

Course/Programme Outcomes
B.A. Part - I (ECONOMICS)
Semester-I
MICROECONOMICS – I

Course objective

- ❖ Define the meaning of economics, explain its nature, and explore the scope of economic study.
- ❖ Discuss the various methods used in economics and understand the reasons for studying economics.
- ❖ Analyze the role of an economist, including thinking like an economist, functioning as a scientist, and advising on economic policies.
- ❖ Examine different types of economic activities and systems, including their organization and evolution.
- ❖ Define firms and households, and analyze the relationship between them in input and output markets.
- ❖ Explain the circular flow of economic activities in a two-sector model and understand the concept of demand and supply.
- ❖ Analyze individual and market demand, including the law of demand, types of goods, and determinants of demand.
- ❖ Evaluate supply and its determinants, the law of supply, and market equilibrium.
- ❖ Explore elasticity of demand and supply, including price, income, and cross elasticity, and understand how to measure elasticity.
- ❖ Analyze consumer equilibrium using cardinal and ordinal utility analysis, and understand concepts like consumer surplus.
- ❖ Study production function in the short run and long run, total, marginal, and average product, and the laws of returns to factor and scale.
- ❖ Analyze costs and revenues, including fixed and variable costs, opportunity cost, and traditional cost curves, along with total revenue, marginal revenue, and average revenue relationships.

These objectives cover a wide range of economic concepts and theories, providing a comprehensive understanding of economic principles and their practical applications.

Course outcomes

- ❖ Understand the meaning, nature, and scope of economics, including its methods and the rationale for studying economics.
- ❖ Evaluate the role of economists as thinkers, scientists, and policy advisors within the field of economics.
- ❖ Analyze different economic activities and systems, including their organization and historical development.
- ❖ Explain the functions of firms and households, and analyze their interactions in input and output markets.
- ❖ Demonstrate an understanding of the circular flow of economic activities in a two-sector model and its implications.
- ❖ Analyze demand and supply in markets, including individual and market demand, the law of demand, and supply determinants.

- ❖ Evaluate elasticity of demand and supply, including price, income, and cross elasticity, and apply elasticity measurement techniques.
- ❖ Analyze consumer equilibrium using both cardinal and ordinal utility analysis, and understand the concept of consumer surplus.
- ❖ Understand production analysis, including the production function, total, marginal, and average product, and the laws of returns to factor and scale.
- ❖ Analyze cost and revenue relationships, including fixed and variable costs, opportunity cost, and traditional cost curves, along with total revenue, marginal revenue, and average revenue.
- ❖ Apply economic concepts and theories to real-world scenarios, demonstrating the ability to analyze and interpret economic phenomena.
- ❖ Develop critical thinking and analytical skills necessary for economic analysis and decision-making.

These course outcomes are designed to ensure students develop a strong foundation in economic theory and its practical applications, preparing them for careers in economics and related fields.

Course/Programme Outcomes
B.A. Part - I (ECONOMICS)
Semester-II
MACROECONOMICS – I

Course Objectives

- ❖ Understand the nature and scope of macroeconomics and differentiate it from microeconomics.
- ❖ Recognize the importance of macroeconomics in analyzing national economies and policy-making
- ❖ Explain the concept, measurement methods, and limitations of national income statistics.
- ❖ Analyze the circular flow of income in two, three, and four sector economies.
- ❖ Evaluate Say's law and its implications in the classical theory of income and employment.
- ❖ Compare and contrast the classical theory of income and employment with Keynesian theory.
- ❖ Understand the principle of effective demand and its role in determining aggregate output and employment.
- ❖ Analyze the consumption function, including its meaning, technical attributes, and the Keynesian Psychological Law of Consumption.
- ❖ Discuss the significance of the Marginal Propensity to Consume (MPC) and its relationship with the Average Propensity to Consume (APC).
- ❖ Examine short-run and long-run consumption functions and their impact on economic stability and growth.
- ❖ Define capital and investment, identify different types of investment, and analyze the Marginal Efficiency of Capital (MEC).
- ❖ Understand the relationship between MEC and the Marginal Efficiency of Investment (MEI) and identify factors influencing inducement to invest.

These objectives cover a broad range of macroeconomic concepts and theories, providing a comprehensive understanding of the subject matter.

Course Outcomes

- ❖ Demonstrate a clear understanding of the fundamental principles, nature, and scope of macroeconomics compared to microeconomics.
- ❖ Evaluate the significance of macroeconomics in analyzing national economies and its role in policy formulation and decision-making.
- ❖ Apply appropriate methods to measure national income and critically assess the limitations associated with national income statistics.
- ❖ Analyze and interpret the circular flow of income in various sector economies, including two, three, and four sector models.
- ❖ Evaluate Say's law and its implications within the context of the classical theory of income and employment.

- ❖ Compare and contrast the classical theory of income and employment with Keynesian theory, highlighting key differences and similarities.
- ❖ Analyze the principle of effective demand and its impact on aggregate output, employment levels, and economic stability.
- ❖ Critically evaluate the consumption function, including its technical attributes, the Keynesian Psychological Law of Consumption, and its implications for economic behavior.
- ❖ Assess the significance of the Marginal Propensity to Consume (MPC) and its relationship with the Average Propensity to Consume (APC) in determining consumption patterns.
- ❖ Analyze short-run and long-run consumption functions and their implications for economic fluctuations and long-term growth.
- ❖ Define and differentiate between capital and investment, identify various types of investment, and assess the Marginal Efficiency of Capital (MEC) in investment decision-making.
- ❖ Evaluate the relationship between MEC and the Marginal Efficiency of Investment (MEI) and analyze factors influencing the inducement to invest in different economic scenarios.

These course outcomes are designed to ensure students develop a comprehensive understanding of macroeconomic theories, principles, and their practical applications in analyzing and interpreting economic phenomena.

B.A. Part - II(ECONOMICS)
Semester-III
MACROECONOMICS – I

Course Objectives

- ❖ Understand the nature and scope of macroeconomics and differentiate it from microeconomics.
- ❖ Recognize the importance of macroeconomics in analyzing national economies and policy-making
- ❖ Explain the concept, measurement methods, and limitations of national income statistics.
- ❖ Analyze the circular flow of income in two, three, and four sector economies.
- ❖ Evaluate Say's law and its implications in the classical theory of income and employment.
- ❖ Compare and contrast the classical theory of income and employment with Keynesian theory.
- ❖ Understand the principle of effective demand and its role in determining aggregate output and employment.
- ❖ Analyze the consumption function, including its meaning, technical attributes, and the Keynesian Psychological Law of Consumption.
- ❖ Discuss the significance of the Marginal Propensity to Consume (MPC) and its relationship with the Average Propensity to Consume (APC).
- ❖ Examine short-run and long-run consumption functions and their impact on economic stability and growth.
- ❖ Define capital and investment, identify different types of investment, and analyze the Marginal Efficiency of Capital (MEC).
- ❖ Understand the relationship between MEC and the Marginal Efficiency of Investment (MEI) and identify factors influencing inducement to invest.

These objectives cover a broad range of macroeconomic concepts and theories, providing a comprehensive understanding of the subject matter.

Course Outcomes

- ❖ Demonstrate a clear understanding of the fundamental principles, nature, and scope of macroeconomics compared to microeconomics.
- ❖ Evaluate the significance of macroeconomics in analyzing national economies and its role in policy formulation and decision-making.
- ❖ Apply appropriate methods to measure national income and critically assess the limitations associated with national income statistics.
- ❖ Analyze and interpret the circular flow of income in various sector economies, including two, three, and four sector models.
- ❖ Evaluate Say's law and its implications within the context of the classical theory of income and employment.
- ❖ Compare and contrast the classical theory of income and employment with Keynesian theory, highlighting key differences and similarities.

- ❖ Analyze the principle of effective demand and its impact on aggregate output, employment levels, and economic stability.
- ❖ Critically evaluate the consumption function, including its technical attributes, the Keynesian Psychological Law of Consumption, and its implications for economic behavior.
- ❖ Assess the significance of the Marginal Propensity to Consume (MPC) and its relationship with the Average Propensity to Consume (APC) in determining consumption patterns.
- ❖ Analyze short-run and long-run consumption functions and their implications for economic fluctuations and long-term growth.
- ❖ Define and differentiate between capital and investment, identify various types of investment, and assess the Marginal Efficiency of Capital (MEC) in investment decision-making.
- ❖ Evaluate the relationship between MEC and the Marginal Efficiency of Investment (MEI) and analyze factors influencing the inducement to invest in different economic scenarios.

These course outcomes are designed to ensure students develop a comprehensive understanding of macroeconomic theories, principles, and their practical applications in analyzing and interpreting economic phenomena.

B.A. Part - II(ECONOMICS)
Semester-IV
MACROECONOMICS – II

Course Objectives

Building on the foundation of Macroeconomics I, this course aims to:

- Deepen understanding of macroeconomic concepts like the multiplier effect, monetary theory, inflation, and business cycles.
- Analyze the relationships between key macroeconomic variables like consumption, investment, money supply, and interest rates.
- Evaluate the impact of government policies on economic performance using established frameworks.
- Develop critical thinking skills to analyze real-world economic issues. Apply macroeconomic models like the multiplier and the Phillips Curve to analyze economic situations.
- Evaluate the impact of changes in government policies on key macroeconomic variables.
- Utilize economic data to assess inflation and business cycle trends.
- Formulate well-supported arguments on macroeconomic issues using relevant theories.
- Critically analyze the assumptions and limitations of different macroeconomic models.
- Evaluate the effectiveness of alternative policy options to address economic problems.
- Formulate an informed perspective on real-world economic issues based on evidence and analysis.

Course Outcomes

By the end of this course, students will be able to:

- Explain the concept of the Keynesian multiplier and its relationship with MPC and MPS.
- Differentiate between comparative static and dynamic analysis in macroeconomics.
- Analyze the working of the multiplier in underdeveloped countries (UDCs).
- Explain the acceleration principle and the concept of the super multiplier.
- Understand the demand for money, its functions, and its significance in the economy.
- Evaluate the Quantity Theory of Money (Fisher's and Cambridge approaches).
- Analyze the Keynesian liquidity theory of money.
- Define money supply and identify its determinants.
- Explain the concept of high-powered money and money multipliers.
- Define inflation, analyze its causes and effects.
- Classify different types of inflation.
- Critically evaluate the classical theory of inflation.
- Differentiate between demand-pull inflation and cost-push inflation.

- Analyze the Phillips Curve in the short run and long run.
- Explain the nature and features of business cycles.
- Identify different types and phases of business cycles.
- Evaluate Keynes's view on trade cycles.
- Explain Hicks and Samuelson's theories of business cycles.
- Compare and contrast classical and Keynesian theories of interest.

B.A. Part - III(ECONOMICS)

Semester-V

INDIAN ECONOMY – I

Course Objectives

This course aims to:

- Provide a comprehensive understanding of the Indian economy within the context of developing economies.
- Analyze the key characteristics and challenges faced by the Indian economy.
- Evaluate government policies and programs designed to address issues like poverty, unemployment, and agricultural development.
- Develop critical thinking skills to analyze contemporary issues and propose solutions for economic growth. Apply economic concepts to analyze specific issues faced by the Indian economy.
- Evaluate the effectiveness of government policies on economic development indicators.
- Analyze data and trends related to demographics, poverty, unemployment, and agriculture.
- Formulate well-supported arguments on economic issues specific to India.
- Critically analyze the impact of economic policies on various stakeholders.
- Propose alternative solutions to address economic challenges faced by India.
- Develop an informed perspective on contemporary issues in the Indian economy.

Course Outcomes

By the end of this course, students will be able to:

- Define and differentiate between capitalist, socialist, and mixed economies.
- Distinguish between developed and developing economies.
- Analyze the basic characteristics of the Indian economy as a developing nation.
- Compare the Indian economy with developed economies across various aspects.
- Identify the major issues hindering development in India.
- Explain the theory of demographic transition and its relevance to India.
- Analyze the size, growth, and features of the Indian population.
- Evaluate the causes and consequences of India's growing population.
- Define poverty and understand the need for redefining the poverty line in India.
- Utilize methods for measuring poverty in the Indian context.
- Analyze the causes of poverty in India.
- Evaluate various measures undertaken by the government to eradicate poverty.
- Define unemployment, classify its types, and analyze its causes and impacts.
- Analyze measures implemented to address unemployment in India.
- Understand the significance of agriculture in the Indian economy.
- Evaluate the causes of low agricultural productivity in India.
- Analyze the achievements and failures of the Green Revolution in India.
- Identify the sources of agricultural finance in India.
- Evaluate the challenges and solutions for agricultural marketing in India.

- Define Special Economic Zones (SEZs), understand their features, and analyze the associated problems.

B.A. Part - III(ECONOMICS)

Semester-VI

INDIAN ECONOMY – II

Course Objectives

This course builds upon the foundation of Indian Economy I by focusing on:

- Analyzing key sectors like industry and labor, and their role in economic development.
- Evaluating the impact of economic reforms and planning on the Indian economy.
- Understanding India's external sector dynamics including trade, foreign investment, and global institutions.
- Developing critical thinking skills to analyze the challenges and opportunities faced by the Indian economy in the global context.
- Apply economic concepts to analyze specific issues faced by Indian industry and labor.
- Evaluate the effectiveness of government policies on industrial development and labor welfare.
- Analyze data and trends related to industrial growth, labor issues, and India's external sector.
- Formulate well-supported arguments on economic issues specific to Indian industry, labor, and external trade.
- Critically analyze the impact of LPG reforms on various stakeholders in the Indian economy.
- Evaluate the effectiveness of past and ongoing economic planning in India.
- Propose solutions to address challenges faced by India's external sector.
- Develop an informed perspective on the role of India in the global economic landscape.

Course Outcomes

By the end of this course, students will be able to:

- Explain the role of industrialization in economic growth and development.
- Analyze the impact of industrial policy changes since 1991 on the Indian economy.
- Define and differentiate between liberalization, privatization, and globalization (LPG reforms) in the Indian context.
- Evaluate the growth and challenges faced by small and large-scale industries in India.
- Analyze the rise of knowledge-based industries like IT and software consultancy.
- Define labor and its various classifications.
- Analyze the characteristics of industrial labor in India.
- Evaluate the causes and measures for settlement of industrial disputes.
- Explain the concept of social security and analyze existing measures in India.
- Define economic planning, its need, objectives, and different approaches.
- Evaluate the merits and demerits of centralized planning.
- Analyze the objectives, achievements, and failures of India's Five Year Plans.

- Identify the objectives of the ongoing Five Year Plan.
- Analyze the trends and composition of India's imports and exports.
- Explain EXIM policy and its impact on trade liberalization in India.
- Evaluate the role of foreign direct investment (FDI), foreign institutional investment (FII), and multinational corporations (MNCs) in the Indian economy.
- Analyze the impact of external borrowings and the Balance of Payments (BOP) problem in India.
- Explain the roles of international institutions like IMF, World Bank, ADB, and WTO in the Indian economy.

B.Sc. Chemistry (Non-Medical)
Bachelor of Physical sciences (Chemistry)
MDC-Chemistry

Program Outcomes & Program Specific Outcomes

PO1	Knowledge	• Capability of demonstrating comprehensive disciplinary knowledge gained during complete course
PO2	Communication	• Ability to communicate effectively on general and scientific topics with the scientific community and with society at large
PO3	Science & Society	• To know the relevance of chemistry in everyday life and in other discipline too
PO4	Problem Solving	• To think critically and solve problems logically
PO5	Life-long Learning	• Aptitude to apply knowledge and skills that are necessary for participating in learning activities throughout life
PO6	Ethics	• Capability to identify and apply ethical issues related to one's work; avoid unethical behavior such as fabrication of data, committing plagiarism and unbiased truthful actions in all aspects of work.
PO7	Individual & Team Work	• Capable to learn and work effectively as an individual and as a member or leader in a team
PO8	Modern Tool Usage	• Ability to use and learn techniques, skills and modern tools for scientific practices
PO8	Research Aptitude	• Capability to ask relevant questions for identifying and analysing the research problems and to draw conclusion from the analysis
PSO		• To perform, observe and analyze the results of chemical reactions • To understand good laboratory practices and safety while performing

		• To acquire the knowledge of chemistry by understanding the theoretical and performing the practical's • To understand qualitative and quantitative aspects of chemistry • Capability of applying knowledge to solve scientific and other problems • To be aware of the impact of chemistry on environment and society
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B.Sc. Chemistry (Non-Medical)
Bachelor of Physical sciences (Chemistry)
MDC-Chemistry

Course Outcomes

After the successful completion of above courses, a student should be able to:

S. No.	Semester	Subject Code	Subject Name	Course Outcomes
1	I	B23-CHE-101	Chemistry-I	After completing this course, the learner will be able to ✓ Enable to understand the basis of quantum mechanics and structural idea and relevance in describing shapes of s, p and d orbitals. ✓ To learn about role of temperature and pressure to establish the state of gases and describe the concept of critical constants of real gases ✓ Get knowledge about the electrophile/nucleophile and its role in mechanism of preparation of organic compounds ✓ To know the physical properties, morphology and crystalline study of liquid and different type of solids. ✓ Hand on practice in preparation of solutions, compounds, estimation and determination of physical properties of some compounds.
	I	B23-CHE-104	Introductory Chemistry-I	After completing this course, the learner will be able to: ✓ To get knowledge about structure and bonding. ✓ To learn about hydrocarbons and their applications. ✓ To get aware about different polymers. ✓ To get knowledge about preservative. ✓ To get knowledge about experiments related to daily life.
	II	B23-CHE-	Chemistry-II	After completing this course, the learner

		201		will be able to ✓ Able to understand the theories which governs the shape, structure and ionic behavior, polarizability, ionic structures and concept of Lattice energy of crystals of molecules ✓ To know the basics of rates of chemical reactions, the laws and solubility behavior of solutes in different compositions of solvents ✓ To know about alkanes, alkene, cycloalkanes and their chemical reactions. ✓ To understand about weak interactions and bonding in metals ✓ Hand on practice for estimation and determination of viscosity, specific refractivity properties of some compounds.
	II	B23-CHE-204	Introductory Chemistry-II	After completing this course, the learner will be able to ✓ To learn about role of Indian scientists in the upliftment of research ✓ To learn about classification of elements with their properties ✓ To learn about three states of matter ✓ To get more knowledge about role of fertilizers in fertility of soil ✓ To learn about acid- base reaction in daily life
	III	B23-CHE-301	Chemistry-III	After completing this course, the learner will be able to ✓ To learn about the structure of S and P-block elements, their properties and discuss their use in daily life as well as industrial applications ✓ To understand about various laws and theories related to electrochemistry-I and know about their thermodynamic properties ✓ To understand about variation of conductance studies with concentration and explain with many

				phenomenon ✓ The fundamental properties, structures and reactivity of organic compounds such as alkene, alkyne, arenes, alkyl and aryl halide etc. ✓ Learning about reaction mechanism and predict the outcome of the reactions ✓ How to distinguish between the organic compounds by use of different chemical tests.
	III	B23-CHE-303	Introductory Chemistry-III	After completing this course, the learner will be able to ✓ To learn about different energy resources ✓ To learn about the purification process of water quality ✓ To know more about pesticides and their bad impacts on health ✓ To get more knowledge on the impacts of pollution on environment ✓ To get acquainted about the pH of different food items.
	III	CH201 TH	Inorganic Chemistry	This course will provide the basic knowledge of chemistry of d-block elements, coordination compounds and Non-aqueous solvents.
	III	CH202 TH	Physical Chemistry	The students will learn basic thermodynamics, different laws of thermodynamics, chemical equilibrium and distribution law.
	III	CH203 TH	Organic Chemistry	This course gives knowledge about the chemistry of alcohols, phenols, epoxides, carboxylic acids & derivatives, Ultraviolet & absorption spectroscopy.
	IV	B23-CHE-401	Chemistry-IV	After completing this course, the learner will be able to ✓ Classify d block and f block elements and also know their properties ✓ Learn about the basic idea of

				analysis with respect to qualitative as well as quantitative measures ✓ Know about the first and second law of thermodynamics and also their implications and also know about the concept of chemical equilibrium ✓ Know about the alcohols, phenols, aldehydes and ketones with respect to their general characteristics and their important reactions ✓ To get knowledge about identification and confirmation of acidic and basic radicals in a given inorganic salts/mixtures
	IV	CH204 TH	Inorganic Chemistry	The students will learn about the chemistry of f-block elements, qualitative and quantitative aspects of analytical chemistry.
	IV	CH205 TH	Physical Chemistry	This course gives the overview of thermodynamic parameters, different statements of the laws, Carnot's cycle, concept of entropy, electrolytic, galvanic cells, reversible & irreversible cells, types of reversible electrodes, reference electrodes, electrode potential, concentration cells, applications of EMF and numerical problems.
	IV	CH206 TH	Organic Chemistry	This course deals with the spectroscopy like IR, absorption spectroscopy for structural elucidation of molecules. It further deals with amines, diazonium salts, aldehydes, ketones and their synthetic applications.
	IV	CH207 Practical		By studying this course, students will learn about gravimetric analysis of Cu, Ni, Al, Colorimetry. Preparations of some inorganic molecules. They will learn to determine CST, solubility, enthalpy of neutralisation, distribution law, rate constant, Systematic identification of basic

				organic compounds.
	V	CH301 TH	Inorganic Chemistry	This course comprises of metal- ligand bonding in transition metal complexes, their thermodynamics and kinetic stability, magnetic properties and electronic spectra.
	V	CH302 TH	Physical Chemistry	The students will acquire the knowledge about basic quantum mechanics, physical properties to determine the structures of compounds, molecular spectroscopy i.e. rotational, vibrational, Raman spectroscopy.
	V	CH303 TH	Organic Chemistry	The students will learn regarding NMR spectroscopy in detail, carbohydrates, organometallic compounds of Mg, Zn and Li.
	VI	CH304 TH	Inorganic Chemistry	The students will be able to gain throughout knowledge about various concepts of acids and bases, organometallic chemistry of Li, Al, Hg and Sn, Bio inorganic chemistry and inorganic polymers like silicones and phosphazenes.
	VI	CH305 TH	Physical Chemistry	In this course, the students will get basic knowledge of statistical mechanics, photochemistry, colligative properties of solutions and phase equilibrium of one and two component systems.
	VI	CH306 TH	Organic Chemistry	The students will learn about the organic synthesis <i>via enolates</i> , structures and properties of heterocyclic compounds, Amino Acids, peptides, proteins, synthetic polymers, natural and synthetic rubbers.
	VI	CH307 Practical		The students will learn to perform semimicro qualitative analysis of mixture

				containing 4 radicals, conductometric and potentiometric titrations, Rast method, TLC separation technique, distillation and synthesis of some organic compounds.
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Programme Name- B.Sc. PHYSICS

Programme Outcomes

- Providing a hands-on learning experience such as in measuring the basic concepts in properties of matter, heat, optics, electricity and electronics.
- Apply the basic principle of physics to the events occurring around us and also in the world.
- Try to find out or analyse scientific reasoning for various things around in surrounding.
- To enhance the student's academic abilities, personal qualities and transferable skills this will give them an opportunity to develop as responsible citizens.
- Develop abilities for logical thinking.
- Develop ability to work in group.

				in one dimension. 3. Understand and describe the laws of motion and their applications in daily life. 4. Understand and appreciate the importance of laws of conservation of energy and momentum in daily life
3	II	B23-PHY-201	Electricity and Magnetism & EM Theory	After completing this course, the learner will be able to: 1. Explain and differentiate the vector and scalar formalisms of electrostatics. Also be able to apply Gauss's Divergence & Stokes theorem to solve various problems in electrostatics
	II	B23-PHY-201	Practicum	2. Describe the magnetic materials & important properties of magnetic field. Understand the properties and theories of dia-, para- & ferromagnetic materials. 3. Derive Maxwell equations and their physical significance and familiar about the propagation of electromagnetic waves i.e. boundary conditions at the interface between different media. The students will also be able to have basic idea about the propagation of electromagnetic waves in free space and in medium. 4. Understand D.C. and A.C. circuits, able to apply and analyse using networks.
4	II	B23-PHY-204	Physics Fundamentals-II	After completing this course, the learner will be able to: 1. Have basic knowledge about nature of light, the associated phenomena and their importance in daily life
	II	B23-PHY-204	Practicum	2. Understand and describe the working of important optical instruments through the learning of image formation by mirrors and lenses

				3. Have basic knowledge about electric current, electric circuit, electric components, and practical utility of heating and magnetic effects of electric current
5	III	PH -301	Computer Programming and Thermodynamics	1. To understand various thermodynamic processes like isothermal, isobaric, isochoric processes and laws of thermodynamics. 2. To understand the concept of entropy. 3. To understand Carnot's cycle, Heat engines and Refrigerators. 4. Learn the Basic Programming Concept. 5. Improve the logical as well as Computational ability.
	III	PH- 302	Wave and Optics -I	1. Image formation related to geometrical optics, Deviation, Magnification, Concept for Equivalent lens and Cardinal Points. 2. Different types of monochromatic and chromatic aberrations and Achromatism in lenses.
6	IV	PH - 401	Statistical Physics	1. To acquire the skill of solving problems based of particle distribution. 2: To study about types of ensembles viz. Microcanonical, canonical and grand canonical. 3. To get the knowledge about Maxwell Boltzmann statistics, Bose Einstein statistics and Fermi Dirac Statistics
	IV	PH - 402	Wave and Optics II	1. The course comprises of the study of superposition of harmonic oscillations, waves motion (general), oscillators, sound, wave optics, interference, diffraction, polarization. 2. The course is important for the students to make their career in various branches of science and engineering, especially in the field of

				photonic engineering.
			Practical	
		PH - 501	Quantum and Laser Physics	1. Introduction to Quantum Mechanics, Historical background, Matter Waves, Wave particle duality, Phase and Group Velocity, Heisenberg's Uncertainty Principle. 2. Physical Interpretation of Wave function, Schrödinger's Wave Equation, Eigen Function and Eigen values. 3. Free Particle, One Dimensional and Three Dimensional Rigid Box, Potential Barrier CO4: Spherically symmetric potential, Examples of Rigid Rotor and hydrogen atom
		PH -502	Nuclear Physics	1. Studying Basic properties of nucleus, student got the idea of inner information of the nucleus. 2. From radioactivity chapter student knew that which radiations emit from radioactive material and how they are useful and harmful for the human. 3. From nuclear force student understood that apart from alpha, beta, gamma particle how many other particles are inside the nucleus.
		PH -601	Solid State and Nano Physics	1. Students will be able to study difference between crystalline and amorphous material, crystal structures, miller indices, interplanar distances, interatomic forces and bonds. From this study students get to learn the basics of solid state physics. 2. Students will understand Bragg's diffraction, Bragg's law. X-ray diffraction and characterization techniques. With the help of this knowledge students know the principles of structures determination by X-ray diffraction method. This would be helpful in performing experiments in nanotechnology.

		PH - 602	Atomic and Molecular Spectroscopy	1. There are many atomic models to explain atomic structure. But none of the model explained atomic structure fully. A new model could explain all parameters of atomic structure called vector atom model. Studying this model students can draw vector diagrams easily. 2. Students learn how to find out interaction energy from different coupling schemes. 3. Students scientifically understand, how the x-rays produced. Also they will understand what precaution should be taken during handling of x-rays
			Practical	

Programme Specific Outcomes (PSOs) of Geography

Studying Geography offers a wide range of outcomes for students, both in terms of academic development and career opportunities. Here are some of the key programme specific outcomes:

Academic and Intellectual Development

- Geography encourages students to analyze complex systems and understand the interconnections between human and physical environments. This enhances their ability to think critically and solve problems.
- Students develop strong research skills, including data collection, analysis, and interpretation. They learn to use various tools such as Geographic Information Systems (GIS) and remote sensing.
- Geography fosters an understanding of different cultures and societies, promoting empathy and global awareness. Students learn about cultural diversity and the factors that shape human experiences.
- A deep understanding of environmental processes and issues, such as climate change, resource management, and sustainability, is a core outcome. This knowledge is crucial for addressing contemporary environmental challenges.
 - Students gain a strong sense of spatial awareness and the ability to visualize and interpret spatial data. This skill is essential in many fields, including urban planning, transportation, and logistics.

Career Opportunities

- Geographers are well-suited for careers in urban and regional planning, where they apply their knowledge to develop sustainable cities and communities.
- Careers in environmental consultancy, conservation, and natural resource management are common pathways. Geographers work to develop strategies for managing environmental impact and promoting sustainability.
- Proficiency in GIS and remote sensing technologies opens opportunities in various sectors, including government, defense, environmental monitoring, and disaster management.
- Graduates can pursue careers in academia or educational institutions, teaching geography and conducting research.
- Geographers contribute to policy-making and development projects by providing insights into population trends, resource distribution, and regional development.
 - With their understanding of places and cultural landscapes, geographers are valuable in the travel and tourism industry, working in roles such as tour planning, travel writing, and tourism management.

Personal Development

- Geography education promotes a sense of global citizenship and responsibility. Students are encouraged to think about their role in the world and how they can contribute to global solutions.
- Geographers often work in interdisciplinary teams and need to communicate their findings effectively. This enhances their written and oral communication skills.

- The diverse nature of geography, which spans physical and human sciences, helps students become adaptable and versatile thinkers, able to tackle a wide range of problems.

Contribution to Society

- Geographers play a crucial role in promoting sustainable development by addressing environmental challenges and advocating for sustainable practices.
- Expertise in physical geography and GIS is vital for disaster preparedness, response, and recovery, helping to mitigate the impacts of natural disasters.
- Geographers contribute to community development projects by planning and implementing strategies that improve quality of life and promote equitable resource distribution.

Course Outcomes (COs) of Geography

Studying Geography offers a wide range of outcomes for students, both in terms of academic development and career opportunities. Here are some of the key COURSE outcomes:

Semester	Subject Code	Subject Name	Course Outcomes
I	B23-GEO-101	Physical Geography	Here are some common course outcomes for a Physical Geography class: 1. Understanding Earth Systems: • Understand the meaning of Physical Geography and describe the Earth system of lithosphere. • Analysis of theories of mass movement, continental drift, isostasy and plate tectonics. 2. Geomorphological Processes: • Explain the processes that shape the Earth's surface, including weathering, erosion, and deposition. • Identify different landforms and the

			processes responsible for their formation 3.Atmosphere: • Understand the principles of weather and climate, including atmospheric circulation, cyclones, weather patterns and climate zones. • Understanding of atmospheric pressure and wind system of earth. • Interpret meteorological data and weather maps to predict weather conditions. 4.Hydrosphere: • Describe the movement/ circulation and distribution of water on Earth. • Understanding of oceanic floor.
I	B23- GEO-101	General Geography of Haryana	Here are some common course outcomes for a "Geography of Haryana" class: 1. Physical Geography of Haryana: ◦ Describe the major physiographic regions of Haryana, including the Shivalik Hills, Aravalli Range, and the Indo-Gangetic Plain. ◦ Understand the geological processes that have shaped Haryana's landscape. 2. Natural Resources: ◦ Identify and evaluate the distribution of natural resources in Haryana, including minerals, forests, and water resources. ◦ Understand the challenges and strategies for sustainable resource management in Haryana. 3. Population and Demographics: ◦ Examine the population distribution, density, and growth trends in Haryana. ◦ Analyze demographic characteristics such as age structure, sex ratio, literacy, and urbanization in the state. 4. Agriculture and Rural Development: ◦ Understand the spatial patterns of

			agriculture in Haryana, including major crops, farming systems, and irrigation practices. ○ Analyze the challenges and opportunities in rural development and agricultural sustainability in Haryana. 5. Economic Geography: ○ Examine the spatial distribution of industries and economic activities in Haryana. ○ Analyze regional disparities in economic development and the factors contributing to these disparities in Haryana. 6. Transport and Communication: ○ Understand the development and distribution of transportation networks in Haryana, including road, rail, and air connectivity. ○ Analyze the role of communication infrastructure in regional development within Haryana.
II	B23- GEO-201	Human Geography	A course in Human Geography aims to provide students with a comprehensive understanding of these relationships and the processes that shape human experiences and behaviors across different regions. 1. Human Geography: ○ Understanding of meaning , scope and its approaches of studies. ○ Understand the spatial aspects of economic activities, including central place theory, agricultural location model and industrial location model. ○ Evaluate the impact of globalization, trade, and economic policies on regional development and spatial inequalities. 2. Population and Migration: ○ Examine patterns and processes of human population growth,

			distribution, and movement. ○ Analyze demographic data to understand trends and implications of population change. 3. Cultural Geography: ○ Explore the spatial distribution of cultural practices, languages, migration, religions, and ethnicities. ○ Understand how culture shapes landscapes and influences human behavior and interactions.
II	B23- GEO-203	General Geography of India	A course on the General Geography of India aims to provide students with a comprehensive understanding of the physical, cultural, economic, and environmental aspects of the country. Here are some common course outcomes for a "General Geography of India" class: 1. Physical Geography of India: ○ Describe the major physiographic regions of India, including the Himalayas, Indo-Gangetic Plain, Deccan Plateau, and Coastal Plains. ○ Understand the geological processes that have shaped India's landscape. 2. Climate and Weather Patterns: ○ Analyze the climatic zones of India and their characteristics. ○ Understand the monsoon system, its significance, and its impact on agriculture and water resources. 3. Population and Demographics: ○ Examine the population distribution, density, and growth trends in India. ○ Analyze demographic characteristics such as age structure, sex ratio, literacy, and urbanization. 4. Cultural Geography: ○ Explore the cultural diversity of India, including languages,

			religions, and ethnic groups. ○ Understand the spatial distribution of cultural practices and their historical and contemporary significance.
II	Course Code B23-SEC-218	Environmental Auditing	An Environmental Audit course aims to provide students with the knowledge and skills necessary to assess the environmental performance of organizations, projects, and facilities .Here are some common course outcomes for an "Environmental Audit" class: 1. Understanding Environmental Auditing: ○ Define the concept and objectives of environmental auditing. ○ Explain the importance of environmental audits in sustainable development . 2. Knowledge of Environmental Regulations: ○ Understand relevant local, national, and international environmental laws and regulations. ○ Analyze the regulatory requirements that apply to different industries and organizations. 3. Audit Planning and Preparation: ○ Develop skills in planning and organizing an environmental audit. ○ Prepare audit plans that include scope, objectives, methodologies, and resources required. 4. Environmental Impact Assessment: ○ Assess the environmental impacts of organizational activities, products, and processes. ○ Evaluate the significance of identified environmental impacts and prioritize them for action.

III	GE-23	Physical Geography - II	Here are some common course outcomes for a Physical Geography class: 1.Atmosphere: ○ Understand the principles of weather and climate, including atmospheric circulation, cyclones, weather patterns and climate zones. ○ Understanding of atmospheric pressure and wind system of earth. ○ Interpret meteorological data and weather maps to predict weather conditions. 2.Hydrosphere: ○ Describe the movement/ circulation and distribution of water on Earth. ○ Understanding of oceanic floor, temperature and salinity of oceanic water. ○ Analyze the role of water in shaping landscapes and sustaining ecosystems. 3.Cartography ○ Interpret meteorological data and weather maps to predict weather conditions. 4.Communication: ○ Effectively communicate geographic concepts and findings through written, oral, and visual means. ○ Collaborate with peers to discuss and analyze physical geography topics. By the end of a Physical Geography course, students should have a solid foundation in understanding the natural processes that shape our planet and the ability to analyze and
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			interpret geographic data related to these processes. This knowledge is essential for careers in environmental science, urban planning, natural resource management, and other fields that require an understanding of the physical environment.
IV	GE-24	Human Geography	Here are some common course outcomes for a Human Geography class: 1. Spatial Understanding: ○ Describe and analyze the spatial organization of people, places, and environments on Earth. ○ Utilize geographic concepts such as location, place, scale, and region to interpret human phenomena. 2. Population and Migration: ○ Examine patterns and processes of human population growth, distribution, and movement. ○ Analyze demographic data to understand trends and implications of population change. 3. Cultural Geography: ○ Explore the spatial distribution of cultural practices, languages, religions, and ethnicities. ○ Understand how culture shapes landscapes and influences human behavior and interactions. 4. Urban Geography: ○ Examine the growth, structure, and functions of cities and urban areas. ○ Analyze urbanization trends and their social, economic, and environmental impacts. 5. Development Geography: ○ Explore concepts and measures of development, including economic development, human development, and sustainable development. ○ Assess the spatial distribution of development and the factors contributing to regional disparities. 6. Environmental Geography: ○ Analyze the interactions between

			human activities and the natural environment. ○ Evaluate the impact of environmental changes on human societies and the role of human actions in shaping environmental outcomes. 7. Cartography: ● Develop skills in map reading, interpretation, Map Projections and its principles By the end of a Human Geography course, students should have a solid understanding of how human activities and spatial processes interact and shape the world
V	GE-25	Economic Geography	A course in Economic Geography aims to provide students with an understanding of the global economic landscape, the factors that influence economic activities, and the implications of economic processes on different regions. Here are some common course outcomes for an Economic Geography of the World class: 1. Understanding Spatial Economic Patterns: ○ Describe the spatial distribution of economic activities across the globe. ○ Analyze the factors that influence the location and development of economic activities in different regions. ○ Spatial distribution of major crops and mineral resources. 2. Economic Sectors: ○ Examine the characteristics and spatial distribution of primary (agriculture, mining), secondary (manufacturing), and tertiary (services) economic sectors. ○ Understand the meaning of Economics Geography and relationship with other branches of

			social science. ○ Analyze the processes of industrialization and deindustrialization and their impacts on regional economies. 3. Global Trade and Investment: ○ Understand the patterns and determinants of international trade and foreign direct investment (FDI). ○ Analyze the impact of trade agreements, tariffs, and trade barriers on global economic relations. 4. Resource Distribution and Management: ○ Evaluate the spatial distribution of natural resources and their economic significance. ○ Analyze issues related to resource management, sustainability, and environmental impacts of economic activities. 5. Cartography: ○ Develop skills in map design, layout, symbolization, toponymy, qualitative and quantitative maps.
VI	GE-26	Introduction to Remote Sensing, GIS and Quantitative Method	Here are some common course outcomes for an "Introduction to Remote Sensing, GIS and Quantitative Method" class: 1. Understanding Remote Sensing Principles: ○ Describe the basic principles of remote sensing, including electromagnetic radiation, spectral signatures, and sensor technologies. ○ Explain the process of data acquisition through remote sensing and the types of data collected by different sensors. 2. Image Interpretation and Analysis: ○ Develop skills in interpreting

			remote sensing imagery, including identifying features and patterns. ○ Apply techniques for preprocessing and enhancing remote sensing images to improve data quality and usability. 3. Geographic Information System (GIS) Fundamentals: ○ Understand the basic concepts and components of GIS, including spatial data models, data structures, and spatial relationships. ○ Explain the role of GIS in various field of Geography. ○ framework. 4. Cartography ○ Learn principles of Aerial Photographs and Identification of features on FCC. ○ Socio-economic survey and Report Writing. 5. Remote Sensing Applications: ○ Explore various applications of remote sensing in fields such as environmental monitoring, agriculture, urban planning, disaster management, and natural resource management. 6. GIS Applications: ○ Examine the use of GIS in various fields, including urban planning, environmental management, public health, transportation, and business. 7. Understanding Quantitative Methods: ○ Describe the role and importance of quantitative techniques in geographic research. ○ Understand the basic principles of statistical analysis and mathematical modeling as applied to geographic data. 8. Descriptive Statistics:
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			◦ Calculate and interpret measures of central tendency (mean, median, mode) and dispersion (range, variance, standard deviation) for geographic data. ◦ Use graphical methods, such as histograms and scatter plots, to visualize spatial data distributions. This knowledge is crucial for careers in urban planning, environmental management, transportation, public health, and other fields that rely on spatial data analysis.
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DEPARTMENT OF MATHEMATICS

Programme Specific Outcomes

1. Understanding of the fundamental axioms in mathematics and capability of developing ideas based on them. Inculcate mathematical reasoning.
2. Prepare and motivate students for research studies in mathematics and related fields.
3. A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations , terminology.
4. A student should get adequate exposure to global and local concerns that explore them many aspects of mathematical sciences.
5. Student is equipped with mathematical modeling ability, problem solving skills, creative talent and power of communication necessary for various kinds of employment.
6. Student should be able to apply their skills and knowledge that is translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
7. Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.
8. Students learn conversion of real life problems into mathematical models which enhance their problem solving and decision making abilities
9. Problem solving skills of students are enhanced.
10. Theoretical concepts are strengthened by solving maximum no. of problems
11. Due to one to one interaction with the teacher doubts of the students get cleared if any.
12. Students learn how to apply mathematical concepts to practical and real life problems.
13. Interdisciplinary approach is developed.

B.Sc. Mathematics (Non-Medical)/B.A. Mathematics/B.com

Bachelor of Physical science/ Bachelor of Arts/Bachelor of Commerce

Course Outcomes

Sr. No.	Semester	Subject Code	Subject Name	Course Outcomes
1	I(CC)	B23-MAT-101	Calculus	After completing this course, the learner will be able to: 1. Gain knowledge of the concepts and theory of limit, continuity and differentiability of functions. Attain skills of calculating the limit of functions and examining the continuity and differentiability of different types of functions, and perform successive differentiation of functions. To apply the procedural knowledge to obtain the series expansions of functions which find multidisciplinary applications. 2. Understand concepts of asymptotes and curvature, the geometrical meaning of these terms and to have procedural knowledge to solve related problems 3. Determine singular points of a curve and classify them. Understand the concept of rectification of curves and derive the reduction formulae. 4. Have theoretical knowledge and practical skills to evaluate the area bounded by the curves, and volume and surface area of solids formed by revolution of curves 5. Attain cognitive and technical skills required for solving different problems of calculus associated with tracing of curves, determination of curvature, and rectification of curves, volume and surface area of solids of revolution. Have technical and practical skills of solving calculus problems related to differentiation and integration of functions by using MAXIMA software
2	I(MDC)	B23-MAT-104	Introductory Mathematics	After completing this course, the learner will be able to: 1. Gain the knowledge of set theory, types of sets and operations on sets. Understand various

				concepts of matrices and determinants, and acquire the cognitive skills to apply different operations on matrices and determinants. 2. Have the knowledge of the basic concepts of complex numbers and acquire skills to solve linear inequalities and quadratic equations. 3. Gain the knowledge of the concepts of Arithmetic progression, Geometric progression and Harmonic progression, and find A.M., G.M. and H.M. of given numbers. 4. Have the conceptual knowledge of straight lines and circles. Find out the slope of a line, angle between two lines, and know about various forms of a straight line and the standard form of a circle. 5. Attain the skills to make use of the learnt concepts of Introductory Mathematics in multidisciplinary learning contexts and to know their applications
3	I	B23-BCOM-103	Business mathematics	After completing this course, the learner will be able to: 1. understand set theory, logical statements and truth tables. 2. learn the logarithms and arithmetic and geometric progressions and their applications. 3. familiarize with the concepts of matrices and determinants. Learn to solve system of simultaneous linear equations. 4. have the conceptual knowledge of Compound interest, annuity, loan, debenture and sinking funds and attain skills to use these concepts in daily life.
4	II	B23- MAT-201	Algebra And Number Theory	After completing this course, the learner will be able to: 1. Gain knowledge of the concepts of symmetric, skew-symmetric, Hermitian, skew-Hermitian, Orthogonal and Unitary matrices, Linear dependence and independence of rows and columns of a matrix. Have knowledge of procedure and cognitive skills used in calculating rank of a matrix, eigen values, characteristic equation, minimal polynomial of a matrix and technical skills used in solving problems based on Cayley- Hamilton theorem. 2. Have knowledge of the concepts used in solving problems based on relations between the roots and coefficients of general polynomial

				equation is related to the practical component of the course. in one variable, solutions of polynomial equations having conditions on roots, common roots and multiple roots. Understand Descartes's rule of signs and learn cognitive and technical skills required in assessing nature of the roots of an equation and solving problems based on these. 3. Have deeper and procedural knowledge required for solving cubic and biquadratic equations used in Mathematics as well as many other learning fields of study. To understand the basic concepts of number theory and their applications in problem solving and life- long learning. 4. Have knowledge of concepts, facts, principles and theories of Linear Congruences, Fermat's theorem, Euler's theorem, Wilson's theorem and its converse, Chinese Remainder theorem. Attain cognitive skills used in solving linear Diophantine equations in two variables. 5. Attain cognitive and technical skills required to formulate and solve practical problems involving rank of a matrix, inverse of a matrix, Cardon's method, Ferrari's method, Descartes's method, Cayley-Hamilton theorem, Euler's theorem and Chinese Remainder theorem. Have technical and practical skills required for solving algebraic equations, finding inverse and eigen values of matrices by using built in functions of MAXIMA software.
5	II(MDC)	B23 - MAT - 204	Mathematics For Commerce & Social Sciences	After completing this course, the learner will be able to: 1. Understand and have the procedural knowledge of the concepts of matrices and determinants to solve simultaneous linear equations. 2. Gain the knowledge to find derivatives and integration of simple functions related to commerce and social sciences. Acquire skills to make use of derivatives and integration in realistic problems of the discipline. 3. Have the conceptual knowledge of compound interest, annuity, loan, debenture and sinking funds and attain skills to use these concepts in problem solving. 4. Gain the knowledge and understanding of the

				concepts of Linear programming and develop skills of formulating and solving linear programming problems based on real world problems. 5. Attain the cognitive and technical skills required for accomplishing assigned tasks relating to the chosen fields of learning in the context of broad multidisciplinary contexts to solve commercial and social real world problems using Mathematics.
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6	II	B23- SEC-203	Calculation Skills with Vedic Mathematics-I	After completing this course, the learner will be able to: 1. Gain the knowledge of Sutras and Up sutras from Vedic Mathematics. Perform simple arithmetic calculations with speed and accuracy. 2. Have the procedural knowledge of multiplication of complicated numbers quickly with the aid of Vedic sutras and generate tables of any number. 3. Make use of Vedic sutras to quickly divide, and find LCM and HCF of many digit numbers. 4. Acquire the cognitive skills to calculate square and cube roots of numbers speedily with accuracy. 5. Attain skills to perform calculations in competitive examinations with speed and accuracy.
7	II	B23- SEC-225	Numerical Ability Enhancement Skills	After completing this course, the learner will be able to: 1. Understand real number system, fundamental arithmetical operations, use of BODMAS rule and solve typical expressions accurately and fast. 2. Acquire skill to identify types of given sequences/series and apply suitable method to find a particular term, sum of specific number of terms and practice this learning in real life mathematical problems. 3. To formulate equations for specific mathematical problem and making use of mathematical skills to solve that. 4. Have a deeper and comprehensive understanding of the basic concepts of Percentage, Profit & Loss, Averages and acquire skill to use this knowledge in real life problems 5. Attain cognitive and analytical skills to identify, analyze and generate solutions to realistic problems by exploring procedural knowledge associated with the problems. Have analytical skills to compare and recognize various geometrical figures available in surroundings with mathematical figures and determine areas and volumes of the same.

8	II	B23-COM-204	Business Mathematics -II	After completing this course, the learner will be able to: 1. gain the knowledge to find derivatives simple functions related to commerce problems, attain skills to use application of derivatives in evaluating maxima and minima. 2. learn to find integration of simple functions related to commerce and economic problems, attain skills to use application of integration in business and commerce problems. 3. apply binomial theorem, learn the concept and applications of permutations and combinations. 4. learn the concept of Linear programming and formulation of linear programming problems related to business and commerce.
9	III	B23 - MAT - 301	Differential Equations - I	After completing this course, the learner will be able to: 1. Gain knowledge of the basic concepts of ordinary differential equations and learn various techniques of finding exact solutions of certain solvable first order differential equations. 2. Have procedural knowledge and cognitive and technical skills of solving homogeneous and nonhomogeneous second order linear ordinary differential equations with constant coefficients and with variable coefficients. 3. Gain knowledge of theory of total differential equations and basic concepts of partial differential equations. To learn methods and techniques for solving linear PDEs of first order and to acquire technical skills for accomplishing assigned tasks relating to formulation and solution of PDEs in broad multidisciplinary contexts. 4. Have knowledge of concepts and theories of second order PDEs and to apply theory of PDEs to determine integral surfaces through a given curve and to find orthogonal surfaces. To understand compatible systems and to learn cognitive and technical skills required for selecting and using relevant Char pit method, Jacobi method methods to assess the appropriateness of approaches for solving PDEs.
10	III(MDC)	B23 - MAT - 303	Mathematics For All	After completing this course, the learner will be able to: 1. Gain knowledge of the concepts of sets, Venn

				diagrams, De-Morgan's laws, basic set operations and apply this factual knowledge to solve daily life mathematical problems which can be formulated in terms of sets. 2. Understand the concept of differentiation as the rate of change of dependent variable with respect to the change in independent variable. Gain knowledge of differentiation of various functions and apply it to the problems of its own discipline and other disciplines for computing the rate of change. 3. Acquire cognitive and technical knowledge about a variety of methods of representation of statistical data and methods of measure of central tendency. Analyze the problem and apply the best measure of central tendency to draw inferences from the available data. 4. Understand the concept of correlation, correlation methods and conclude about the type of correlation for the available data. Comprehend the skills of curve fitting. 5. Attain a range of cognitive and technical skills to differentiate and integrate various functions. Use procedural knowledge to solve simple first order differential equations. Have technical and practical skills required for selecting and using suitable methods for data representation and measure of central tendency
11	III(VAC)	B23-VAC-308	Mathematics in India: From Vedic Period to Modern Times	After completing this course, the learner will be able to: 1. Have knowledge about the development of mathematical ideas and techniques in Indian mathematics during Vedic and Ancient period. Attain sufficient level of the historical background and contributions of notable Indian mathematicians to explore Indian knowledge system further. 2. Have deeper knowledge about development of mathematics during the Medieval period. Theoretical knowledge used in various branches of mathematics like techniques of calculus and spherical trigonometry found in the Kerala school of astronomy and mathematics will be gained. Learn about the biography and contributions of eminent Indian mathematicians

				during this period and Indian knowledge system as such. 3. Gain knowledge about development of mathematics in modern period. Have knowledge of notable work of Srinivasa Ramanujan and other mathematicians with other aspects of the old and strong traditions of mathematics in India. Familiarize with biographies of Mathematicians in modern period. 4. Have Knowledge about the prestigious Fields Medal, Abel Prize in the subject of mathematics and their significance. Gain theoretical knowledge about illustrious contributions of contemporary Indian mathematicians.
12	III	B23-SEC-303	Calculation Skills with Vedic Mathematics-II	After completing this course, the learner will be able to: 1. Gain the knowledge to perform multiplication, division, HCF, LCM and factorization of polynomials using Vedic Sutras. 2. Have the procedural knowledge to apply Vedic sutras to solve linear equations, quadratic equations and simultaneous equations. 3. Gain the cognitive skills to evaluate determinant, inverse of a matrix, derivative and integration of functions with speed and accuracy using Vedic Mathematics. 4. Have the knowledge and understanding of the concepts of Vedic Geometry and Trigonometry. 5. Attains the cognitive and technical skills to use Vedic sutras and upsutras for solving Algebra, Calculus and
13	III	B23-SEC-324	Learning MATLAB Skills	After completing this course, the learner will be able to: 1. Gain theoretical knowledge about memory and file management, basic flow controls, MATLAB program development environment that will help to develop programming skills and techniques to solve problems. 2. Have procedural and technical knowledge required for matrix generation, implementation of built-in functions, MATLAB graphic features and its applications. Deeper knowledge and understanding of these tools for interactive computation and able to generate plots and their export for use in reports and presentations. 3. Gain procedural knowledge of MATLAB

				providing skill for solving polynomial, algebraic and transcendental equations, system of linear equations, ordinary differential equations used in interdisciplinary fields. 4. Have knowledge of tools in MATLAB used for curve fitting, interpolation, numerical differentiation, numerical integration, data statistics and to learn cognitive and technical skills required for application of these in analysis of various economical, commercial, and statistical problems. 5. Develop cognitive and technical skills to use MATLAB tools in solving various data handling problems related with multidisciplinary subjects and bridge the skill gap. Learn tools and built-in functions of MATLAB/Scilab in solving stated problems. Learn technical skills and understand how to analyze all the results graphically in a very easy manner
14.	III	B23-SEC-326	Quantitative Aptitude	After completing this course, the learner will be able to: 1. Comprehend the formulation of equations for specific mathematical problems and use mathematical skills to solve those. 2. Acquire the procedural knowledge to analyze and solve problems related to work & time , work and wages and apply those in real life situations. 3. To get deeper knowledge and understanding of concepts of Simple interest, Compound Interest, Partnership, Work and time and use this procedural knowledge to perform assigned tasks of solving such problems. 4. Familiarize and get acquainted with various measures of central tendency and using cognitive skills to choose better of these for the available data and draw the inferences/results. 5. Attain a range of cognitive and technical skills to analyze and comprehend various numerical concepts, e.g., Formulation of equations, S.I. & C.I., Work & time, Work & Wages, Set theory etc. and apply these learned skills and techniques to solve daily life mathematical problems accurately, logically and well in time

15.	IV	B23 - MAT - 401	Analytical Geometry & Vector Calculus	After completing this course, the learner will be able to: 1. Gain knowledge of the concept of different conic sections, their classification and properties. Understand various terms related to conic sections and gain skills to use them in problem solving. 2. Have knowledge of general form of equation of a sphere and attain procedural knowledge required for solving problems related to intersection of spheres, tangent plane and line, orthogonality, length of tangent and co-axial system of spheres. Learn about equations of cones and apply knowledge for problem solving. 3. Have deeper knowledge and understanding of cylinder, enveloping cylinder, concepts of conicoid, tangent plane, director sphere, normal, envelope and to make further use thereof. 4. Understand and solve problems related to scalar and vector product of vectors, vector differentiation, directional derivatives, gradient, divergence and curl operators. Have deeper understanding of line, surface and volume integrals, their evaluation, proof of Gauss Divergence, Green's and Stoke's theorems and gain theoretical and technical knowledge in computing different surface flux integrals, volume integrals and line integrals used in other disciplines also. 5. Attain cognitive and technical skills required for solving practical problems related to assessing nature of conicoid, their characteristics. Learn skills to formulate and solve real life practical problems on sphere, cone and cylinder; to generate solutions of practical problems involving complex line, surface and volume integral using Gauss Divergence theorem, Stokes's theorem, Green's theorem in a very easy manner.
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16.	IV	B23-VAC-418	Mathematics in everyday life	After completing this course, the learner will be able to: 1. Gain knowledge of facts, concepts and rules to calculate simple and compound interests. Understand the technical terms related to income tax and equated monthly installment (EMI) and then to apply their enhanced technical and analytical skills to calculate income tax for different level of income tax payee and aware about how much they have to pay each month on a loan. They will be able to compare the results and discuss the impact of compounding on long term savings. 2. Have deeper knowledge of profit, loss, work, time and distance, coding and decoding inculcate technical and cognitive skill in solving problems related to these. Attain procedural skill to solve real life problems related to ratios and proportions. Gain procedural and technical knowledge to solve the practical problems of height and distances using concepts of trigonometry. 3. Attain technical and cognitive skills to analyze and solve numerical based on the concept of sequence and series, Arithmetic Progression, Geometric Progression, permutation and combination. 4. Develop cognitive skill to analyze the results of a sample using measures of central tendency and graphical representation (pie charts, frequency polygons, ogive). To design and conduct a survey on a relevant topic of their choice (e.g., favorite leisure activities, dietary habits, etc.). Have procedural knowledge to solve linear programming used in everyday life.
17.	V		Group & Rings	After completing this course, the learner will be able to: 1. Gain theoretical knowledge of the concept of a group, subgroup, abelian group, cyclic group, normal group, quotient group and have understanding of the results based on these concepts. 2. Have knowledge and understanding of the theory of group homomorphisms, group isomorphisms and group automorphisms. Learn about the permutation groups, permutations,

				centre of a group and theorems based on these concepts. 3. Gain the deeper knowledge of the concepts of a ring, subring, ideal, integral domain, field of quotient and understanding of the results based on these concepts. 4. Know about Euclidean rings, Polynomial rings and Unique factorization domain
18.	V		Numerical Analysis	After completing this course, the learner will be able to: 1: calculate errors induced in the values by truncation of a series expansion. 2: find roots of linear and non-linear system (algebraic and transcendental) equations. 3: fit polynomials to a given set of data points. 4: solve differential and integral equations numerically 5. describe various interpolating and extrapolating methods;
19.	V		Real Analysis	After completing this course, the learner will be able to: 1. describe different properties of the real line $\mathbb{R}$; 2.define and recognize bounded, convergent, divergent, Cauchy, and monotonic sequences, and calculate limit superior, limit inferior of bounded sequences; 3. apply the ratio, root, alternating series and limit comparison tests for convergence and absolute convergence of an infinite series of real numbers.
20.	VI		Linear Algebra	After completing this course, the learner will be able to: 1. Have comprehensive knowledge and understanding of the concepts of vector space, subspace, linear span, linearly independence, basis, dimension and quotient space. 2. Gain the procedural knowledge required to find the null space, range space, rank, nullity of linear transformation. Understand the proof of rank-nullity theorem and change of basis concept. 3. Have deeper knowledge of the concept of

				algebra of linear transformations, dual spaces and bi-dual spaces. Find the eigen values, eigen vectors and minimal polynomials of linear transformations. 4. Gain the theoretical knowledge and understanding of inner product space, Gram Schmidt orthogonalization process and Bessel's inequality. Attain the cognitive skills to apply the learnt concepts to solve mathematical problems.
21	VI		Real & Complex Analysis	After completing this course, the learner will be able to: 1. Employ De Moivre's theorem in a number of applications to solve numerical problems. 2. Understand the significance of differentiability of complex functions leading to the understanding of Cauchy-Riemann equations. 3. Understand analytic functions and to evaluate the contour integrals and understand the role of Cauchy-Goursat theorem and the Cauchy integral formula. 4. Get familiar with Liouville's theorem and the Fundamental theorem of Algebra and expand some simple functions as their Taylor and Laurent series.
22.	VI		Dynamics	After completing this course, the learner will be able to: 1. understand and use basic terms for the description of the motion of particles, vector functions and the fundamental laws of Newtonian mechanics 2. solve mechanics problems in one dimension that involve one or more of the forces of gravity, friction and air resistance 3. understand the concept of terminal speed, and use it in solving mechanics problems in one dimension 4. apply Newton's second law in vector form to problems in more than one dimension 5. solve problems relating to the motion of a projectile in the absence of air resistance.

Program Specific Outcomes Department of History

PSOs of B.A (General) History

PSO1. Acquaint with the concept of Bharatvarsha and its eternity and major knowledge Traditions and Educational system also understand the concepts of Dharma, Philosophy, Art and culture in Ancient India.

PSO2. Learn about the Sources for Reconstructing the History of Ancient India and Historical developments from the origins of Harappan Civilization to invasions of Mahmood Ghaznavi and Muhammad Ghori in India.

PSO3. Analyse the Establishment of the Mughal Empire and its Expansions, uprising of 1857, rise of Modern Europe & Modern World.

PSO4. -Use Historical maps, Charts, Diagrams etc.

-Develop practical skills helpful in the study and understanding of Historical events. - Develop interests in the study of History and activities relating to History.

-Read Historical documents, maps, charts etc.

-The study of History helps to impart moral education.

-History installs the feeling of patriotism in the hearts of the Students.

CO1: IDEA OF BHARAT

-Understanding of Bharatvarsha and its Political Contour, Indian concept of Time and space, Ancient Education system, Arts, Culture, Science and Technology, Health Consciousness, The Concept of Vasudhaiva Kutumbakam, Environment Conservations and Indian Economic Thoughts.

-Focus maps for better understanding of Political Contours of ancient Bharatvarsha, Places of Indian Arts in Ancient times, Important JanaPadas, and Maritime Commerce in Ancient India.

CO2: History of India (From Earliest Times to 1206 A D)

-Learn about the sources for reconstructing the History of Ancient India, Harappan Civilization, rise of Mauryan Empire, Pushyabhutis, Chalukyas, Tri-Parties Struggle among Pratiharas, Palas and Rashtrakutas.

-Analyse invasions of Mahmood Ghaznavi and Muhammad Ghori.

-Identify maps of India to understand the Important sites of Harappan Civilization, expansion of Asoka Empire, Kanishka, Harsha Empire.

CO3: Political History of India (1526 - 1857 A.D.)

-Study the Mughal period with special reference to their policies. -Analyse the establishment of British power in India.

-Write down the Uprising of 1857

-Discuss maps of India regarding Political Conditions of India in 1526, Mughal Empire at the Death of Akbar (1605), Mughal Empire at the Death of Aurangzeb (1707), Expansion of British Empire up to 1856 and Major Centres of the Uprising of 1857.

CO4: Indian National Movement

-Analyse the origin of the National Consciousness among countrymen.

-Study the role of Moderates, Extremists and Revolutionaries in the Freedom Movement. - Discuss the Role of Mahatma Gandhi in Freedom Movement.

- Describe the contribution made by Subhash Chandra Bose and Indian National Army.

-Understand rise of Communal Politics & Partition and Independence of India. -Discuss maps regarding these chapters.

CO5: Rise of Modern World

-Describe the rise of Modern World and classify growth of Capitalism. -Analyse the Renaissance.

-Study the Scientific Revolutions with special reference to Industrial Revolution. -Acquire knowledge about 20th century world.

-Recognize maps of Europe for the above-mentioned topics.

CO6: Modern Europe (1789-1945 A. D)

-Describe rise of Modern Europe.

-Analyse the French Revolution with its aftermath. -Study the process of Nationalism in Europe. -Critically analyse the World War I and II.

-Focus the maps of Europe to evaluate Europe on the Eve of French Revolution, Reconstruction of Europe by the Vienna Congress, Europe on the Eve of World War - I, Europe after Paris Peace Settlement and Europe on the Eve of World War II.

B.A. Public Administration

PROGRAMME OUTCOMES (POs)

PO 1: Demonstrate a detailed knowledge and understanding of selected fields of study in core disciplines in the humanities, social sciences and languages;

PO 2: Apply critical and analytical skills and methods to the identification and resolution of problems within complex changing social context.

PO 3: Demonstrate a general understanding of the concepts and principles of selected areas of study outside core disciplines of the humanities, social sciences and languages;

PO 4: Apply and independent approach to knowledge that uses rigorous methods of inquiry and appropriate theories;

PO 5: Articulate the relationship between diverse form of knowledge and the social, historical and cultural context that produced them;

PO 6: Communicate effectively and show ability to read, write, listen to and speak in chosen languages with fluency;

PO 7: Act as informed and critically discerning participants within the community of scholars, as citizens and in the work force;

PO 8: Work with independence, self-reflection and creativity to meet goals and challenge in the workplace and personal life.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: The students would be able to understand the basic concepts, need & growth of the discipline

PSO2: The program would provide the critical reasoning and analysis of key issues along with different concepts of administration.

PSO3: The students would be able to apply the theoretical interpretations to administrative system as well as they will acquire skill to identify social issues through scientific enquiry.

PSO4: The students would be able to have analytical and empirical understanding of administrative phenomena which leads to formulate the administrative planning and policies.

Bachelor of Arts (Public Administration)
Semester wise Three Year Degree Programme Course Outcome

S. No.	Semester	Subject Code	Paper Name	Course Outcomes
1	I	PA-21	Elements of Public Administration	In this course, the students learn regarding the Origin, Meaning, Nature and Basic concept of the discipline i.e., Public and Private Administration, New Public Administration, Hierarchy, Span of Control, Coordination and Control etc.
	II	PA-22	Basics of Public Administration	In this paper students strengthen from the Budgetary Process of the country and Basics Principle, and Theory of the subject i.e., Traditional Theory of Organization, Bureaucracy Theory and Scientific Management Theory
2	III	PA-23	Central Administration	Students gain the knowledge about the central administration of the country i.e., President, Prime Minister, Council of Minister, Home Ministry, CAG, UPSC and Role of Civil Servants in the Country
	IV	PA-24	State and District Administration	District is the basic unit of the administration So students go through the basic administrative procedure in this semester because functioning and role of Governor, Chief Minister, Chief Secretary, Deputy Commissioner, SDM, Tehsildar and BDPO is given.

3	V	PA-25	Rural-Urban Administration	Students know the grass roots democracy in this year they know about the rural and urban panchayati raj system. They gain the knowledge of Zila Parishad, Gram Panchayat, Gram Sabha and Municipal Council
	VI	PA-26	Issues of Public Administration	In this course, students learn how the administration become corruption free and can be more transparent responsible and accountable towards common masses. The Concept of Good Governance, E-Governance, RTI, Consumer Protection Platform, Anti-Corruption agencies and Indian Judicial System is given in the syllabus. These concepts enhance the knowledge of students.



Dr Ravinder Singh
Assistant Professor of Public Administration
GC Bherian (Pehowa)

Department of English

Session 2023-24

Programme Specific Outcome (PSOs).

The course/Subject will inspire students to constantly upgrade their knowledge and skills. The students will be accurate both in oral and written communication as they will be strong in grammar and its usage. They will be able to gain better listening, speaking, reading and writing skills. They can express a through command of English and its linguistic structure.

They will develop intellectual, personal and professional ability through effective communication skills.

Course Outcomes

To expose students to the best examples of poetry, prose and novel in English, so that they realize beauty and communicative power of English.

B.A. (English)

Course Outcomes

After the successful completion of BA (English) i.e. 3 year program a student should be able to

Sr. No.	Semester	Subject Code/ Course type	Subject Name	Course Outcomes
1	BA I st Semester	B 23 AEC-1	AEC-1	1. The students will learn various types of verbal communication. 2. They will understand the importance of interpersonal communication on work places and different ways of behavior and communication.
	B.A ^{1ST}	B 23 -ENG - 103 CC -M -1	ENGLISH (minor)	1. The student will be able to understand different kinds of poetry 2. Student will be able to understand basic of English grammar 3. Student will be able to understand antonyms and synonyms in English
	B.A ^{1ST}	B 23 - ENG -101/CC - 1/MCC -1	ENGLISH (major)	1. The student will comprehend different forms and techniques of short fiction 2. The student will be able to understand tenses 3. The student will understand parts of speech, voices and narration 4. The student will progress to understand basic of grammar
2.	B.A ^{2ND} SEMESTER	B 23 - ENG 203/CC -M -2	ENGLISH (minor)	1. The student will understand the significance of literary essays 2. They will be able to appreciate literariness embedded into the text 3. They will be able to understand In intricacies of grammar
	B.A ^{2ND}	B 23 - ENG - 201/CC - 2/MCC -3	ENGLISH (major)	1. The students will be able to understand various components of prose 2. The student will be able to write paragraph , essay, letters and precis 3. The student will be able to write speech and resume

	BA II nd	B 23 AEC-211	AEC-11	1. The students will be introduced to the phonetics and syllables in English 2. They will learn various components of speaking skills and their use in communication.
3	BA III rd			1. They acquire better communication and analytical abilities in English. 2. Students will be able to understand of the different sentences patterns in English. 3. They will be able to know about various Literary Forms and Devices.
4	BA IV th		English	1. They will be able to understand and familiar with one-act plays. 2. Students will be able to translate from Hindi to English & English to Hindi.
5	BA V th		English	1. The students will be able to understand and analyse about Novel and its forms. 2. They will be able to know about intonation and weak forms in English Pronunciation. 3. They will be familiar with sentences
6	B.A. VI th Semester		English	1. The students will be familiar with theories related to Drama. 2. They will be able to understand and analyse plays in relation to History. 3. The students will be familiar with one-word substitution and gain knowledge about precis writing.

Department of Commerce
Session - 2023-2024.

* Some program-specific outcomes in Commerce Subject.

1. Comprehensive knowledge Base:

Gain a deep understanding of accounting, Finance economics and management Principles.

2. Analytical and Problem Solving Skills:-

Develop the ability to analyze financial data, evaluate business situations and propose effective solutions.

3. Communication Proficiency:-

Communicate financial information and analysis clearly and effectively, both orally and in writing.

These Program-specific outcomes equip Commerce students with the knowledge, skills and abilities necessary for success in their chosen field of study and future careers.

les

Session- 2023-2024.

Students setting admission for B.Com (Pass course) is expected to imbue with following quality which helps them in their future life to achieve the expected goals.

The B.com Graduates would be able to acquire basic and fundamentals knowledge and skills for doing business and commercial activities for their choice.

B.com pass course covers several subjects such as accounting, costing, taxation, marketing, economics, corporate and business laws, management, HR and business etc. This opens up the door for wide range of employment opportunities.

A b.com graduate can choose from multiple job profiles based on their interests and abilities. A few of them are: - Accountant, finance analyst, portfolio manager, investment analyst, tax consultant.

The program also empowers the graduates to appear for various competitive exams or choose a profession of their choice such as CA, CS, ICWA, M.COM, MBA etc.

A B.Com degree holder is well suited to a business career whether as an employee or an entrepreneur.

- **B. Com (Sem-01)**
- **To record the basic journal entries.**
- **Memorize how to calculate depreciation by applying various methods.**
- **Maintain the financial statements of a business entity.**
- **Rectify errors in accounts.**
- **To apply basic terms of integration in solving practical problems field of as of business.**
- **To explain basic methods of business calculus, types and methods of interest account.**

- To solve problems in the areas of business calculus, simple and compound interest account,
- use of compound interest account, loan and consumer credit.
- To discuss effects of various types and methods of interest account.
- Connect acquired knowledge and skills with practical problems in economic practice.
- Understand how households (demand) and businesses (supply) interact in various market.
- Understand the links between household behavior and the economic models of demand.
- Represent demand, in graphical form, including the downward slope of the demand curve .
- Understand the links between production costs and the economic models of supply.
- Apply the concept of opportunities.

- **B.Com (Sem-02)**

- Student can able to make necessary journal entries in the books of record under hire purchase method.
- Able to maintain royalty and joint venture accounts.
- Easily examine the dissolution of partnership.
- Easily can prepare the journal entries of amalgamations and sale of partnership firms.
- understanding of fundamental of marketing
- Define various elements internal as well as external affecting business environment.
- Explain the techniques like SWOT analysis.
- Student will be able to recognize when to use each of the Microsoft Office programs to create documents.

- Students will have a working knowledge of basic functions and formulas in MS-Excel.

- **B. Com (Sem-03)**

- Learn about the journal entries of issue of shares and issue of debentures.
- To know about the meaning of companies and working style of companies.
- To know about the final accounts of the companies.
- Learn about the Work with profit prior to incorporation and post incorporation profits in company's accounts.
- Learn about the concept of sources of redemption of debentures and redemption of preference shares
- Student will able to apply knowledge to solve simple tasks using computer (MS Excel).
- Student will able to independently calculate basic statistical parameters (mean, measures of dispersion, correlation, indexes)
- Student will able to choose a statistical method for solving practical problems.
- Student will able to explain probability theory and probability distributions .
- Student will able to Understand and appreciate the need to solve a variety of business- related problems using a systematic approach involving accepted statistical techniques.
- Learn the difference between valid void and voidable contract.
- Memorize difference between contract of guarantee and indemnity.
- Learn how to pursue the consumer rights under consumer protection act .
- Know about the concept of company and shares.
- Know about the company law in the India.
- Understand the use of the memorandum of association and article of association in a company, they also learn from this course.

- Use of prospectus in a company.
- Understand the relationship between company and debenture holders.
- Learn the qualities of human resource manager in an organization.
- Analysis the importance of different methods of training given to the employees in organization.
- Memorize the difference between on-the-job training and of the job training.
- Learn the participant of industrial relation and recruitment of good industrial relation program.

- **B.Com (Sem-04)**

- Know about the companies all accounts.
- Get the Knowledge of banking system.
- Learn about working format of companies
- Student will able to apply knowledge to solve simple tasks using computer (MS Excel)
- Student will able to explain probability theory and probability distributions.
- Student will able to Understand computerized accounting system.
- Critically evaluate conditions and warranties of sale of goods act.
- Aware about rights to information.
- Can able to use negotiable instrument in practical life.
- Student will able to develop in the student an understanding of the free enterprise system.
- Student will able to demonstrate clearly and forcibly the generally accepted, but not always documented, proposition that law is an expression of the public will; that a law is valid in the real sense only when it is an expression of the public will.
- Student will able to develop in the student and appreciation of the significant role played by the judiciary in the protection of individual liberty and private property.

- Student will be able to develop in the student acceptable attitudes and viewpoints with respect to business ethics and social responsibility.
- Student will be able to enrich and make more meaningful the study of the other social sciences.
- Students can identify how consumer behaves differently.
- Able to understand how a product passes from different stages.
- Able to understand the difference between trademark and branding.
- Able to describe the customer segmentation, target marketing and positioning.
- Understand different methods of sale promotion.
- Demonstrate a comprehension of the principles of banking law and its relationship to banks and customers.
- Demonstrate an awareness of law and practice in a banking context.

- **B.Com (Sem-05)**

- Define the procedure of direct tax assessment.
- Able to file IT return on individual basis.
- Able to compute total income and define tax complications and structure.
- Able to understand amendments made from time to time in Finance act.
- Differentiate between direct and indirect tax assessment.
- Define the various components of total cost of a product i.e. direct & indirect cost and fixed & flexible cost.
- Determine various levels of material i.e. reorder level, minimum level, maximum level & EOQ for managing working capital.
- Use methods of time-keeping & time-booking and manage idle & overtime. Define the features of overhead or indirect cost of production and basis of allocation and apportionment.
- Use cost-sheet to compute unit cost of product.

- Determine basis for computing tender price of a product.
- Use business finance terms and concepts when communicating.
- Explain the financial concepts used in making accounting management decision.
- Use effective communication skills to promote respect and relationship for financial deals.
- Demonstrate a basic understanding of accounting management.
- Student will able to describe the types of equity securities that companies can use to raise .
- Student will able to apply different company valuation techniques to determine share prices.
- Student will able to describe the characteristics of different types of debt securities and be able to price them.
- Student will able to describe different theories of how interest rates are determined and explain the relationship between the term to maturity, risk, and interest rates.
- Student will able to understand the basic knowledge of human resource management for small business.
- Student will able to identify and implement systems for collecting and analyzing information to monitor the performance of a new firm
- Student will able to understand the critical roles of marketing research, competitive analysis, consumer-value proposition, and market-entry strategy in the development of a business plan.
- Student will able to describe examples of entrepreneurial business and actual practice, both successful and unsuccessful, and explain the role and significance of entrepreneurship as a career, in the firm, and in society.
- Student will able to understand the importance and role of ethical, sustainability, innovation and global issues for strategic decision making. Student will evaluate different modes of entering into entrepreneurship
- Use effective communication skills to promote respect and relationship for Business Environment.

- **B.Com (Sem-06)**

- Define the procedure of direct tax assessment.
- Able to file IT return on individual basis.
- Define tax complications and structure.
- Aware about IT authorities and their powers.
- Aware about appeal & revision, tax penalties, offences and prosecutions.
- Define the process to compute total cost of a product belong to various production processes.
- Accumulate total cost of a contract assigned.
- Able to prepare various budgets like fixed and flexible budgets.
- Define the terms with regard to variance analysis.
- Define the terms with regard to BEP analysis.
- Use business finance terms and concepts when communicating.
- Explain the financial concepts used in making financial management decision.
- Use effective communication skills to promote respect and relationship for financial deals.
- Utilize information by applying a variety of business and industry software and hardware.

Programme Specific outcomes
in the Subject of Hindi

- (I) विद्यार्थी हिन्दी विषय की उत्पत्ति व मूल अवधारणा को समझने में सक्षम होंगे।
- (II) हिन्दी साहित्य के विविध पक्षों एवं उसकी दिशाओं से परिचित होंगे।
- (III) व्याकरणिक क्रियाओं को दूर कर शुद्ध लेखन में सक्षम होंगे।
- (IV) शब्दकोश एवं शब्दावली सम्बन्धी योग्यता का विकास होगा।
- (V) हिन्दी साहित्य को तर्कपूर्ण ढंग से व्याख्यात करने की क्षमता का विकास होगा।

Department of Hindi

Course outcomes

Class	Course	Outcomes
BA-I Sem-I	हिन्दी मेजर हिन्दी भाषा एवं आधुनिक कविता	(1) हिन्दी भाषा की उत्पत्ति व विभिन्न क्षेत्रों से परिचय (2) मानक वर्तनी का परिचय (3) आधुनिक हिन्दी कविता में निम्नलिखित विविध विधियों से परिचय
	हिन्दी माइनर हिन्दी का व्यावहारिक व्याकरण	(4) शब्दभ्रष्टा, शब्दभ्रष्टा व सम्पूर्ण भाषा के निम्नलिखित कानून से परिचय (5) परिभाषित शब्दसूची के प्रयोग की जानकारी होना। (6) व्याकरण के नियमों से परिचित होना। (7) हिन्दी भाषा के शुद्ध उच्चारण व लेखन की जानकारी होना।
BA-I Sem-II	हिन्दी मेजर मध्यकालीन हिन्दी कविता	(8) मध्यकालीन कवियों से परिचित होना (9) काव्य में आद्यमय से नैतिक व मानवीय मूल्यों की स्थापना
	हिन्दी माइनर साम्प्रदायिक हिन्दी: प्रावधान और प्रयोग	(10) साम्प्रदायिक के अर्थ, स्वरूप और प्रकृति से परिचय (11) हिन्दी कम्प्यूटरीकरण की आधुनिक स्थिति से परिचय
	हिन्दी AEC हिन्दी भाषा एवं सम्प्रेषण: मौखिक सम्प्रेषण	(12) सम्प्रेषण के अर्थ, प्रकृति व विशेषताओं से परिचय (13) प्रकृति, शब्दात्मक और शब्द व वाक्य की प्रकृति (14) शब्दकोश के अर्थ प्रयोग की जानकारी होना।

Class	Course	Outcomes
BA-II Sem-III	हिन्दी अनिवार्य	कहानी विद्या से परिचय व कहानी लेखन सम्बन्धी योग्यता सृजनात्मक व व्यावहारिक लेखन से परिचय ग्रन्थ-विद्याओं से परिचय व लेखन योग्यता समाज के प्रति संवेदन व संस्कार विकसित करना हिन्दी में शैल्यार के अवसरों का ज्ञान
BA-II Sem-IV	हिन्दी अनिवार्य	
BA-III Sem-V	हिन्दी अनिवार्य	आधुनिक कवियों की काव्य सम्बन्धी बदलती अवधारणाओं से परिचित होना हिन्दी साहित्य के विभिन्न कालों से परिचित पत्र लेखन, संक्षेपण व पल्लवन लेखन सम्बन्धी योग्यता विकसित करना हरियाणवी भाषा व साहित्य से परिचित होना
BA-III Sem-VI	हिन्दी अनिवार्य	पत्रकार, पत्रकारिता व संपादक सम्बन्धी शक्तियों का ज्ञान बढ़ाना निबन्ध विद्या को समझना

Political Science as Department/Subject Outcomes for Students and College

Students Outcomes:

1. Comprehensive Understanding: Students increase understandings into political systems, ideologies, and governance structures.
2. Analytical Skills: They develop strong analytical abilities to assess political phenomena and public policies critically.
3. Communication Skills: Political Science education enhances communication skills through writing, public speaking, and debate.
4. Civic Engagement: Students become actively involved in political processes and community initiatives, development civic responsibility.
5. Versatile Career Paths: Graduates follow diverse career paths in government, academia, law, journalism, and international relations.

College Outcomes:

1. Intellectual Diversity: Political Science courses enrich the intellectual diversity of colleges, fostering critical thinking and curiosity.
2. Interdisciplinary Studies: College contributes to interdisciplinary studies by integrating political insights with other disciplines.
3. Civic Engagement Promotion: College promote a culture of civic responsibility and activism through Political Science education.
4. Leadership Development: College prepare future leaders for public service roles, instilling values of ethical leadership and social responsibility.

Undergraduate Programme (Political Science)
MDC- Political Science

Course Outcomes

After the successful completion of B.A i.e. 3-year program, a student should be able to:

S. No.	Semester	Subject Code	Subject Name	Course Outcomes
1	I	B23-POL-101	Principles of Political Science – I {CC/MCC}	1. Understand the meaning, nature and scope of Political Science along with its relationship with other Social Sciences. 2. Understand the concept, development and theories of the origin of State. 3. Develop a thorough understanding of state and its relationship with society, government and nation. 4. Comprehend the concepts, features and theories of sovereignty.
2	I	B23-POL-104	Indian Polity – I {MDC}	1. Comprehend the salient features of the Indian Constitution and develop an understanding of Fundamental Rights and duties. 2. Develop an understanding of the powers, position and functions of the Union Executive 3. Comprehend the functioning of the Union legislature. 4. Comprehend the functioning of the Indian

				judicial system.
3.	II	B23-POL-201	Principles of Political Science-II {CC/MCC}	1. Develop a thorough understanding of the theory and practice of government, separation of powers and rule of law. 2. Understand the various forms of government in a political system. 3. Understand the nature and operation of political parties, pressure groups, representation and bureaucracy. 4. Comprehend the functioning of monarchy, totalitarianism, military rule and democratic political regimes
4.	II	B23-POL-203	Indian Polity-II {MDC}	1. Understand the powers, position and functions of the State Executive. 2. Develop an understanding of the powers, position and function of the State legislature 3. Comprehend the functioning of the Indian Judicial system. 4. Comprehend the functioning of local self-government.

5.	III	PS-23	Indian Political Thinkers-I	1.To understand the nature, methods and significance of political thought. 2.History and relevance of Indian political thought since Raja Ram Mohan Ray till Bal Gangadhar Tilak. 3. Study of Renaissance thinkers of India.
6.	IV	PS-24	Indian Political Thinkers-II	1 To understand the nature, methods and significance of political thought. 2. To acquire knowledge about modern political thinkers and theirs view on state craft. 3. To appreciate the various social and political ideas of Indian political thinker. 4. To inculcate the spirit of ahinsa, satyagraha, through Gandhi ideology
	V	PS-25	Comparative Politics	1. Understand the definition and scope of comparative politics along with its traditional and modern concerns. 2. Develop a thorough understanding of the following approaches to study Comparative Politics: Systems, Structural-functionalism, Political Development and Political Culture. 3. Comprehend the concept of constitutionalism and its problems in the modern times. 4. Comprehend the formal and informal constitutional structures.
	VI	PS-26	Comparative Constitutions of UK & USA	1. Understand the evolution, conventions, legacies and features of the constitutions of UK and USA along with their socio-economic basis.

				2. Develop a thorough understanding of the comparative study of the executive, legislature and judiciary of U.K. and USA. 3. Understand the structure, functions and role of political parties and pressure groups in UK and USA. 4. Comprehend the process and dynamics of elections, bureaucracy and recent trends in the system of UK and USA.
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ਗੋਰਗਿਰਿ ਕਾਲਜ, ਭੇਰੀਆਂ

ਪੰਜਾਬੀ ਵਿਭਾਗ

1. ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਭਾਸ਼ਾ ਸੰਬੰਧੀ ਮੁੱਖਮ ਮੁੱਦੇ ਵਿਕਸਿਤ ਹੋਣਗੀ ਅਤੇ ਇਹਨਾਂ ਦੇ ਸੁਥਰੇ ਭੇਰੇ ਵਿਚ ਟਾਪੂ ਹੋਣਗਾ।
2. ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਭਾਸ਼ਾ ਦਾ ਸੁੱਧ ਯੋਜਨਾ ਕੋਸ਼ਿਸ਼ ਵਿਕਸਿਤ ਹੋਵੇਗਾ।
3. ਮਾਹਿਤ ਦੀ ਸਮਝ ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਕੋਸ਼ਿਸ਼ ਭਾਵਨਾ ਅਤੇ ਮਾਨਵਤਾਵਾਦੀ ਦ੍ਰਿਸ਼ਟੀਕੋਣ ਵਿਕਸਿਤ ਕਰੇਗੀ।
4. ਸਾਹਿਤਕਾਰੀ ਦਾ ਵਿਸ਼ੇਸ਼ਤਾ ਕਰਕੇ ਅਤੇ ਸੂਝਣਾਕ ਫੈਸਲੇ ਕੈਂਦ ਆਈ ਹੋਵੇਗੀ ਕੀਤੇ ਗਿਆਨ ਅਤੇ ਹੁਕਮ ਕ੍ਰਿ ਵਿਗਰਹ ਰੂਪ ਵਿਚ ਯਾਨ੍ਹ ਕਰਕੇ ਦੀ ਸਮਝੋਥਾ ਪੈਦਾ ਹੋਵੇਗੀ।


Jyotirmoy Singh
Asstt. Prof. of Punjabi

Punjabi

UG.Course Outcomes

1.ਪਹਿਲਾ ਸਮੈਸਟਰ

ਪਾਠਕ੍ਰਮ ਕੋਡ : PUN101

ਪਾਠਕ੍ਰਮ ਪਰਿਣਾਮ : ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਤੇ ਲਿਪੀ ਦੀ ਬੁਨਿਆਦੀ ਜਾਣਕਾਰੀ ਮਿਲੇਗੀ। ਵਿਦਿਆਰਥੀ ਸਹੀ ਉਚਾਰਣ ਅਤੇ ਲਿਖਤ ਦੇ ਨਿਯਮਾਂ ਨੂੰ ਸਮਝਣ ਵਿੱਚ ਸਮਰੱਥ ਹੋਣਗੇ। ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਰੂਪ ਆਧੁਨਿਕ ਕਵਿਤਾ ਅਤੇ ਉਸਦੇ ਵਿਭਿੰਨ ਰੂਪਾਂ, ਨਿਕਾਸ-ਵਿਕਾਸ ਸੰਬੰਧੀ ਜਾਣਕਾਰੀ ਹਾਸਿਲ ਕਰਨਗੇ। ਇਸ ਨਾਲ ਕਵਿਤਾ ਪੜ੍ਹਨ, ਸਮਝਣ ਅਤੇ ਸਿਰਜਣ ਸੰਬੰਧੀ ਰੁਚੀ ਵਧੇਗੀ। ਜਿਸ ਨਾਲ ਰਚਨਾਤਮਕ ਸ਼ਕਤੀ ਵਿਕਸਿਤ ਹੋਵੇਗੀ।

2.ਦੂਜਾ ਸਮੈਸਟਰ

ਪਾਠਕ੍ਰਮ ਕੋਡ : PUN102

ਪਾਠਕ੍ਰਮ ਪਰਿਣਾਮ :

ਵਿਦਿਆਰਥੀ ਪੰਜਾਬੀ ਗਲਪ ਸਾਹਿਤ ਦੀ ਜਾਣਕਾਰੀ ਪ੍ਰਾਪਤ ਕਰ ਨਾਵਲ ਅਤੇ ਨਿੱਕੀ ਕਹਾਣੀ ਸੰਬੰਧੀ ਸਮਝ ਵਧਾਉਣਗੇ। ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਗਲਪ ਦੇ ਪ੍ਰਮੁੱਖ ਰੂਪਾਂ, ਉਹਨਾਂ ਦੀ ਸਰੰਚਨਾ, ਨਿਕਾਸ ਵਿਕਾਸ ਅਤੇ ਪ੍ਰਵਿਰਤੀਆਂ ਸੰਬੰਧੀ ਜਾਣਕਾਰੀ ਹਾਸਿਲ ਕਰਨਗੇ। ਜਿਸ ਨਾਲ ਵਿਦਿਆਰਥੀਆਂ ਵਿੱਚ ਨਾਵਲ ਅਤੇ ਕਹਾਣੀ ਕਲਾ ਦੀ ਰਚਨਾ ਅਤੇ ਸੰਰਚਨਾ ਸੰਬੰਧੀ ਸਮਝ ਵਿਕਸਿਤ ਹੋਵੇਗੀ।

3.ਤੀਜਾ ਸਮੈਸਟਰ

ਪਾਠਕ੍ਰਮ ਕੋਡ: PUN201

ਪਾਠਕ੍ਰਮ ਪਰਿਣਾਮ :

ਵਿਦਿਆਰਥੀ ਪੰਜਾਬੀ ਵਾਰਤਕ ਸਾਹਿਤ ਦੀ ਵਿਸ਼ੇਸ਼ ਜਾਣਕਾਰੀ ਹਾਸਿਲ ਕਰ ਕਵਿਤਾ, ਨਾਵਲ ਅਤੇ ਕਹਾਣੀ ਤੋਂ ਇਸਦੇ ਅੰਤਰ ਬਾਰੇ ਮੁੱਢਲੀ ਜਾਣਕਾਰੀ ਪ੍ਰਾਪਤ ਕਰਨਗੇ ਅਤੇ ਇਸਦੇ ਵਿਭਿੰਨ ਵਿਕਾਸ ਪੜਾਵਾਂ ਨੂੰ ਕ੍ਰਮਵਾਰ ਸਮਝਣਗੇ। ਵਿਦਿਆਰਥੀ ਮਾਨਸਿਕ ਪੱਧਰ ਤੋਂ ਪਰਿਪੱਕਤਾ ਪ੍ਰਾਪਤ ਕਰਨਗੇ। ਜੀਵਨੀ ਅਤੇ ਸਵੈ-ਜੀਵਨੀ ਦੀ ਸਮਝ ਅਤੇ ਸਰੰਚਨਾ ਬਾਰੇ ਗਿਆਨ ਹਾਸਿਲ ਕਰ ਵਾਰਤਕ ਦੀਆਂ ਇਹਨਾਂ ਵਿਧਾਵਾਂ ਨੂੰ ਸਿਰਜਨ ਦੇ ਸਮਰੱਥ ਹੋਣਗੇ।

4. ਚੌਥਾ ਸਮੈਸਟਰ

ਪਾਠਕ੍ਰਮ ਕੋਡ: PUN202

ਪਾਠਕ੍ਰਮ ਪਰਿਣਾਮ : ਵਿਦਿਆਰਥੀ ਮਧਕਾਲੀ ਪੰਜਾਬੀ ਕਵਿਤਾ ਸੂਫ਼ੀ ਕਾਵਿ ਅਤੇ ਕਿੱਸਾ ਕਾਵਿ ਅਤੇ ਵਾਰ ਕਾਵਿ ਦੀ ਵਿਸ਼ੇਸ਼ਤਾ ਨੂੰ ਸਮਝਣਗੇ। ਇਹਨਾਂ ਦੇ ਵਿਸ਼ਾ ਪੱਖ ਅਤੇ ਕਲਾ ਪੱਖ ਨੂੰ ਸਮਝ ਮਧਕਾਲੀ ਰਚਨਾਵਾਂ ਦੀ ਵਿਲੱਖਣਤਾ ਅਤੇ ਵੰਨਸੁਵੰਨਤਾ ਦੀ ਜਾਣਕਾਰੀ ਹਾਸਿਲ ਕਰਨਗੇ। ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਇਤਿਹਾਸ ਦੇ 1700 ਈ. ਤੋਂ 1850 ਈ. ਦੀ ਸਾਹਿਤ ਰਚਨਾ ਅਤੇ ਸਾਹਿਤ ਦੇ ਇਸ ਵਿਕਾਸ ਪੜਾਅ ਪ੍ਰਤੀ ਆਪਣੀ ਸਮਝ ਵਿਕਸਿਤ ਕਰਨਗੇ।

5. ਪੰਜਵਾਂ ਸਮੈਸਟਰ

ਪਾਠਕ੍ਰਮ ਕੋਡ: PUN301

ਪਾਠਕ੍ਰਮ ਪਰਿਣਾਮ : ਵਿਦਿਆਰਥੀ ਵਿਭਿੰਨ ਕਾਵਿ ਰੂਪਾਂ ਦਾ ਵਿਸਤ੍ਰਿਤ ਅਧਿਐਨ ਕਰਨਗੇ। ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਸਾਹਿਤ ਰੂਪ ਪਦ ਅਤੇ ਗਦ ਬਾਰੇ ਸਮਝ ਵਿਕਸਿਤ ਹੋਵੇਗੀ। ਵਿਦਿਆਰਥੀ ਹਿੰਦੀ ਭਾਸ਼ਾ ਤੋਂ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੇ ਅਨੁਵਾਦ ਦੀ ਮੁੱਢਲੀ ਸਮਝ ਅਤੇ ਸਮਰੱਥਾ ਹਾਸਿਲ ਕਰਨਗੇ।

6. ਛੇਵਾਂ ਸਮੈਸਟਰ

ਪਾਠਕ੍ਰਮ ਕੋਡ: PUN302

ਪਾਠਕ੍ਰਮ ਪਰਿਣਾਮ : ਵਿਦਿਆਰਥੀ ਮਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ ਧਰਾਵਾਂ ਗੁਰਮਤਿ ਕਾਵਿ, ਸੂਫ਼ੀ ਕਾਵਿ, ਕਿੱਸਾ ਕਾਵਿ ਅਤੇ ਗੁਰਮਤਿ ਕਾਵਿ ਧਾਰਾ ਨਾਲ ਸੰਬੰਧਿਤ ਕਵੀਆਂ ਅਤੇ ਉਹਨਾਂ ਦੀਆਂ ਵਿਲੱਖਣ ਰਚਨਾਵਾਂ ਅਤੇ ਵਿਚਾਰਧਾਰਾ ਨੂੰ ਸਮਝਦੇ ਹੋਏ ਆਪਣੇ ਵਡਮੁੱਲੇ ਵਿਰਸੇ ਤੋਂ ਸੇਧ ਪ੍ਰਾਪਤ ਕਰਨਗੇ। ਵਿਦਿਆਰਥੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਇਤਿਹਾਸ ਅਤੇ ਸਾਹਿਤ ਰੂਪਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਪ੍ਰਾਪਤ ਕਰ ਸਾਹਿਤ ਰਚਨਾ ਲਈ ਆਪਣੀ ਯੋਗਤਾ ਨੂੰ ਵਿਕਸਿਤ ਕਰਨਗੇ। ਵਿਦਿਆਰਥੀ ਖੁਦ ਦੀਆਂ ਲਿਖਤਾਂ ਨੂੰ ਪ੍ਰਕਾਸ਼ਿਤ ਕਰਨ ਲਈ ਤਿਆਰ ਹੋਣਗੇ। ਇਹ ਸਿਲੇਬਸ ਪੰਜਾਬੀ ਵਿਸ਼ੇ ਦੀ ਸਮੁੱਚੀ ਸਮਝ ਪ੍ਰਦਾਨ ਕਰਨ ਲਈ ਤਿਆਰ ਕੀਤਾ ਗਿਆ ਹੈ।

