engage in Collaborative Scholarship: Collaborate with peers, faculty, and community partners to engage in collaborative scholarship, interdisciplinary research, and community-based initiatives aimed at addressing social issues and promoting social justice.
PSO-8	Demonstrate Professional Ethics and Integrity: Adhere to ethical principles and professional standards in all aspects of sociological practice, demonstrating integrity, honesty, and a commitment to social justice in research, teaching, and professional endeavors.

Semester	Course Code	Course Title	Course Outcomes on completing the course, the student will be able to:	PSOs addressed	Cognitive levels
I	BASO101	Introduction to Sociology	**CO1:** Understand the foundational principles and theories of sociology.	1,6	R,A,C
			CO2: Develop a critical perspective on social structures and processes.	1,6	R,A,C
	BASO102	Indian Society - II	**CO1:** Analyze the complexities and dynamics of Indian society.	1,2	A,An,R
			CO2: Explore cultural diversity and social issues in the Indian context.	1,2	A,An,R
II	BASO201	Basic Concepts in Sociology - I	**CO1:** By engaging in the study of social structure and change, students acquire essential knowledge about the fundamental aspects of society and its major segments.	1,2,3	R,A,U,An
				1,2,3	R,A,U,An
	BASO202	Society in India: Issues and Problems - II	**CO1:** Examine contemporary social issues and challenges in India.	1,2,3,5	R,An,E,U
			CO2: Propose solutions and interventions for societal problems.	1,2,3,5	R,An,E,U
III	BASO301	Foundation of Social Research- I	**CO1:** Acquire foundational knowledge in social research methods.	4, 5, 7, 8	An,E,U
			CO2: Develop skills for designing and conducting social research.	4, 5, 7, 8	An,E,U
	BASO302	Rural Sociology II	**CO1:** Understand the social dynamics and issues in rural communities.	1,2,3,6	U,R,An,E
			CO2: Analyze the impact of social change on rural societies.	1,2,3,6	U,R,An,E
IV	BASO401	Sociology of Tribal	**CO1:** Explore the unique characteristics and challenges of tribal societies.	1,3,6,8	R,A,An,E

		Society - I	**CO2:** Understand the cultural and social aspects of tribal communities.	1,3,6,8	R,A,An,E
IV	**BASO402**	**Classical Sociological Thought - II**	**CO1:** Examine and critically analyze classical sociological theories.	1,2,3,4	An,E,C
			CO2: Relate classical thought to contemporary societal issues.	1,2,3,4	An,E,C
V	**BASO501**	**Urban Sociology - I**	**CO1:** Analyze the social dynamics and challenges of urban environments.	1,2,3,6,	R,A,An,E
			CO2: Explore the impact of urbanization on society.	1,2,3,6,	R,A,An,E
V	**BASO502**	**Indian Sociological Thought - II**	**CO1:** Study the evolution and contributions of Indian sociological thinkers.	1,3,6	A,An,R
			CO2: Apply indigenous perspectives to sociological analysis.	1,3,6	A,An,R
VI	**BASO601**	**Political Sociology - I**	**CO1:** Analyze the interplay between politics and society.	1,2,3,4	U,An,E,C
				1,2,3,4	U,An,E,C
VI	**BASO602**	**History of Western Sociological Thought - II**	**CO1:** This course delves into the evolution of sociological perspectives, building upon the foundations laid by classical theories. Students explore the historical progression of sociological thought, examining how contemporary perspectives have emerged and evolved from the seminal works of classical sociologists.	1,2,3,6	R,A,E
				1,2,3,6	R,A,E

B.A. Sanskrit
Programme Specific Outcome (PSO's)

Semester	Course code	Course Title	Course outcomes	Attributes	
				PSOs addresses	Cognitive levels
I	BASA101	दृश्य,श्रव्य एवं नीति काव्य-प्रथम	इस पाठ्यक्रम से छात्रों को दृश्य,श्रव्य एवं नीति काव्यों की विभिन्न विधाओं को जानने का सुअवसर प्राप्त होगा साथ ही नीति वाक्य व्यक्तित्व विकास में सहायक सिद्ध होगें।	1,2,3,4,5,6	U,R,A,An,E,C
I	BASA102	भारतीय संस्कृति के मूल तत्व, व्याकरण एवं अनुवाद -प्रथम।	इस पाठ्यक्रम से छात्रों को भारतीय संस्कृति के मूल तत्वों एवं पाणिनीय व्याकरण की बारीकियों को समझने में मदद मिलेगी।	1,2,4,5,6	U,R,A,An,E,C
II	BASA201	दृश्य, श्रव्य एवं नीति काव्य - द्वितीय।	इस पाठ्यक्रम से छात्रों को दृश्य, श्रव्य एवं नीति काव्यों की विभिन्न विधाओं को जानने का सुअवसर प्राप्त होगा साथ ही नीति वाक्य व्यक्तित्व विकास में सहायक सिद्ध होगें।	1,2,3,4,5,6	U,R,A,An,E,C
II	BASA202	भारतीय संस्कृति के मूल तत्व, व्याकरण एवं अनुवाद -द्वितीय	इस पाठ्यक्रम से छात्रों को भारतीय संस्कृति के मूल तत्वों एवं पाणिनीय व्याकरण की बारीकियों को समझने में मदद मिलेगी।	1,2,4,5,6	U,R,A,An,E,C
III	BASA301	वैदिक साहित्य, गद्य साहित्य एवं व्याकरण - प्रथम।	इस पाठ्यक्रम से छात्रों को वैदिक साहित्य , प्रयुक्त देवताओं का परिचय, मंत्र ज्ञान गद्यसाहित्य में नीति वाक्य से व्यक्तित्व विकास , व्याकरण में शब्दरूप की ससूत्र सिद्धि का ज्ञान प्राप्त होगा।	1,2,3,4,5,6	U,R,A,An,E,C

III	**BASA302**	नाटक, छंद एवं संस्कृत साहित्य का इतिहास - प्रथम।	इस पाठ्यक्रम से संस्कृत नाटकों की प्राचीनता, कला एवं समृद्धि का ज्ञान प्राप्त होगा।छंद , अलंकार से नाट्य गुणों की इस श्रेष्ठता तथा संस्कृत साहित्य के समृद्ध इतिहास को जानने में मदद मिलेगी।	1,2,3,4,5,6	U,R,A,An,E,C
IV	**BASA401**	वैदिक साहित्य, गद्य साहित्य एवं व्याकरण- द्वितीय।	इस पाठ्यक्रम से छात्रों को वैदिक साहित्य, प्रयुक्त देवताओं का परिचय, मंत्र ज्ञान, गद्य साहित्य में नीति वाक्य से व्यक्तित्व विकास, व्याकरण में शब्दरूप की ससूत्र सिद्धि का ज्ञान प्राप्त होगा।	1,2,3,4,5,6	U,R,A,An,E,C
IV	**BASA402**	नाटक, छंद एवं संस्कृत साहित्य का इतिहास - द्वितीय।	इस पाठ्यक्रम से संस्कृत नाटकों की प्राचीनता, कला एवं समृद्धि का ज्ञान प्राप्त होगा।छंद, अलंकार से नाट्य गुणों की इस श्रेष्ठता तथा संस्कृत साहित्य के समृद्ध इतिहास को जानने में मदद मिलेगी।	1,2,3,4,5,6	U,R,A,An,E,C
V	**BASA501**	भारतीय दर्शन एवं व्याकरण - प्रथम।	इस पाठ्यक्रम से छात्रों को भारतीय दर्शन के प्रमुख दार्शनिक विषयों, श्रीमद्भगवत्गीता के सांख्ययोग, निष्कामकर्म का ज्ञान प्राप्त होता है व्याकरण में क्रियारूपों की ससूत्र सिद्धि का ज्ञान होता है।	1,2,3,4,5,6	U,R,A,An,E,C
V	**BASA502**	काव्य, धर्मशास्त्र एवं निबंध।	यह पाठ्यक्रम संस्कृत काव्यों, धर्मशास्त्रों की विभिन्न विधाओंका ज्ञान करवाता है। जिससे धर्म, नीति, इतिहास तथा संस्कृत भाषा के लेखन को समझने व सृजन करने की क्षमता का विकास होता है।	1,2,3,4,5,6	U,R,A,An,E,C
VI	**BASA601**	भारतीय दर्शन एवं व्याकरण- द्वितीय।	इस पाठ्यक्रम से छात्रों को भारतीय दर्शन एवं दार्शनिक विषयों, श्रीमद्भगवत्गीता के सांख्य योग, निष्काम कर्म का ज्ञान प्राप्त होता है व्याकरण में क्रियारूपों की ससूत्र सिद्धि का ज्ञान प्राप्त होता है।	1,2,3,4,5,6	U,R,A,An,E,C
VI	**BASA602**	काव्य एवं धर्मशास्त्र	यह पाठ्यक्रम संस्कृत काव्यों धर्मशास्त्रों की विभिन्न विधाओं का ज्ञान करवाता है जिससे धर्म, नीति, इतिहास तथा संस्कृत भाषा साहित्य को समझने व सृजन करने की क्षमता का विकास होता है।	1,2,3,4,5,6	U,R,A,An,E,C

B.A. Maths
Programme Specific Outcome (PSO's)

S. No.	On completing Bachelor of Science, the student will be able to:
PSO 1.	A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology.
PSO2.	A student should get adequate exposure to global and local concerns that explore them many aspects of mathematical sciences.
PSO3.	Student is equipped with mathematical modelling ability, problem solving skills,
PSO4.	Student should be able to apply their skills and knowledge that is translate information presented verbally into mathematical form.
PSO5.	Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.
PSO6	Student will get the creative talent and power of communication necessary for various kinds of employment.
PSO7.	Student should be able to select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion
PSO8.	Recognize the importance and value of Mathematical thinking, training and approach to problems solving on a diverse variety of disciplines.
PSO9.	Ability to learn and apply the computer programming in C

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	Cognitive levels
I	BAMA 101	Discrete Mathematics	**CO1:** Analyze logical propositions via truth tables.	1, 4, 8	R, U, AN,
			CO2: Prove mathematical theorems using mathematical induction.	1, 2, 5	U, A, AN
			CO3: Understand sets and perform operations and algebra on sets.	1, 2, 5	U, A, AN
			CO4: Determine properties of relations, identify equivalence and partial order relations, sketch relations.	1, 4, 8	R, U, AN,
			CO5: Identify functions and determine their properties.	1, 4, 8	R, U, AN,
I	BAMA 102	Calculus-I	**CO1:** Understand the idea of derivative, tangent line to the graph of a function	1, 2, 5	U, A, AN
			CO2: How a derivative can be used to describe the rate of change of one quantity with respect to another	1, 4, 8	R, U, AN,
			CO3: How to relate the geometric ideas to the analytic ideas.	1, 4, 8	R, U, AN,
I	BAMA 103	Three Dimensional Geometry and Vector Calculus	**CO1:** Understand the basic applications of coordinate geometry.	3,4, 5, 8	U, A
			CO2: They will develop ability to pursue advanced studies and research in pure and applied mathematical science.	1, 4, 8	R, U, AN,
			CO3: Determine the derivatives of vectors and their properties	1, 4, 8	R, U, AN,
			CO4: Understand the various operators and their applications in vector calculus	1, 4, 8	R, U, AN,
			CO5: Understand the concept of line, surface and volume integration with their relationship.	1, 4, 8	R, U, AN,

II	**BAMA 201**	**Graph Theory**	**CO1:** Understand the basics of graph theory and their various properties.	1,4, 5, 7	U, A, An,C
			CO2: Model problems using graphs and to solve these problems algorithmically.	1, 4, 8	R, U, AN,
II	**BAMA 202**	**Calculus-II**	**CO3:** Apply graph theory concepts to solve real world applications like routing, TSP/traffic control, etc.	1, 4, 8	R, U, AN,
			CO1: Sketch curves in a plane using its mathematical properties in the different coordinate systems of reference.	7, 4, 1	R, A, E
			CO2: Compute the length of curve, area bounded by the curves, area and volume of surface of solid of revolution	1, 4, 8	R, U, AN,
II	**BAMA 251**	**Maths Practical**	**CO1:** Understand the linear optimization theory and its applications.	2,3,4,5,6,7,8	R, U, A
			CO2: Identify the appropriate methods for the efficient computation of optimal solutions of a problem and a set of linear constraints	1, 4, 8	R, U, AN,
III	**BAMA 301**	**Real Analysis-I**	**CO1:** Describe fundamental properties of the real numbers that lead to the formal development of real analysis.	1,4	U, A, E
			CO2: Comprehend regions arguments developing the theory underpinning real analysis	1, 4, 8	R, U, AN,
			CO3: Demonstrate an understanding of limits and how it is used in sequences, series and differentiation.	1, 4, 8	R, U, AN,
			CO4: Construct rigorous mathematical proofs of basic results in real analysis.	1, 4, 8	R, U, AN,
			CO5: Appreciate how abstract ideas and regions methods in mathematical analysis can be applied to important practical problems.	1, 4, 8	R, U, AN,
III	**BAMA 302**	**Differential Equation-I**	**CO1:** Distinguish between linear, nonlinear, partial and ordinary differential equations.	2,3,4,7,8	U, A, C
			CO2: Recognize and solve exact differential equation by use of an integrating factor.	1, 4, 8	R, U, AN,
			CO3: Solve basic application problems described by first and second order differential equations	1, 4, 8	R, U, AN,

III	**BAMA 303**	**Numerical Analysis**	**CO1:** Understand the nature and operations of Numerical Analysis, demonstrate familiarity with theories and concepts used in Numerical Analysis	2,3, 5, 6	U, R, A, An
			CO2: Identify the steps required to carry out a piece of research on a topic in Numerical Analysis.	1,2	R,U
			CO3: Apply Numerical Methods to solve algebraic and transcendental equations, integrals and differential equations.	1, 4, 7	R, U, C
			CO4: Analyzing their convergence rate and performance, applicability of the methods on different test examples.	1, 4, 7	R, U, C
			CO5: Recognize and apply appropriate theories, principles and concepts relevant to Numerical Analysis.	1, 4, 7	R, U, C
IV	**BAMA 401**	**Advanced Analysis and Metric Space**	**CO1:** Develop a reasoned argument in handling problems about functions, especially those that are of bounded variation.	1, 4, 7	R, U, C
			CO2: Develop the ability to reflect on problems that are quite significant in the field of metric space.	3,6,9	A, E
IV	**BAMA 402**	**Differential Equation-II**	**CO1:** Understand that physical systems can be described by differential equations	2,3,4,5,6	U, An, E
			CO2: Understand the practical importance of solving differential equations	3,6,9	A, E
			CO3: Analytically solve a wide range of differential equations	3,6,9	A, E
			CO4: Solve classical linear partial differential equations (PDEs)	3,6,9	A, E
IV	**BAMA 451**	**Maths Practical**	On successful completion of this course students will be able to **CO1:** Apply well known numerical technique to solve science and engineering problems and evaluate the results.	3,6,9	A, E
V	**BAMA 501**	**Abstract Algebra-I**	**CO1:** To construct and compare algebraic structures and substructures and analyze a given structure in detail.	4, 6	U, An, C
			CO2: Understand a new structure based on given structures.	3,6,9	A, E

V	**BAMA 502**	**Complex Analysis-I**	**CO1:** Explain the central importance of complex variables in analysis by comparing and contrasting their use in different areas of mathematics.	1, 3	U, R, An,C
			CO2: Grasped a deeper understanding of differentiation and integration in this setting	1,4,7	U, E
			CO3: Know the tools and results of complex analysis including Cauchy's Theorem, Cauchy's integral formula	1,4,7	U, E
V	**BAMA 503**	**Dynamics**	**CO1:** Learn about concept of Velocity and Acceleration.	1, 2	R, U, A
			CO2: Understand the theory of Simple Harmonic Motion and Hooke's law and Motion of elastic strings.		
			CO3: Know about various topics in dynamics such as Motion in resisting medium and Projectile motion.	1,4,7	U, E
			CO3: Learn the concept of motion on smooth curve in vertical plane and inside the circle also.	1,4,7	U, E
VI	**BAMA 601**	**Abstract Algebra-II**	**CO1:**.Understand the concept of ideals, field of quotient, vector space and quotient space.	1,2	U, A
			CO2: Calculate the basis and dimension of vector space.		
VI	**BAMA 602**	**Complex Analysis-II**	**CO1:** Understand the manipulation-skills in the use of Rouche's theorem, Cauchy-Hadamard theorem,	1,4,7	U, E
			CO2: Evaluate radius of convergence.	1,4,7	U, E
			CO3: Understand the Argument Principle, the principle of Analytic Continuation and the concerned results.	1,4,7	U, E
VI	**BAMA 651**	**Mathematics Practical**	**CO1:** Understand the scope and classification of operation research.	3,5,6,7,8	U, AN, C
			CO2: Optimize the allocation of resources to demand points in the best possible way using various techniques and minimize the cost or time of completion of number of jobs by number of persons.	1,4,7	U, E
			CO3: Model competitive real-world phenomena using concepts from game theory.	1,4,7	U, E
			CO4: Analyse pure and mixed strategy games.	1,4,7	U, E

Physical Education

Programme Specific Outcome (PSO's)

Programme Specific Outcome (PSOs) , Department of Physical education	
S.No	**On completing Physical education course, the student will be able to:**
PSO-1	Students will develop competency in many movement activities
PSO-2	Students will understand *how* and *why* they move in a variety of situations and use this information to enhance their own skills
PSO-3	Students will achieve and maintain a health-enhancing level of physical fitness.
PSO-4	Students will exhibit a physically active lifestyle and will understand that physical activity provides opportunities for enjoyment, challenge and self-expression.
PSO-5	Students will demonstrate responsible personal behavior while participating in movement activities.
PSO-6	Students will demonstrate responsible social behavior while participating in movement activities. Students will understand the importance of respect for others.
PSO-7	Students will understand the relationship between history, culture and games.

Semester	Course code	Course Title	Course Outcomes	PSOs addressed	Cognitive levels
I	BAPE101	History Of Physical Education-I	**CO1:** The course aims to compare the relationship between general education and physical education	1, 2, 3, 4	U,R,A
			CO2: To help the students to know more about the ancient games which help for higher level of sports.	1,2,4	U,R,An
			CO3: It enables the students to know recent developments of the subject. The course is designed to apply the knowledge of Olympics in organizing various sport activities and distinguish the functional operations on National and International Olympic Federations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: Students will learn about history of physical education in India and perform all the major Olympic lifts. Students will be able to identify the terminology used in Olympic lifting.	1,2	U,R
I	BAPE102	Foundation Of Physical Education-I	**CO1:** To understand the Psychological, physiological, Biological, Philosophical progressive &development of a athlete.	1,3,4	U,R,A
			CO2: The Foundation of physical educations helps the students to know the background of the human foundation	1, 2	U,R
			CO3: Discover the development of Physical Education and Sports in various periods.	1,2,3,4,5,6	U,R,A,An, E,C
			CO4: It intends to analyze the concepts and issues pertaining to Physical Education and formulate the principles, philosophy and concepts about Physical Education.	1,2,5,6,7	U,R,A,An, E,C

II	**BAPE201**	**History Of Physical Education-II**	**CO1:** Understand the recognition system for Indian sportspersons and institutions (Arjuna Award, Dronacharya Award, Maulana Abdul Kalam Azad Trophy, Major Dhyan Chand Khel Ratna Award).	1,2,3,4	U,R,A,An
			CO2: Analyze the contribution of leaders and movements to the development of physical education.	3,4,5,6,7	An,E,C
			CO3: Recognize the contributions of key figures in Indian physical education (G.D. Sondhi, Rajkumari Amrit Kaur, Dr. P.M. Joseph, H.C. Buck, Prof. Karan Singh, Ajmer Singh).	1,2,3,4,5,6,7	R,U,A,An,E,C
			CO4: Understand the significance of regional and national games (Asian Games, South Asian Games, National Games, and Paralympics).	1,2	U,R
II	**BAPE202**	**Foundation Of Physical Education-II**	**CO1:** To understand the basic functioning of the respiratory, circulatory, and muscular systems and their response to physical activity.	1,2,3	U,R,A
			CO2: To explore the psychological factors impacting sports performance and the benefits of various exercises for physical and mental well-being.	1,2,3,4	U,R,A
			CO3: To analyze the role of physical education and sports in shaping society, considering its sociological implications and its significance as a cultural heritage.	1,2,3,4,5	U,R,A,An
			CO4: To analyze the role of physical education and sports in shaping society, considering its sociological implications and its significance as a cultural heritage.	1,2,3,4,5,6,7	U,R,A,An,E,S

III	**BAPE301**	**Anatomy And Physiology Of Exercise -I**	**CO1:** To understanding anatomy and physiology helps to learn sports movements correctly and execute them in a perfect way.	2, 3, 4	R,,U,A
			CO2: To understand the muscular and skeletal involvements of various joints. Analyze the skeletal system of the body.	1,4,5	R, U,A, An
			CO3: The student will be oriented with the basic structure and function of human body by identifying, comparing and relating different systems, organs and their functional and structural units.	1,2,3,4,5,6,7	R,U,A,An,E,C
			CO4: To learn structure and functions of the human body mechanism with lot of interest to perfect the sports movements. Explain the different organ systems of the body.	1,2,3,4,5,6,7	U,R,A,An,E,C
III	**BAPE302**	**Management & Methods Of Physical Education-I**	**CO1:** To improve the ability to use appropriate teaching methods for effective teaching and to organize sports and games competitions flawlessly.	1, 2, 6	U,R
			CO2: To know about that intramural and extramural tournament. Develop the understanding about the infrastructural and resources in a school.	1,2,6,7	U,R,C
			CO3: Understand the functional aspects of a institute. To Know the importance of sports Management and curriculum Design	1, 2	U,R
			CO4: To know the practical part of tournaments	1,4,5,6	R,U,An,E,C

IV	**BAPE401**	**Anatomy And Physiology Of Exercise-Ii**	**CO1:** To differentiates between the types of muscles and their roles in physical activity.	1,2,3	R,U
			CO2: To critically evaluate the impact of social institutions like schools and sports clubs on personality development through participation in physical activities.	1,2,3,4	R,U,A,An
			CO3: To analyze the historical evolution of physical education and sports, exploring its changing social significance.	1,2,4	R,U,An
			CO4: To identify and explain the key components of the Olympic movement and major sporting organizations in India.	1,2,3,4	R,U,A,An
IV	**BAPE402**	**Management & Methods Of Physical Education-II**	**CO1:** To evaluate the need and importance of equipment in physical education programs and create an ideal equipment list based on specific activities.	1,2,3	R,U
			CO2: To develop a realistic approach for purchasing physical education equipment, considering cost-effectiveness and functionality. Additionally, students will learn proper maintenance techniques and explore improvisation methods for equipment utilization.	1,2,3,4	R,U,A,An
			CO3: To understand the process of preparing a physical education budget, including identifying funding sources and prioritizing equipment needs.	1,2	R,U
			CO4: To gain practical skills in record-keeping, filing systems, and office correspondence relevant to managing a physical education program.	1,2,4	R,U,An

V	**BAPE501**	**Health Education-I**	**CO1:** Define health education, identify its purpose, and analyze the factors that influence individual and community health. Additionally, students will explore the scope and importance of health education for school and college students.	1,2,3,4	R,U,A,An
			CO2: Distinguish between health and fitness, identify the key components of physical fitness, and evaluate the significance of health for individuals, families, and society as a whole.	1,2,3	R,U
			CO3: Explain the relationship between mental health and physical education, exploring ways to enhance mental well-being through physical activity.	1,2,3,4	R,U,A,An
			CO4: Define a balanced diet, analyze the components of nutrition, and understand the functions of food in the body. Students will also learn about the specific dietary needs of athletes to optimize sports performance.	1,2,4,6,7	R,U,An,E,C
V	**BAPE502**	**Test And Measurement-I**	**CO1:** Imparting the knowledge of collection of data help in evaluating the learner's ability individually. Understand and differentiate between formative and summative evaluation, Process and Product evaluation.	1,2,3,4	R,U,A,An
			CO2: Applying the knowledge to determine the corrective measures that test are administrated for. Able to apply the different statistical test for hypothesis testing.	1,2,3,4,5,6	U, R,A,An,E,C
			CO3: Develop physical competence and knowledge of specific test to measure the performance and fitness. To Know the importance of Applied statistics in physical education.	4,5,6	U,A,An
			CO4: Collect and analyse fitness test data of a person. Select appropriate Evaluation tools according to purpose and age groups.	5,6	U, R,E,C

VI	**BAPE601**	**Health Education-II**	**CO1:** Define personal hygiene and its importance for overall health. Recognize the negative effects of tobacco, alcohol, and drugs on the human body. Develop healthy hygiene habits.	1,2	R,U
			CO2: Analyze the symptoms, preventative measures, and treatments for various communicable diseases (Malaria, Smallpox, Hydrophobia (Rabies), AIDS, Whooping Cough, Tuberculosis, Cholera, Diphtheria, Leprosy, Dysentery, Tetanus).	1,2,3,4,5,6,7	R,U,A,An,E,C
			CO3: Define safety principles and their importance in preventing sports-related accidents. Identify common sports injuries and explore effective prevention strategies.	1,2,4	R,U,An
			CO4: Define first aid and outline the essential qualities of a first-aider. Gain foundational knowledge and skills in first aid administration.	1,2,3,4	R,U,A,An
VI	**BAPE602**	**Test And Measurement-II**	**CO1:** Analyze and apply various fitness tests (AAPHER Youth Fitness Test, JCR Test, Canadian Fitness Test, and Cooper Run Test) to assess individual fitness levels.	1,2,3	R,U
			CO2: Critically evaluate skill tests used in different sports (Johnson Basketball Test Battery, McDonald Soccer Skill Test, Harbans Singh Field Hockey Test, Brady Volleyball Test) and understand their application in assessing athletic ability.	1,2,3,4,5,6	R,U,A,An,E,C
			CO3: Interpret diagrams and learn the official dimensions and markings of playfields for various sports (Football, Volleyball, Basketball, Cricket, Hockey, Kabaddi, Badminton, Kho-Kho).	1,2,4,5,6	R,U,An,E,C
			CO4: Apply knowledge of playfield dimensions and markings to set up playing areas for different sports, ensuring proper game administration and safety.	1,2,3,4	R,U,A,An

Programme Outcome Bachelor of Commerce (B.Com- Pass Course)

	BACHELOR OF COMMERCE
	Programme Outcomes (PO's)
	After the successful completion of Bachelor's Degree of Commerce the students get equipped with the following specialties:
PO-1	They acquire the in-depth knowledge of principles and theories of commerce including economics, finance, accounts, marketing, entrepreneurship, trade & industry.
PO-2	They becomes the beholder of special and essential business skills like critical thinking, decision making, problem solving, risk analyzing and minimizing etc. and they learn how to apply theoretical knowledge to the real business world.
PO-3	The graduates get a strong hand on financial literacy like formulation of financial statements, budgeting, investment analysis, audit process, income tax laws, inventory management, risk and uncertainty management etc.
PO-4	The commerce graduate becomes proficient in team work and leadership.
PO-5	They develop an innovative and entrepreneurial mindset.
PO-6	They acquire the knowledge about the policy formulation and implementation machinery of the nation its problems and the way out.
PO-7	The commerce graduates get the knowledge about the banking and financial intermediaries, their role in the nation building and propagation of economic growth and development.
PO-8	The graduates further move towards research in the field of commerce

Accountancy and Business Statistics (ABST)
Programme Specific Outcome (PSO's)

Programme Specific Outcomes:	
PSO-1	Students will acquire a comprehensive understanding of accounting principles, concepts, and practices.
PSO-2	Students will develop skills in analyzing and interpreting financial statements, assessing the financial health of organizations and making informed decisions based on financial information.
PSO-3	Students will gain knowledge of tax laws, regulation and procedure.
PSO-4	Students will understand the principles and practices of auditing.
PSO-5	Students will enhance their communication skills, both written and oral, and develop the ability to work effectively in teams, present financial information and communicate with stakeholders.
PSO-6	Students will develop strong analytical and problem-solving skills, enabling them to analyze complex financial data, identify issues and propose appropriate solutions.

Semester	Course Code	Course Title	Course Outcomes on completing the course, the student will be able to:	Attributes	
				PSOs addressed	Cognitive levels
I	BCAS101	Financial Accounting	**CO 1:** The student shall demonstrate Understanding of the concepts and process of accounting	1	U
			CO 2: Ability to prepare various accounts for small traders who do not able to keep proper accounts	1	U
			CO 3: Ability to calculate Loss of claim regarding various business losses	2	U, A
			CO 4: Ability to prepare account for transactions related to Hire Purchase and Lease Accounting system	6	U, A, An
I	BCAS102	Business Statistics	**CO 1:** Understand the basics of statistics and its applications	6	U, A
			CO 2: Analyse the relationship between two variables of various managerial situations	2	U, An, E
			CO 3: Understand applications of Dispersion and Skewness	1, 6	U, A, E
			CO 4: Interpret Correlation and Regression	6	An, E
II	BCAS201	Corporate Accounting	**CO 1:** Able to learn about the Indian Accounting Standards as well as IFRS	1	U, R
			CO 2: Grasp the issue and redemption procedure of Shares and Debentures	2	U, A
			CO 3: Understand the concept of Underwriting of Shares and Debentures	1	U, A, E
			CO 4: Able to learn final accounts of companies and disposal of profit	1	U, R

II	**BCAS202**	**Advanced Business Statistics**	**CO 1:** Understand the graphical presentation of statistical data	1	U
			CO 2: Understand the applications of Time Series and Index Numbers	2	U, A, An
			CO 3: Analyse the problems of Interpolation and Extrapolation	6	A, An, E
			CO 4: Able to understand the concept of permutations and Combinations	1	U
III	**BCAS301**	**Income Tax Law**	**CO 1:** Able to learn about basic knowledge of Income Tax act 1961	3	U, A, An
			CO 2: Learn about the residential status of the assesses	3	U, R, E
			CO 3: Learning about the various heads of Income	2, 3	U, R, A, An
			CO 4: Able to compute taxable income under various heads of income	2, 3, 5	A, An, E
III	**BCAS302**	**Elementary Cost Accounting**	**CO 1:** Able to learn about basic knowledge of cost concepts and its elements	1	U
			CO 2: Able to understand material control, labour control and overhead control	6	A, An, E
			CO 3: Learn about the Cost Sheet for Single Output / Unit Costing	6	A
			CO 4: Able to understand the reconciliation between cost and financial books	2, 6	U, An, E
IV	**BCAS401**	**Income Tax Laws & Practices**	**CO 1:** Able to understand the latest provisions of income tax	3	U
			CO 2: Identify taxable income and exempted incomes	3	U, R, An
			CO 3: Able to compute total taxable income and tax liability of different assesses	3, 5	A, An, E
			CO 4: Understand the work as tax consultant, audit assistant and other supporting services	5, 6	U

IV	**BCAS402**	**Methods and Techniques of Costing**	**CO 1:** Prepare a Cost Sheet for Service provider	2, 6	A, E
			CO 2: Ascertain costs in Job Costing, Contract Costing and Process Costing	6	A, An, E
			CO 3: Able to learn about basic knowledge of budgetary control	5, 6	U, An, E
			CO 4: Able to understand about Marginal and Standard Costing	5, 6	U, An, E
V	**BCAS501**	**Auditing**	**CO 1:** Able to articulate knowledge of fundamental audit concepts	4	U
			CO 2: Able to describe the auditor's responsibility for assessing fraud risk and detecting fraud	4	A, E
			CO 3: Understand the role of an Auditor in verifying and valuation of Assets and Liabilities	4, 5	U, An
			CO 4: Able to understand the audit of various	4, 5, 6	U A, An, E
V	**BCAS502**	**Functional Accounting**	**CO 1:** Able to articulate knowledge of Valuation of Goodwill and Shares	2	U, An
			CO 2: Able to understand about the accounting of stock market transactions	1	U, A
			CO 3: Learn about the accounting of different types of Royalty	2	U, A, An
			CO 4: Understand the accounting of branch and departmental store transactions	2,6	U, A, An
VI	**BCAS601**	**Advanced Accounting**	**CO 1:** Understand the meaning and methods adopting for internal reconstruction	1	U, A, E
			CO 2: Grasp the meaning of amalgamation and accounting of amalgamation of companies	1, 2	U, A, E
			CO 3: Understand the concept of Liquidation of companies	5	U, A, An, E
			CO 4: Understand the basic of Value Added Accounting, Social Accounting and Human Resources accounting.	1, 2	U, R, A, E

VI	**BCAS602**	**Management Accounting**	**CO 1:** Understand the concepts of management accounting and financial statements	1, 2	U, R
			CO 2: Able to understand the leverages and various ratios	2	U, A, An, E
			CO 3: Understand the significance and procedure for preparing cash flow statement	2, 5	A, An, E
			CO 4: Understand the concept of decision taking regarding long term investments	2, 5, 6	A, An, E

BADM (Bachelor of Commerce)

Programme Specific Outcome (PSO's)

	After the successful completion of Bachelor's Degree of Commerce the students get equipped with the following specialties:
PSO-1	They acquire the in-depth knowledge of principles and theories of commerce including economics, finance, accounts, marketing, entrepreneurship, trade & industry.
PSO-2	They becomes the beholder of special and essential business skills like critical thinking, decision making, problem solving, risk analyzing and minimizing etc. and they learn how to apply theoretical knowledge to the real business world.
PSO-3	The graduates get a strong hand on financial literacy like formulation of financial statements, budgeting, investment analysis, audit process, income tax laws, inventory management, risk and uncertainty management etc.
PSO-4	The commerce graduate becomes proficient in team work and leadership.
PSO-5	They develop an innovative and entrepreneurial mindset.
PSO-6	They acquire the knowledge about the policy formulation and implementation machinery of the nation its problems and the way out.
PSO-7	The commerce graduates get the knowledge about the banking and financial intermediaries, their role in the nation building and propagation of economic growth and development.

Semester	Course Code	Course Title	Course Outcomes	Attributes	
				PSOs addressed	Cognitive levels
I	BCBM101	Business Contract	**CO1:** Graduate students will develop an understanding of contract, that how a contract works in business and importance of contract in businesses according to The Contract Act.1872.	1,3,4	U,R
			CO2: Students would enhance logical and practical thinking process among the students, including the ability to understand businesses and their working.	1,2,3,4	U,A,An
			CO3: The student will be able to demonstrate an understanding of the Legal Environment of Business.	1,7	U,An
			CO4: Graduates would apply basic legal knowledge to business transactions, Communicate effectively using standard business and legal terminology.	1,5	A,E,An
I	BCBM102	Entrepreneurship	**CO1:** Graduate students advance their skills in customer development, customer validation, competitive analysis, and iteration while utilizing design thinking.	1,6,7	A,E,An
			CO2: Students will know that Business success is the outcome of an entrepreneurial skill and risk taking and innovation.	1,6,7,5	A,E,An
			CO3: Graduates would be able to apply entrepreneurial skills.	4,6,7	A,E,An
			CO4: Students would be able to know about various governmental schemes availing for MSMEs and will take advantage of them.	1,3	A,E,An

II	**BCBM201**	**Business Laws**	**CO1:** The students would be able to deal with the legal aspect of different business situations.	2,4,6,7	A,E,An
			CO2: The outcome of this programme will help to accumulate and analyse requisite legal knowledge and its application about the legal framework for starting a business venture.	1,2,4,6,7	A,E,An
			CO3: The students would be able to interpret various legal provisions and learn how to apply them in building their career through an exposure to various case studies and clinical legal education.	1,2,4,6	A,E,An
			CO4: Students would learn the rules regarding the Contract of Sale, Distinction between Sale & Agreement to sell, Condition & Warranty, Doctrine of Caveat Emptor, etc.	1,3	U,R
II	**BCBM202**	**Business Communication**	**CO1:** The students will penetrate the communication skills used in business world.	1,2,3,4	U,R,C
			CO2: The students will be able to use communication skills for effective business writing, effective business communications, research approaches, etc.	2,4,5,6,7	A,An,C
			CO3: It will enable them to enhance their verbal communication using modern technology.	4,6,7	A,C
			CO4: Students will be conversant with business or official communication terms and writing skills.	4,6,7	A,C,C
III	**BCBM301**	**Corporate Law**	**CO1:** Graduate students will understand the Company Act that how a company works in business and also get knowledge about Indian law and the importance of rules and regulation of a company according to prescribed Act.	1,2,3,6,7	U,R,An
			CO2: A Graduate student would be able to understand the practices of Director and promoter of company.	1,2,3,6,7	U,An,A

			CO3: Students would remember the duties and liabilities of members of a company and apply them in practical life.	2,3,4	U,An,A
			CO4: Graduates would get knowledge about the necessary documentation needed at the time of incorporation of company.	1,2,3,4,7	U,An,A
III	**BCBM302**	**Business Management**	**CO1:** Examines the functions of planning, organizing, leading, staffing and controlling.	1,2,6,7	U,An,A
			CO2: Learns and describe the primary functions of management and their importance in the work performed by managers.	1,3,4,7	U,An,A
			CO3: Evaluates and anticipate the potential effectiveness of various management styles, communications, and decisions for a given situation.	2,6,7	U,An,A
			CO4: Evaluates the major models of leadership and motivation, and suggest situations when they may be successfully applied.	2,4,5,6,7	U,An,A

IV	**BCBM401**	**Secretarial Practice**	**CO1:** Develop proficiency in essential administrative and clerical skills	1,2,6,7	U,An,A
			CO2: Enhance written and verbal communication abilities to interact professionally with colleagues, clients, and stakeholders.	2,4,5,6,7	U,An,A
			CO3: Implement advanced time management and organizational strategies to prioritize tasks, manage schedules, and increase productivity, thereby contributing to the smooth functioning of the office.	5	C
			CO4: Cultivate a strong understanding of business ethics, confidentiality, and professional behaviour.	1,4	U,A
IV	**BCBM402**	**Marketing Management**	**CO1:** On successful completion of the course, students will be able to understand the basics of marketing strategy formulation and implementation	1,3	U,An,A
			CO2: This course will help the students aspiring to be marketing professionals in better decision making	2,4,5,7	U,An,A
			CO3: Students would understand complete relationship between Marketing and other Management functions.	1,2,7	U,An,A
			CO4: Students will get to know their role in the marketing sphere.	1,2	U,An,A

V	**BCBM501**	**Functional Management**	**CO1:** Recognize and discuss the different functions of Management.	1,2,4	U,An,A
			CO2: Understand Human Resource Planning, Recruitment, Selection, Training and Placement.	1,2,5,6,7	U,An,A
			CO3: Understanding finance function in detail.	1,3,5,6,7	U,An,A
			CO4: Apply HR, Marketing and Finance skills	1,2,4,7	U,An,A
V	**BCBM502**	**Advertising and Sales Promotion**	**CO1:** Familiarity with the advertising process	1,3	U,An,A
			CO2: Graduates would understand the strategic role of creativity in successful advertising campaigns and brand building.	1,2,6,7	U,An,A
			CO3: Ability to pursue a career in the field of advertising and sales promotion through the knowledge gained about the field.	1,4,6,7	U,An,A
			CO4: Graduates would culminate the skills of understanding various sales promotion techniques and creating advertisements.	5,7	U,An,A
VI	**BCBM601**	**Business Ethics & Corporate Governance**	**CO1:** Students would be acquainted with business objectives, dynamics of business and various components of environment.	1,2,4	U,An,A
			CO2: Students would recall and relate various concepts like business ethics, ethical dilemmas, corporate culture and ethical climate.	1,2,4	U,An,A
			CO3: Students would describe and discuss Corporate Social Responsibility, Corporate Governance and Social Audit.	1,2,4	U,An,A

			CO4: Students would be acquainted with various strategies of Global Trade. They would also discuss Foreign Trade in India, Foreign Direct Investments and its implications on Indian Industries.	1,2,4	U,An,A
VI	**BCBM602**	**E-Commerce**	**CO1:** Analyze the potential impacts of different e-Business strategies.	2,6,7	U,An,A
			CO2: They would get aware of the e-Business environment, the identification of contemporary ebusiness issues, and the evaluation of their implications for organizations.	1,2,6,7	U,An,A
			CO3: Describe about the anatomy of e-commerce applications and demonstrate about the E-commerce consumer application.	2,6,7	U,An,A
			CO4: Develop the ability to evaluate the effects of business issues in relation to various e-Business model	2,4,5	U,An,A

Economic Administration & Financial Management (EAFM)
Programme Specific Outcome (PSO's)

S.No	On completing Bachelor of Commerce, the student will be able to:
PSO-1	Develop the knowledge of banking operations, regulations, monetary auditing, selling of financial products and services.
PSO-2	Create trained professionals who can handle various financial activities associated with banking insurance and economic sectors.
PSO-3	Acquire Specialization in Banking and Finance helps students to operate efficiently in the Banking and financial service sector and handle various technologies employed in the field of Banking and Finance.
PSO-4	Get the theoretical and application-based knowledge in the banking and financial sector and analytical skills to work with various financial tools, such as regulatory agencies and global markets.
PSO-5	Inculcate the capability of evaluating the current profitability & operational efficiency of the enterprise so that the financial health of the company can be determined.
PSO-6	Enable the students to analyze future prospects of the company for healthy decision making.

Semester	Course Code	Course Title	Course Outcomes	PSOs addressed	Cognitive levels
I	BCEF101	Business Economics	**CO1:** Develop the skills in business operation and management practices and economic and financial regulations and planning.	1, 2, 3, 4	U, R, A
			CO2: Learn the concepts and techniques used in Micro & Macro Economic theory	1,2,4	U, R, An
			CO3: Apply this knowledge in Business decision-making.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: Enhance logical and practical thinking and understand the economic policies and theories in reference to persisting problems	1,4	U, R, A, An
I	BCEF102	Banking	**CO1:** Acquire knowledge of working of Indian Banking system	1,3,4	U,R,A
			CO2: Become familiar with the impact of government policy and regulations on the banking industry, performance of banks & Banking lending policies and procedures	1, 2	U,R
			CO3: Evaluate the performance and mechanisms of the banking industry which further enhance their participation in banking, financial and other allied services.	4, 5,6	U,R,A,An,E,C
II	BCEF201	Managerial Economics	**CO1:** Make decisions on the various areas that affect business. It can include risk management, manufacturing, pricing, and investment.	2, 3, 4	U,R,A
			CO2: Implement devices that measure the broad scale of a company's financial goals.	1,4,5	U,R,A
			CO3: Develop a solid understanding of economic analysis, enhance decision-making in the context of Strategic planning.	5, 6	U,R,A,An,E,C

			CO4: Imbibe logical and critical thinking skills in decision making, project formulation and execution	3,4,6	U,R,A,An,E,C
II	**BCEF202**	**Public Finance and Financial System in India**	**CO1:** Thoroughly comprehend concepts and theories related to Public policy and rational choice.	1, 2, 6	U,R
			CO2: Understand inequality and factors affecting it, study the various policies to eliminate inequality	1	U,R,C
			CO3: Develop comprehensive understanding of theories of public expenditure and their application. By knowing this the students learn to know it's vital role in nation's economic growth	1, 5, 6	U,R,A,An,E,C
			CO4: Learn the method to manage public finance nature and scope of economic development, eliminating inequality, retaining price stability, satisfying the nation's fundamental needs, and managing the currency value in the international market.	1, 6	U,R,A,An,E,C
III	**BCEF301**	**Economic Environment in India**	**CO1:** Manage public funds and eliminating inequality,	1,2	R,U,A
			CO2: Manage the currency value in the national and international market.	4,5,6	R,A,E
			CO3: Understand the theories of economic environment and their application.	2, 4,5	U,An,C
			CO4: Comprehend concepts and theories related to economic environment	1,2	U,R
III	**BCEF302**	**Financial Management**	**CO1:** Understand the financial manager's objectives and its significance	1,3,4,5	U,R,A,An,E,C
			CO2: Monitor the liquidity within the company.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: learn the skills of maximizing profits by providing it with tools for analyzing its costs and revenues	4,5,6	U,A,An,E

			CO4: Evaluate the resource utilization in the most efficient way possible.	5,6	U,R,E,C
IV	**BCEF401**	**International Trade & Finance**	**CO1:** learn about the objectives of trade and gain the knowledge of profits by selling, services and collecting the maximum revenue. Also learn about the companies need and policies that provide support in export processes.	1, 2	U,R
			CO2: Study the current scenario to international markets, consumer base of a company's products or services.	1	U,R
			CO3: Develop comprehensive understanding of theories of International Trade and Finance and their applications.	1,2	U,A,An
			CO4: Thoroughly comprehend concepts and theories related to International Trade and Finance.	1,5,6	U,R,E,C
IV	**BCEF402**	**Business Finance**	**CO1:** Enhance the ability to identify ethical dilemmas within the finance setting	2,4,5	An, E
			CO2: Develop appreciation for socially responsible actions with respect to financial decisions.	3,4,6	U, E
			CO3: Present, discuss, and defend financial decisions by using appropriate terminology.	1,3,4	R, An, E
			CO4: Prepare finance professionals through the development of interpersonal and teamwork skills.	1,2	R,U

V	**BCEF501**	**Rural Development & Co-operation**	**CO1:** Understand the policies made by the government and analyze plans.	2,4,5	An, E
			CO2: Understand and analyze the problems of rural people	3,4,6	U, E
			CO3: Learn the ways for Reduction of unemployment	1,3,4	R, An, E
			CO4: Understand and get knowledge of the advantages of Co-operatives.	1,2	R, U
V	**BCEF502**	**Business Budgeting**	**CO1:** Understand and apply different budgeting techniques	1,3,5	U,A,C
			CO2: Ability to analyze financial data and interpret budget variances.	2,3,6	An, R
			CO3: Develop skills in using budgets as a tool for strategic decision-making	1,2	U,R
			CO- 4: Develop presentation skills to articulate budgetary plans, forecasts, and performance results in a clear and concise manner	1,3,4,5	U,R,C
VI	**BCEF601**	**Economy of Rajasthan**	**CO1:** Understand the historical, geographical, and demographic aspects of Rajasthan that influence its economy.	1,4,5,6	U,R,A,C
			CO2: Analyze and Evaluate the primary and secondary sectors of Rajasthan's economy, and their role in economic development.	4,5	R,U,E,C
			CO3: Examine and explore the influence of secondary factors of growth on state's economy	5,6	An,E,C
			CO4: Analyze the impact of globalization and liberalization on state's economy, including trade relations and investment opportunities.	1,2,5	U,R,A

VI	**BCEF602**	**Project Planning and Control**	**CO1:** To Equip students with the skills and knowledge necessary to develop detailed project plans, including defining project scope, objectives, deliverables, timelines, resource allocation, and risk management strategies.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To demonstrate proficiency in developing and managing project schedules, identifying critical paths, and adjusting timelines to accommodate project changes and delays.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To establish and utilize effective control mechanisms to track project performance, manage changes, and ensure project stays on track and within budget.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To make students capable of conducting thorough risk assessments, developing risk mitigation plans, and implementing risk response strategies to minimize project impact and maximize success rates.	1,2,3,4,5,6	U,R,A,An,E,C

Bachelor of Business Administration (BBA)
Programme Specific Outcome (PSO's)

S.No	Programme Specific Objective
PSO-1	To help acquire conceptual clarity of various functional areas and the ability to recall basic information.
PSO-2	To inculcate the ability to understand and comprehend the complexities of business and their implications.
PSO-3	To demonstrate the ability to apply theoretical knowledge to practical scenarios and proposing effective strategies for business improvement.
PSO-4	To develop the ability to analyse and interpret data used in decision-making, critically examine it, identify patterns, and draw meaningful insights to make informed business decisions.
PSO-5	To create an ability to assess the effectiveness of business practices, models, and frameworks, considering both strengths and limitations.
PSO-6	To develop the ability to synthesize theoretical understanding to propose innovative solutions and contribute to the creation of new knowledge in the field of business to address business challenges.

Semester	Course Code	Couse Title	Course Outcomes	Attributes	
				PSOs addressed	Cognitive Levels
I	BMBA101	Principles and Practices of Management	**CO1:** To enable the students to study the evolution of management.	1,2,4,6	U,R,A,An,E,C
			CO2: To develop an understanding about the functions and principles of management and learn their application within organizations.	2,4,6	A,An,E
			CO3: To familiarize students with contemporary challenges faced by managers in the dynamic business environment.	2,4,6	U,R,A,An,E,C
			CO4: To develop problem-solving skills and learn to make informed decisions in diverse organizational contexts.	2,4,6	U,R,A,An,E,C
			CO3: To familiarize students with contemporary challenges faced by managers in the dynamic business environment.	2,4,6	R,A,
			CO4: To develop problem-solving skills and learn to make informed decisions in diverse organizational contexts.	2,4,6	An,E
I	BMBA102	Business Communication	**CO1:** To provide knowledge about the essentials of communication skills.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To equip the students with effective listening, speaking and writing skills.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To enhance students' proficiency in business communication through an emphasis on clarity, conciseness, and professionalism, thus preparing them to communicate effectively in diverse business contexts.	1,2,3,4,5,6	U,R,A,An,E,
			CO4: To develop awareness of non-verbal communication cues and strategies for overcoming communication barriers.	2,4,6	An,E

I	**BMBA103**	**Business Law**	**CO1:** To develop knowledge of the legal principles and environment in which a consumer and business operates.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To develop an understanding about the relevance of business law to individuals and businesses in an economic, political and social context.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To cultivate students' ability to analyze legal principles and apply them to various contractual scenarios. Legal issues, assessment of risks, and propose solutions in the context of contract law.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To instill ethical values and principles in students' approach to business transactions to maintain trust and credibility in business relationships.	1,2,3,4,5,6	U,R,A,An,E,C
I	**BMBA104**	**Fundamentals of Computers**	**CO1:** To enable students to understand basic computer concepts and applications related to day-to-day functioning in modern day organizations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To know the different input and output devices that makes a computer operational along with an understanding of Information systems and Word processors.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To equip students with the necessary skills to proficiently utilize software applications thus enabling them to create, edit, and format documents, spreadsheets, and presentations effectively.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To enhance digital communication and presentation skills through hands-on practice and assignments.	1,2,3,4,5,6	U,R,A,An,E,C

I	**BMBA105**	**Managerial Economics**	**CO1:** To enable students to apply micro economic concepts and tools for analyzing business problems.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To make students aware of cost concepts, demand and supply, types of competitions in the market impacting decisions pertaining to individual firms.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To enhance students' ability to make informed and strategic decisions in real-world business scenarios.	2,3,4,5	U,R,A
			CO4: To cultivate understanding of market dynamics and strategic behavior to recognize the strategic implications of market structure on firm behavior and market outcomes.	2,3,4,5	U,R,A
I	**BMBA106**	**Fundamentals of Accounting**	**CO1:** To provide fundamental accounting knowledge and to familiarize the students with basic accounting terminologies	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To accustom students with the mechanics of preparation of financial statements, understanding corporate financial statements, their analysis and interpretation	2,3,4,5	U,R,A
			CO3: To develop students' ability to analyze financial data and make informed decisions through evaluation of the financial health of an organization.	2,3,4,5	U,R,A
			CO4: To prepare students for the digitalization of accounting practices in the modern business environment.	2,3,4,5	U,R,A

II	**BMBA201**	**Entrepreneurship and Start up Management**	**CO1:** To create an understanding about the importance of Entrepreneurship and learn about entrepreneurial environment.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To acquaint the students with the challenges of starting new ventures and introducing new product and service ideas by identifying business and funding opportunities.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To nurture students' ability to innovate and generate creative ideas for entrepreneurial ventures. by emphasizing an entrepreneurial mindset that values creativity, adaptability, and experimentation.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To cultivate students' strategic thinking and planning skills essential for entrepreneurial success.	1,2,3,4,5,6	U,R,A,An,E,C
II	**BMBA202**	**Human Resource Management**	**CO1:** To familiarize the students with the basic concepts, relevance and scope of Human Resource Management in modern organizations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To impart knowledge on the development of human resources, sound industrial relations, methods of performance appraisal and organizational climate & culture.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To cultivate skills in talent acquisition and management by developing an understanding of the role of human resource management in attracting and retaining top talent.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To create an understanding of employee development and training programs aimed at enhancing employee skills, knowledge, and performance.	1,2,3,4,5,6	U,R,A,An,E,C

II	**BMBA203**	**Company Law**	**CO1:** To introduce the students to Companies Act 2013 along with the history and development of company laws in India	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To familiarize the students with the rules and regulations related to formation, management and winding up of a company.	3,4,	,An,E
			CO3: To develop students' comprehension of corporate governance principles and practices in enhancing corporate performance and maintaining investor confidence as outlined in the Companies Act 2013.	2,3,4,5,	A,An,E,C
			CO4: To cultivate skills in company law compliance and documentation in adherence to legal formalities and guidelines in corporate operations.	2,3,4,5,	A,An,E,C
II	**BMBA204**	**Strategic Management**	**CO1:** To acquaint the students with the strategic business environment and designing of plans, policies and strategies to meet challenges and opportunities.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To build an understanding of the nature and dynamics of strategy formulation and implementation processes at corporate and business level.	2,3,4,	An,E,C
			CO3: To develop students' analytical thinking skills necessary for strategic decision-making. by assessing the external and internal environments of organizations.	2,3,4,	An,E,C

			CO4: To cultivate skills in strategic planning and execution by learning the importance of coordination, communication, and monitoring in successful strategy implementation.	1,2,3,4,5,6	U,R,A,An,E,C
II	**BMBA205**	**Macro Economics**	**CO1:** To create an understanding of the foundational concepts and theories of macroeconomics.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To develop the ability to analyze the classical theory of employment and its criticisms.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To provide knowledge about how to investigate business cycles and their implications for economic stability.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To provide insights into the concept and measurement of national income.	1,2,3,4,5,6	U,R,A,An,E,C
II	**BMBA206**	**Financial Management & Accounting**	**CO1:** To understand the basics of finance function and their application in organizations to make financial decisions.	1,2,3,	U,R,A,An,E,C
			CO2: To familiarize the student with the concepts of long term and short-term investment decisions, analyze the relationship among capital structure, cost of capital, dividend decisions and business value.	4,5,6	An,E,C
			CO3: To develop skills in assessing and managing financial risks through effective financial planning strategies.	1,2,3	U,R,A,An,E,C
			CO4: To enhance understanding of how financing decisions influence organizational performance by evaluating optimal capital structures and dividend policies to maximize shareholder wealth.	4,5,6	An,E,C
III	**BMBA301**	**Indian Management Thought**	**CO1:** To develop a comprehensive learning on management lessons which can be inferred from great Indian epics.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To inculcate ability to critically analyze ethical issues in corporate governance and adhere to ethical codes.	1,2,3,4,5,6	U,R,A,An,E,C

			CO3: To create an understanding of the distinctive features of Indian management ethos and the contrast between Western and Indian management paradigms.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To cultivate a critical mindset for adherence to ethical codes in managerial decision-making by studying the ethical perspectives of influential Indian thinkers and business leaders.	1,2,3,4,5,6	U,R,A,An,E,C
III	**BMBA302**	**Marketing Management**	**CO1:** To provide an exposure to the concepts, design, applications, tools and impact of marketing management in modern day organizations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To develop ability to use decision tools for planning, designing & implementing marketing strategy through insights into consumer motivation and expectations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To create an understanding of the difference between marketing and selling, and exploring the core elements of the marketing mix.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To provide insights into market segmentation, product positioning, pricing strategies, and promotional techniques to effectively meet consumer needs and preferences.	1,2,3,4,5,6	U,R,A,An,E,C
III	**BMBA303**	**Personality Development**	**CO1:** To facilitate self-awareness and ability to self-monitor personality and skills.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To develop the ability to identify strategies for improving behaviors on individual and organizational level.	4,5,6	An,E,C
			CO3: To provide knowledge about tools such as mind mapping, competence mapping, and assessments like the 360-degree feedback method to aid in self-assessment and development.	4,5,6	U,R,A,An,E,C

			CO4: To cultivate personal, intrapersonal, interpersonal, and managerial skills, along with decision-making and interaction skills, to enhance individual and organizational effectiveness.	1,2,3,4,5,6	U,R,A,An,E,C
III	**BMBA304**	**Industrial and Production Management**	**CO1:** To provide an overview of the ways and means of optimizing processes and operating systems so as to make them simpler and efficient to use.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To expose students to the concept of supply chain and logistics management and its significance in business operations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To help students explore concepts such as production management, plant location, layout planning, work study, and method study, to streamline operations and improve productivity.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To introduce students to the fundamentals of supply chain and logistics management, emphasizing their significance in modern business operations.	1,2,3,4,5,6	U,R,A,An,E,C
III	**BMBA305**	**Fundamentals of Banking**	**CO1:** To introduce the students to the basic concept of banking and the role of banks as a financial intermediary.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To prepare students for career opportunities in banking sector.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To develop an understanding of the regulatory framework governing the Indian banking sector, and the impact of key banking reforms.	1,2,3,4,5,6	U,R,A,An,E,C

			CO4: To equip students with knowledge about contemporary trends and innovations in banking services, including investment banking, e-banking, and Non-Banking Financial Companies.	1,2,3,4,5,6	U,R,A,An,E,C
III	**BMBA306**	**Business Statistics**	**CO1:** To create an understanding of basic statistical tools to apply for solving management problems and their analysis.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To stimulate the student's interest by exposure to the relevance and use of statistical knowledge.	1,2,3	R,U,A
			CO3: To develop proficiency in the application of basic statistical tools and interpretation of statistical measures to effectively analyze and draw insights from management data.	1,2,3	R,U,A
			CO4: To cultivate an appreciation for the relevance and utility of statistical knowledge in addressing managerial challenges and making informed decisions.	1,2,3	R,U,A
IV	**BMBA401**	**Green Management and Sustainability**	**CO1:** To create an understanding of green business and to provide knowledge of the strategies for building eco-businesses.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To empower students to take up pro-social and environmental agenda in their organisations, communities and personal lives.	1,2,3,4,5,6	U,R,A,An,E,C

			CO3: To provide insights into the relevance of green management in the 21st century and the role of green tax incentives and rebates to encourage sustainable business practices.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To develop the ability to propose and implement	1,2,3,4,5,6	U,R,A,An,E,C
			CO5: practical solutions for reducing environmental impact and promoting sustainability through case studies.	1,2,3,4,5,6	U,R,A,An,E,C
IV	**BMBA402**	**Organisational Behavior**	**CO1:** To create an understanding about behaviour of people, their motivation factors, skills, abilities and how these all influence the behavior of entire organizations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To understand the concept of change in organizations and gain insights on factors influencing organizational culture.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To provide insights into the concept of organizational change and its implications on organizational culture.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To provide an understanding about developing support for change and managing resistance, to effectively leads organizational transformations.	1,2,3,4,5,6	U,R,A,An,E,C
IV	**BMBA403**	**Advertising and Sales Promotion**	**CO1:** To impart knowledge about advertising and sales promotion and their role in developing integrated marketing programme.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To measure effectiveness of advertising and knowing its implications on society.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To develop an understanding about the factors influencing media selection to design effective advertisements and achieve desired outcomes.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To create an understanding of the role of sales promotion in stimulating consumer interest, increasing sales, and enhancing brand loyalty.	1,2,3,4,5,6	U,R,A,An,E,C

IV	**BMBA404**	**E-Commerce**	**CO1:** To create awareness about the concepts, tools and practices in e-commerce and their effectiveness in the digital era.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To impart knowledge about the process of managing an online business from start to finish.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To enable students to learn about electronic payment systems, electronic banking, electronic trading, and enterprise resource planning (ERP) systems in the context of e-commerce.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To create an understanding of e-marketing strategies and the impact of mobile commerce on business operations and consumer behaviour.	1,2,3,4,5,6	U,R,A,An,E,C
IV	**BMBA405**	**Research Methods in Business Management**	**CO1:** To create an understanding about the role, significance and applications of research in business management.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To enable the students in developing the most appropriate methodology for their research studies and to familiarize them with the art of using different research methods and techniques.	1,23,4,5,6	U,R,A,An,E,C
			CO3: To develop an understanding about identifying emerging trends in business management research, and discover the implications of research findings on organizational strategies and practices.	1,23,4,5,6	U,R,A,An,E,C
			CO4: To inculcate confidence in conducting rigorous and methodologically sound research in business management contexts.	1,23,4,5,6	U,R,A,An,E,C

IV	**BMBA406**	**Quantitative Techniques**	**CO1:** To develop an understanding about the fundamentals and applications of quantitative techniques in business and industry.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To develop an ability to apply linear programming techniques to real-world scenarios and interpret the solutions in terms of optimization and resource allocation.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To create acumen for interpretation of solutions obtained from transportation and assignment problems in the context of logistics, supply chain management, and resource allocation.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To expose the students to advanced topics in quantitative techniques and their applications in decision-making processes in business environments	1,2,3	U,R,A
V	**BMBA501**	**Ethics and Corporate Social Responsibility**	**CO1:** To create awareness about the role of ethics and CSR to encourage moral practices and ethical considerations in modern day organizations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To understand the scope of business ethics in the functional areas of finance, human resources, marketing and production for sustainability of organizations.	1,2,3	U,R,A
			CO3: To create an understanding of the role of CSR initiatives in addressing social, environmental, and economic challenges while promoting long-term business success.	1,2,3	U,R,A
			CO4: To develop critical thinking skills to analyze ethical dilemmas and issues within specific functional areas of business and the importance of ethical leadership in creating a culture of integrity and accountability within organizations.	1,2,3,4,5,6	U,R,A,An,E,C

V	**BMBA502**	**Consumer Behaviour & Marketing Research**	**CO1:** To have an understanding of the elements constituting consumer behaviour and their relevance in consumption and purchase patterns.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To identify consumer decision making models and trends.	1,2,3	U,R,A
			CO3: To understand and explore models such as the Nicosia model and the Howard Sheth model to comprehend consumer behavior dynamics.	1,2,3	U,R,A
			CO4: To differentiate between consumer and organizational buying behavior, and to analyze the distinctions between consumer markets and industrial markets,	1,2,3	U,R,A
V	**BMBA 503**	**International Business**	**CO1:** To equip the students about the global scenario of business.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To give knowledge about the art of managing business across domestic borders.	4,5,6	An,E,C
			CO3: To help students analyze and interpret the global economic environment to make informed decisions in international business management.	4,5,6	An,E,C
			CO4: To develop students' proficiency in handling foreign direct investment activities and implement strategies for sustainable growth and competitiveness in the global marketplace.		

V	**BMBA504**	**Project Report and Viva-Voce**	**CO1:** To explore the various functional areas and analyze how theoretical concepts taught are applied in real life situations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To analyze best practices, system, processes, procedures and policies of a Company/ industry in different functional areas and bring forward the deviations.	4,5,6	An,E,C
			CO3: To develop skills in report writing through data collection, data analysis, data extraction, presentation and drawing lessons vis-à-vis firm or company.	4,5,6	An,E,C
			CO4: To understand the social, economic and administrative considerations that influence the working environment of industrial organizations	4,5,6	An,E,C
			CO5: To understand the psychology of the workers and their habits, attitudes and approach to problem solving.	4,5,6	An,E,C
V	**BMBA 505**	**Business Budgeting**	**CO1:** To enhance knowledge of the students regarding the interpretation of financial statements, calculation of key financial ratios and analyzing financial data.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To provide a comprehensive and practical understanding of business budgeting to the students so as to enable them to make informed budgeting decisions.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To provide students with a practical understanding of business budgeting techniques, to facilitate effective planning and resource allocation within organizations.	4,5,6	An,E,C
			CO4: To enable students to interpret financial statements effectively to assess the financial health and performance of an organization.	4,5,6	An,E,C

V	**BMBA506**	**Management Accounting**	**CO1:** To help students understand the basic concepts, importance and functions of Management Accounting.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To enable students to understand and illustrate the format of financial statements, their analysis and interpretation.	1,2,3,4,5,6	1,2,3,4,5,6
			CO3: To provide students with a comprehensive understanding of financial ratios and their significance thus enabling them to compare the financial performance of organizations.	1,2,3,4,5,6	1,2,3,4,5,6
			CO4: To equip students with the knowledge and skills necessary to prepare and interpret cash flow statements.	1,2,3,4,5,6	1,2,3,4,5,6
VI	**BMBA601**	**Retail Management**	**CO1:** To develop an understanding of the core and contemporary concepts of retail management.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To familiarize the students with the required strategies and planning in organized retail and the value they create.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To equip students with the knowledge and skills necessary to explore retail entrepreneurship opportunities, enabling them to formulate effective strategies for market entry and expansion in diverse retail environments.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To provide students with practical insights into store planning and operations management thus preparing them for successful careers in retail management	1,2,3,4,5,6	U,R,A,An,E,C

VI	**BMBA602**	**Compensation Management**	**CO1:** To learn how systems operate to attract, retain and motivate competent work force in organization.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To assess and diagnose issues and problems of compensation management.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To develop an understanding about the importance of aligning compensation programs with organizational goals and employee needs, ensuring fairness and competitiveness in the compensation structure.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To understand the relevance of aligning compensation policies with regulatory requirements and corporate considerations.	1,2,3,4,5,6	U,R,A,An,E,C
VI	**BMBA603**	**Management Information System**	**CO1:** To train students in the use of Information System in organizations and provide insights on current technology that aids business decision-making.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To explain relationships between concepts of information systems, organization, management and strategy formulation.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To equip students with knowledge about IS tools and technologies, such as decision support systems and databases.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To develop a holistic understanding of the strategic importance of IS technologies in enhancing organizational efficiency, effectiveness, and competitiveness in the digital era.	1,2,3,4,5,6	U,R,A,An,E,C

VI	**BMBA604**	**Group Project and Presentation**	**CO1:** To provide an opportunity to the students to get exposed to the cross functional work culture of organizations.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To reinforce skills that is relevant to both group and individual work, to develop the ability to break complex tasks into parts and steps.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To inculcate ability to give and receive feedback on performances.	1,2,3,4,5,6	U,R,A,An,E,C
			CO4: To develop a host of skills like delegation and accountability that are increasingly important in the professional world.	1,2,3,4,5,6	U,R,A,An,E,C
VI	**BMBA605**	**Risk and Insurance Management**	**CO1:** To understand the concept and concerns in insurance and the interrelationship between insurance and risk management sector.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To enable students to analyze and obtain insights into the practical working of the Insurance Sector.	1,2,3,4,5,6	U,R,A,An,E,C
			CO3: To develop an understanding of the implications of effective risk management practices on insurance coverage and premiums.		
			CO4: To inculcate critical thinking skills to explore ethical considerations and regulatory frameworks governing insurance practices which ensure fair and equitable treatment of policyholders and stakeholders.	4,5,6	An,E,C
VI	**BMBA606**	**Cost Accounting**	**CO1:** To familiarize the students with the basic cost concepts, allocation and control of various costs and methods of costing.	1,2,3,4,5,6	U,R,A,An,E,C
			CO2: To equip students with a comprehensive understanding of various costing methods and techniques, enabling them to analyze and control costs effectively in different business scenarios.	4,5,6	An,E,C

			CO3: To create critical thinking among students regarding the significance and limitations of different costing methods, to enable them to evaluate the appropriateness of various methods.	4,5,6	An,E,C
			CO4: To develop students' analytical skills in utilizing cost-volume-profit analysis and break-even analysis techniques, thus enhancing their ability to contribute effectively to organizational profitability and growth.		