SWAMI VIVEKANAND GOVT. COLLEGE GHUMARWIN

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Website: www. https://gcghumarwin.org.in/e-mail: gcghumarwin-hp@nic.in

Phone No.01978255551

2.6.1 Program Outcomes, Program Specific Outcomes and course outcomes for all programs offered by the institution are stated and displayed on website and communicated to teachers and students.

BSc with BOTANY

1. To developed a positive attitude among the students towards scientific knowledge, systematic study and sustainable development.
2. Provide the knowledge of Plant Diversity, its importance, threats and conservation methods.
3. Knowledge of basics of life, significance of Evolution and Ecology.
4. Co-relate the understanding of different fields of Botany and Basic Sciences.
5. Awareness and development of basic experimental skills, field observation of Plants and biological techniques used for scientific research.

PROGRAM SPECIFIC OUTCOMES

1. Knowledge of Botany and its branches makes one capable to identify different plants belonging to different groups and its uses for the benefits of mankind.
2. In the U.G. level, a basic knowledge is provided to the students for better understanding of the Plants science specific fields such as Taxonomy, Plant Anatomy, Plant Physiology, Molecular Biology, Floriculture, Biofertilizers, Biotechnology and Mushroom cultivation.
3. In fields like Plant Pathology, we get knowledge of different disease causing organisms and their control measures. In Economic Botany and Ethnobotany the students are apprised about uses and importance of different plant species.

COURSE OUTCOMES

1. Knowledge of classification of archegoniate and angiosperms with examples in Plant Diversity course.
2. Plant anatomy and Embryology gives knowledge about differences in the structural organization of different plant groups as well their embryonic development.

3. Plant Genetics helps in understanding the basic concepts of heredity and variation in the organisms. It also provides information about causes of various genetic abnormalities.
4. Biochemistry provides the knowledge about various biomolecules present among the different organisms.

BSc with Chemistry

Chemistry (BSc)	*A student should be able to:*
Programme Outcomes	PO-1. Demonstrate, solve and understands different concepts of chemistry
	PO-2 Understand the some basic chemical changes around him in day to day life
	PO-3 Categories the various foods in sense of chemistry and is also able to understand food metabolism.
	PO-4. Understand problem of pollution and its impact in his/her own area as well as able to put his ideas related to some chemical changes in the environment due to pollution.
	PO-5 Guide the society in use of material chemicals introduced by the chemical industry.
	PO-6 Have basic Knowledge of simple medicines used to cure infection, fever, pain reliever.
	PO-7 Use chemistry software like Chem draw and 3d orientation of molecules.
	PO-8 Conduct simple experiment in telling about hardness of water
	PO-9 Understand the basic feature for LCD display
	PO-10. Operate and use of various instruments like conductivity meter , pH meter, Colorimeter for various chemicals analysis
Programme Specific Outcomes (SEC)	***A student;***
Basic analytical chemistry	PSO-1 Will have the knowledge of various analytical techniques like titration, chromatography, flame photometry, Atomic absorption spectroscopy. Phenolphthalein traps analysis of bribery.
Fuel & cosmetics chemistry	PSO-2 Will have the basic knowledge of coal gasification, LPG, LNG, CNG, Diesel fuel, petrol, bio diesel etc.
Fuel and cosmetics chemistry	PSO-3 Will have the knowledge of deodorants, cosmetics, perfumes and artificial flavors. Also aware about Food adulterants and food additives
Chem. Tech. & society and business skill in chemistry	PSO- 4 Will have the basic knowledge of nuclear reactors, Genetic engineering drug manufacturing and patents thereof.
Pharmaceutical & pesticide Chemistry	PSO-5 Will have the Knowledge of various chemicals used in pharmaceutical and pesticide industry.
Basic analytical chemistry	PSO-6 has the knowledge of water pollution, water purification and analysis of Calcium and magnesium complexometrically.
Course outcomes	***Course outcomes in terms of various disciplines.***
CHEM202TH	CO-1 Have the knowledge of Inorganic chemicals, there use in daily life.
CHEM102TH	CO-2 Have the knowledge of Various organic chemicals like phenols, Alcohols, Carbonyl compounds, amines and acids.
CHEM202TH	CO-3 Have the knowledge of spontaneous processes and laws of thermodynamics and there relation to nature.
CHEM201TH	CO-4 Knows about electrochemical processes and basic of conduction through solutions
CHEM201PR	CO-5 Have practical knowledge to analyses the organic

	compounds qualitatively through series of experiments.
CHEM202PR	CO-5 Have the practical knowledge of analysis by calorimetrically.
CHEM501	CO-5 Have practical and theoretical knowledge of various plastic in daily use and there lab preparations like Bakelite and urea formaldehyde resin
CHEM102PR	CO-6 Have the basic knowledge of surface tension viscosity and their practical determination
CHEM202PR	CO-7 Have practical knowledge of analyzing various inorganic salts qualitatively.
CHEM201TH	CO-8 Industrial separation of de-silverisation of lead and freezing mixtures
CHEM101TH	CO-9 Have the basic knowledge of stereochemistry and symmetry elements
CHEM201TH	Co-10 Have a generalized idea about X ray diffraction of solids

BSc with Computer Application

Programme Outcomes

This program could provide well trained professionals for the technology and allied industries to meet the well trained manpower requirements. The graduates will get hands on experience in various aspects of information technology viz. software updation, programme developers, software testing and web designer. The program will help the graduates to take up responsibilities in production, testing and designing in the information technologies and contribute for the growth of industry.

On completion of the B.Sc. Physical Science (Physics, Math, Computer) students are able to:

1. Serve as the Programmers or the Software Engineers with the sound knowledge of practical and theoretical concepts for developing software.
2. To Give Technical Support for the various systems.
3. Work as the Support Engineers and the Technical Writers
4. Work as Consultant and Management officers for system management.
5. Work as IT Sales and Marketing person.
6. Serve as the IT Officers in Banks and cooperative societies.
7. Work as DTP Operator in small-scale industries.
8. Serve as the Web Designers with latest web development technologies.

Programme Specific Outcomes

PSO1 Apply fundamental principles and methods of Computer Science to a wide range of applications.

PSO2. Design, correctly implement and document solutions to significant computational problems.

PSO3 Impart an understanding of the basics of our discipline.

PSO4. Prepare for continued professional development.

PSO5. Develop proficiency in the practice of computing.

Course Outcomes

After completion of these courses students should be able to:

COMP101TH (Problem Solving using computer)

CO1. Explain about the basic concepts of program development, algorithms and flowcharts.

CO2. Explain the various way to solve the problem using computer.

CO3. Discuss about the various types of computers on the basis of gen.

CO4. Explain the working of computer through block diagram.

COMP101PR (Python Lab)

CO1 Explanation of design and algorithmic solution for a given problem.

CO2. Construction of flowcharts for the computer programs.

CO3 Explain the program using Control Statements

CO4. Explain the program using Arrays and Functions.

COMP102TH (Office Automation Tools) & Lab

CO1. Explain about the concepts of MS Office and Libre Office

CO2. Explain the features and working options of MS Word, PPT and Excel with practical.

After completion of these courses students should be able to:

COMP201TH (Computer System Architecture)

CO1.Explain the logic gates Boolean algebra, K-Map

CO2. Explain about the basic of data representation and basic computer arithmetic.

CO3. Explain about the basic internal organization of computer like instruction set, register and its types, logical micro operation.

CO4. Explain about the working of various I/O devices and their interface.

COMP202TH (Database Management System)

CO1. Explain the concept and importance of database.

CO2. Explain about the basic of different data models.

CO3. Explain about the basic concept of relation created in data base, relational algebra

CO4. Explain about the working of various I/O devices and their interface.

COMP201PR (Database Management System Lab)

CO1. How to use Access as DBMS and basic introduction about SQL commands.

COMP203TH (PHP Programming)

After successful completion of this course, students will be able to:

CO1. Write PHP scripts to handle HTML forms.

CO2. Analyze and solve various database tasks using the PHP language.

CO3. Analyze and solve common Web application tasks by writing PHP programs.

CO4. Write regular expressions including operators.

BPHS501: PHP Programming

After successful completion of this course, students will be able to:

CO1. Write PHP scripts to handle HTML forms.

CO2. Analyze and solve various database tasks using the PHP language.

CO3. Analyze and solve common Web application tasks by writing PHP programs.

CO4. Write regular expressions including operators.

BPHS503: Operating Systems

CO1. Explain the main components of an OS & their functions.

CO 2. Explain the process management and scheduling.

CO3. Explain the concepts and implementation Memory management policies and virtual memory.

CO4. Explain the working of an OS as a resource manager, file system manager, process manager, memory manager and I/O manager and methods used to implement the different parts of OS.

BA/BSc with Mathematics

Programme Outcomes :-

1. Mathematics students will be able to understand basic concepts of mathematics and apply them in solving problems at UG/PG level and in research work or in competitive examinations with proficiency.
2. Students will have more systematic approach in their work culture and become economic in term of time, space and money.

3. On the completion of degree at UG and PG level the mathematics will have various type of job opportunities

Programme Specific Outcomes:-

Mathematics students will have the knowledge of fundamental results of differential calculus, differential equations, real analysis, Algebra, Linear Algebra, Complex analysis, Number theory, Integral calculus, vector calculus, Probability & Statistics, Numerical methods, Mechanics, Matrices, Linear Programming etc.

Course Outcomes of UG

Course Code	Title	Expected Outcomes (after completing the following courses students will be able to:)
MATH101TH	Differential Calculus	Solve problems based on limit, continuity, differentiability, asymptotes etc. and their applications
MATH102TH	Differential Equations	To know the order , degree, exactness of a differential equation, their formation and different methods for their solutions
MATH201TH	Real Analysis	To know sequence and series of real numbers and their convergence and divergence
MATH201TH	Algebra	To identify the various algebraic structures with their corresponding binary operations, generalize the groups on the basis of their orders, elements
MATH309TH	Integral Calculus	To find area and volume of curves.
MATH310TH	Vector Calculus	To find dot and cross products of vectors, vector differentiation, gradient, divergence, curl and vector integration.
MATH503TH	Linear Algebra	To know about the vector space and linear transformation, dual space, rank and null space.
MATH504TH	Probability & Statistics	Solve problems based on probability, sample space, moments and binomial.
MATH602TH	Complex analysis	Problem solved on complex numbers and analytic functions.
MATH605TH	Transportation and Game Theory	To know about the least cost method, Vogel's approximation method North west corner method and Stepping stone method .

MSc with Mathematics

Course Code	Title	Expected Outcomes (after completing the following courses students will be able to:)
M-101	Real Analysis-I	Convergent Sequences, Uniqueness Theorem for Power Series. Abel's and Taylor's Theorems, Limits of Functions (in Metric Spaces), Continuous Functions, Cauchy Criterion for Uniform Convergence, Weierstrass M-Test. Abel's , Definition and Existence of Riemann-Stieltjes Integral.
M-102	Advanced Algebra-	Groups, abelian Groups, Sylow Theorems, Rings, Homomorphisms, Ideals and Quotient Rings, Polynomial Ring

	I	and direct sums, homomorphisms and quotient modules.
M-103	Ordinary Differential Equations	Existence and Uniqueness Theory, Linear Differential Equations, Application to Sturm Liouville System, The separation theorem, Sturm's fundamental theorem, Sturm-Liouville Problems.
M-104	Operations Research-I	Convex functions, Linear Programming Problem (LPP), Game theory, Transportation Problem, Assignment Problem and Integer programming.
M-105	Fluid Dynamics	Type of fluids, Lagrangian and Eulerian method of describing fluid motion, Continuum hypothesis, Newton's law of viscosity, analysis of fluid motion, Thermal conductivity, Fundamental equations of motion of viscous fluid, Dimensional analysis, Buckingham π theorem.
M-201	Real Analysis-II	Linear Transformation, Metric Space. Differentiation of Vector-valued Functions, Differentiation of Monotone Functions, Functions of Bounded Variation, Differentiation of an Integral, The Lebesgue Integral of a Bounded Function Over a Set of Finite Measure, Riemann integral, Outer measure, Measurable sets and Lebesgue measure.
M-202	Advanced Algebra-II	Irreducible polynomials and Eisenstein criterion, Splitting fields, Normal extensions, Multiple roots, Finite fields, Roots of Irreducible Polynomials, Roots of unity, Galois Theory and its Applications.
M-203	Partial Differential Equations	Classification of Second Order Partial Differential Equations, Canonical Forms, Derivation of Laplace Equation, Derivation of Poisson Equation, Boundary Value Problems (BVPs), Diffusion Equation. Boundary Conditions, Separation of Variables Method. Solution of Diffusion Equation in Cylindrical Coordinates, Wave Equation, Solution of One-dimensional Wave Equation by Canonical Reduction ,Wave Equation – Method of Eigen function.
M-204	Classical Mechanics	Generalized Coordinates. Constraints. Work and potential energy. Generalized forces. The Principle of virtual work, Lagrange's Equations for a particle in a plane, Hamilton's Principle. Stationary Values of a function. Constrained stationary values, Modified Hamilton's principle. Principle of least action, The Hamiton-Jacobi equation, Lagrange and Poission Brackets.
M-205	Solid Mechanics	Analysis of Strain, Analysis of Stress , Equations of Elasticity, Unique solution of Boundary value problem, Derivation of Navier's equations and Beltrami-Michal compatibility equations.
M-301	Complex Analysis-I	Geometric representation of complex numbers, Limits, continuity, Analytic functions, Polynomials and rational functions, Conformal mapping, Cauchy's theorem, Sequences, Series, Uniform convergence, Power series and Abel's limit theorem, Weierstrass's theorem, the Taylor's series and the Laurent series.
M-302	Topology	Partial ordered sets and lattices, Open sets, closed sets, convergence, completeness, Baire's category theorem, continuity, Compact spaces, products of spaces, Connected spaces, Weierstrass approximation theorem.
M-303	Analytic Number Theory	Divisibility Theory in the Integers, Fundamental Theorem of Arithmetic, Basic Properties of Congruence, Fermat's Factorization Method, The Little Theorem and Wilson's Theorem.
M-304	Operations Research-II	Queueing Theory, Dynamic Programming, Non-Linear Programming Problems (NLPP), Quadratic programming;

		Wolfe's Modified Simplex method, Beale's Method, Separable Programming.
M-305	Mathematical Statistics	Distributions of Random Variables, Binomial, trinomial, and Multinomial Distributions, the Poisson Distribution, The Gamma and Chi-square Distributions, Sampling theory, Extensions of the change-of-variable Technique, Distributions of order statistics, the moment generating function Technique.
M-401	Complex Analysis-II	Harmonic functions, Schwarz's theorem, Partial fractions, infinite products, canonical products, the Gamma functions, Stirling's formula. Entire functions; Jensen's formula, Hadmard's theorem, periodic functions, Weierstrass theory, germs and sheaves, Sections and Riemann surfaces, Analytic continuations along arcs, Homotopic curves Branch points. Algebraic functions
M-402	Functional Analysis	Banach Spaces, Hahn-Banach Theorem, the Open Mapping Theorem, the Closed Graph Theorem, orthogonal complements, orthonormal sets, self-adjoint normal, unitary operators, projections, Spectral, Theory in Finite Dimensional, Normed Spaces
M-403	Advanced Discrete Mathematics	Boolean Algebras, Pigeonhole principle, Permutations and Combinations, Generating permutations, Unimodality of binomial coefficients, The multinomial theorem, Newton's binomial theorem, **Inclusion-**Exclusion Principle, Recurrence Relations and Generating Functions, Digraphs and Networks, Eulerian trails, Hamilton chains and cycles, Bipartite multigraphs and Trees,
M-404	Differential Geometry	Principal normal, Curvature, Binormal, Torsion, Serret Frenet formulae, Surfaces, Tangent plane, Normal Meunier's theorem, Principal directions and curvatures, first and second curvatures, Euler's theorem. Surface of revolution, Gauss's formulae for $\vec{r}_{11}$, $\vec{r}_{12}$, $\vec{r}_{22}$, Gauss characteristic equation, Mainardi – Codazzi relations, Equations of geodesics, Surface of revolution, Torsion of Geodesic and Bonnet's theorem.
M-405	Magneto Fluid Dynamics	Fundamental Equations**,** Maxwell's electromagnetic field equations, Magnetic induction equation, magnetic Reynold's number, Magnetohydrostatic, Force Free magnetic fluids, Pressure balanced magnetohydrostatic configurations**,** Reflection and refraction of Alfven waves, Dissipative effects**,** Linear Pinch, Method of small Oscillations, Energy principle and Virial Theorem. Homogeneity and Isotropy

BSc with Physics

Programme Outcomes

Department of Physics	**After successful completion of three year degree program in physics a student should be able to;**
Programme Outcomes	PO-1. Demonstrate, solve and an understanding of major concepts in all disciplines of physics. PO-2. Solve the problem and also think methodically, independently and draw a logical conclusion.

	PO-3. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of Physics experiments. PO-4. Create an awareness of the impact of Physics on the society, and development outside the scientific community. PO-5. PO-6. To inculcate the scientific temperament in the students and outside the scientific community. PO-7. Use modern techniques, decent equipments and Phonics software's
Programme Specific Outcomes	PSO-1. Gain the knowledge of Physics through theory and practical's. PSO-2. Understand good laboratory practices and safety. PSO-3. Develop research oriented skills. PSO-4. Make aware and handle the sophisticated instruments/equipments.
Course Outcomes	
Course Outcomes	After completion of these courses students should be able to;
PHYS101TH Mechanics	**CO-1.** Draw the diagram of the problem of mechanics. **CO-2.** Understand the various forces acting in the problem. **CO-3.** Solve the problem by using various principles of physics. **CO-4.** Solve the problems of coriolis forces and pseudo forces acting in a system. **CO-5.** Understand the concepts of Relativity and to solve various problems of Relativity.
PHYS101PR Mechanics (Lab)	**CO-1.** Draw the diagram of the problem of mechanics. **CO-2.** Understand the working of sextant and its use. **CO-3.** Solve the problems of pendulum by using principles of physics. **CO-4.** Find the value of g by using pendulums. **CO-5.** Understand the working of flywheel and its use.
PHYS102TH Electricity, Magnetism and EMT	**CO-1.** Draw the diagram of the problem of Electrostatics and Magneto statics. **CO-2.** Understand the concept of electric field, Magnetic field and electric potential. **CO-3.** Solve the problem of electrostatics by using various principles of physics. **CO-4.** Solve the problems of monopole, dipole and multi poles. **CO-5.** Understand the concepts of EMT and to solve various problems of EMT. **CO-6.** Understand the Maxwell equations and concept of EM waves.
PHYS102PR Electricity, Magnetism and EMT (Lab)	**CO-1.** Draw the diagram of the problem of Electrostatics and Magneto statics. **CO-2.** Understand the working of series and parallel LCR circuit. **CO-3.** Understand the working of solenoids and to study the magnetic field produced by it.
PHYS201TH Statistical and Thermal Physics	CO-1.To understand the basic idea of probability. CO-2. To understand how to distribute n particles in different number of compartments. CO-3. To study the state of maximum probability and its deviation from most probable state CO-4. To understand the concept of phase space and elementary cells. CO-5. To distinguish between classical and quantum statistics.

	CO-6. Use of Quantum statistics for Bosons and Fermions. CO-7. Using the concept of entropy to understand heat death of the universe CO-8. Use the concept of thermodynamic probability to derive entropy. CO-9. To undestand the Maxwell's therodynamic relations and their applications.
PHYS201PR Statistical and Thermal Physics (Lab)	CO-1. Gain the knowledge of Physics through theory and practicals. CO-2. Understand good laboratory practices and safety. CO-3. Using the kwoledge of experiments, able to apply in their life.
PHYS202TH Waves and Optics	CO-1. To understand the concept of simple harmonic motion. CO-2. Able to understand the terms involved in the solution of undamped oscillator, damped oscillator and forced oscillator and their plots. CO-3. To understand the concept of quality factor. CO-4. To understand the basics of wave theory of light. CO-5. To understand the concept of interference of light and different methods to obtained the interference. CO-6. Using the concept of diffraction and polarisation, study the methods for obtaining and their applications in daily life.
PHYS202PR Waves and Optics (Lab)	CO-1. Gain the knowledge of Physics through theory and practicals. CO-2. Understand good laboratory practices and safety. CO-3. Using the kwoledge of experiments, able to apply in their life.
PHYS204SE Computational Physics	CO-1. Write algorithm and flow chart for fortran programming language. CO-2. To use of iterative, decision making and the jump statement. CO-3. Understand the concept of arrays and pointers. CO-4. Able to use the concept graphics in fortran language. CO-5. Able to write documents in letax. CO-6. Able to plot the graph in gnuplot and xmgrace.
PHYS205SE Electrical Circuits and Network Skills	CO-1. Gain the knowledge of Physics through theory and practicals. CO-2. Understand good laboratory practices and safety. CO-3. Develop research oriented skills. CO-4. Make aware and handle the sophisticated instruments/equipments. Co-5. Able to make the knowledge based projects.
PHYS503TH Solid State Physics	CO-1.To understand the basics of crystal structure that is how it is made up of , its smallest unit and how closely they packed. CO-2. Able to understand different methods of diffraction and know the principles of structures determination by diffraction. CO-3. Able to understand the solid materials and their vibrations and interactions in the lattice. CO-4. To understand the concept of phonon and specific heat at low and high temperature. CO-5. Able to distinguish conductor, semiconductors and insulator material and the periodicity in the latttice. CO-6. Know the fundamental principles of semiconductors and be able to estimate the charge carrier mobility and density CO-7. Able to understand the periodicity in Kroning Penny Model. CO-8. Able to understand the the concept of superconductivity and their applications.
PHYS503PR	CO-1. Gain the knowledge of Physics through theory and practicals. CO-2. Understand good laboratory practices and safety. CO-3. Using the knowledge of experiments, able to apply in their life.

PHYS505SE Radiation & Safety	CO-1.To understand the basic concept of atomic structure and properties of the nucleus. CO-2. To study of the interaction of nuclear radiations with matter CO-3. Able to understand the working of various radiation detectors CO-4. To know the radiation safety management CO-5. To enhance the skill based techniques. CO-6. To Make aware and handle the sophisticated instruments/equipments. Co-7. Able to make the knowledge based projects.
PHYS602TH Quantum Mechanics	CO-1. Study the basic principles of quantum mechanics. CO-2. Explain the operator formulation of quantum mechanics. CO-3. Learn the concept of wave function. CO-4 Appreciate the Schrodinger equation and their applications. CO-5. Understand the role of uncertainty in quantum physics. CO-6. Explain the spectrum of H-atom. CO-7. Understand Zeeman effect. CO-8. Able to see the effect and LS and JJ coupling on spectrum of H-atom.
PHYS602PR	CO-1. Able to solve the s-wave Schrodinger equation for the ground state and the first excited state of the hydrogen atom CO-2. Able to perform Electron spin resonance experiment and determine g-factor
PHYS607SE	CO-1. Describe sources and uses of energy. CO-2. Define renewable and non-renewable energy. CO-3. Provide examples of common types of renewable and non-renewable resources. CO-3. Understand and explain general ways to save energy at a personal, community and global level. CO-4. Understand and explain, in general terms, how passive solar heating, hydropower and wind power work. CO-5. Describe some general characteristics of solar power, hydropower and wind power. CO-6. Understand the benefits and disadvantages to using renewable resources.

M.Sc. PHYSICS

PROGRAMME OUTCOMES

Department of Physics	**After successful completion of three year degree program in physics a student should be able to;**
Programme Outcomes	PO-1. Apply the skill and knowledge in the design and development of electronic circuits to fulfill the needs of small scale electronic industry. PO-2. Demonstrate, solve and an understanding of major concepts in all disciplines of physics.

	PO-3. Solve the problem and also think methodically, independently and draw a logical conclusion. PO-4. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of Physics experiments. PO-5. Create an awareness of the impact of Physics on the society, and development outside the scientific community. PO-6. To inculcate the scientific temperament in the students and outside the scientific community. PO-7. Use modern techniques, decent equipments and Phonics software's PO-8. Become professionally trained in the area of electronics, material science, lasers and nonlinear circuits.
Programme Specific Outcomes	PSO-1. Introduce advanced techniques and ideas required in developing area of Physics. PSO-2. Enhance students ability to develop mathematical models for physical systems. PSO-3 Gain the knowledge of Physics through theory and practicals. PSO-4. Understand and apply principles of physics for understanding the scientific phenomenon in classical and quantum physics. PSO-5. Understand and apply statistical methods for describing the quantum and classical a particles phenomenon in various physical systems. PSO-6. Understand good laboratory practices and safety. PSO-7. Develop research oriented skills. PSO-8. Make aware and handle the sophisticated instruments/equipments.
Course Outcomes	**After completion of these courses students should be able to;**
M. Sc Physics 1st Semester	
PHYMS-101 Mathematical Physics	CO-1. Determine the residues of a complex function and use the residue theorem to compute certain types of integrals. CO-2. Have a good grasp of the basic elements of complex anaysis, including the important integral theorems. CO-3. Develop ability to solve ordinary second order differential equations important in the physical sciences; solve physically relevant partial differential equations using standard methods like separation of variables, series expansion (Fourier-type series) and integral transforms. CO-4. Learn how to expand a function in a Fourier series, and under what conditions such an expansion is valid. To create awareness regarding the connection between this and integral transforms (Fourier and Laplace) and be able to use the latter to solve mathematical problems relevant to the physical sciences. CO-5. Understand the concept of vector spaces and its relation to matrices. Students are able to learn the connection of matrices to that of physics e.g. qauntum mechanics. CO-6. Understand the concept of Green functions and their relevance in various problems of quantum mechanics and material science. CO-7. Learn how to use the concepts of group theory in crystallography and high energy physics
PHYMS-102 Classical Mechanics	CO-1. Gain the knowledge of motion in central force field CO-2. Classify elastic and inelastic scattering CO-3. Know the difference between Laboratory and centre of mass system CO-4. Understands Lagrangian and Hamiltonian formulation CO-5. Solve the problems using Lagrangian and Hamiltonian formulation CO-6. Get knowledge of canonical trans formation and Poission's

	bracket. CO-7. Undestand the kinematics and dynamics of rigid body in detail and ideas regarding Euler's equations of motion
PHYMS-103 Electronics-I	CO-1. Understant the basic theorems of electronics like Norton's theorem ,Thevenin's theorem etc. CO-2. Understand the electronic circuits and analises of the circuits by using these theorems. CO-4. To understand the concepts of Digital electronics and working of A/D and D/A converters. CO-5. Understand the working of microprocessors . CO-6. Understand the basic differential amplifier and its DC &AC analysis. CO-7. Able to understand OP-AMP. CO-8. Able to understand the use of OP-AMP as integtater differentiator etc.
PHYMS-104 Computational Methods in Physics	CO-1. To account for how numerical methods can be developed CO-2. To apply the practical experiences on physical problems CO-3. To account for various scientific problems and how different methods can be used to solve these problems. CO-4.To account for the role of computer models and simulations play to study of physical systems.
PHYMS-105 Laboratory	CO-1. Acquire hands on experience of handling and building electronics circuits. CO-2. Be familiar with the various components such as resistors, capacitor, inductor, IC chips and how to use these components in circuits. CO-3. Be able to understand the construction, working principles and V-I characteristics of various devices such as PN junction diodes, UJT, TRIAC etc. CO-4. Handle oscilloscope for visualisation of various input and output signals. CO-5. Apply basics knowledge of computational Physics in solving various physical problems.
M. Sc Physics 2nd Semester	
PHYMS-201 Quantum Mechanics-1	CO-1. To familiar with the main aspects of the historical development of quantum mechanics and be able to discuss and interpret experiments that reveal the wave properties of matter, as well as how this motivates replacing classical mechanics with a quantum mechanics. CO-2. To understand the central concepts and principles in quantum mechanics, such as the Schrödinger equation, the wave function and its statistical interpretation, the uncertainty principle, stationary and non-stationary states, time evolution of solutions, as well as the relation between quantum mechanics and linear algebra. This includes an understanding of elementary concepts in statistics, such as expectation values and variance. CO-3. To develop the ability to solve the Schrödinger equation on your own for simple systems in one to three dimensions analytically. Students are able to use these solutions to calculate their time evolution, associated probabilities, expectation values, and uncertainties, as well as give concise physical interpretations and reasoning underlying the mathematical results. CO-4. To master the concepts of angular momentum and spin, as well as the rules for quantisation and addition of these. To account for the phenomena involved in the Zeeman effect and spin-orbit coupling, what is meant by identical particles and quantum statistics, and are able to perform calculations on systems of identical particles, for example to determine the

	symmetry properties of the wave function and total spin.
PHYMS-202 Condensed Matter Physics	CO-1.To understand the basics of crystal structure that is how it is made up of , its smallest unit and how closely they packed. CO-2. Able to understand different methods of diffraction and know the principles of structures determination by diffraction. CO-3. Able to understand the solid materials and their vibrations and interactions in the lattice. CO-4. To understand the concept of phonon and specific heat at low and high temperature. CO-5. Able to distinguish conductor, semiconductors and insulator material and the periodicity in the latttice. CO-6. Know the fundamental principles of semiconductors and be able to estimate the charge carrier mobility and density CO-7. Able to understand the periodicity in Kroning Penny Model. CO-8. Able to understand the the concept of superconductivity and their applications.
PHYMS-203 Statistical Physics	CO-1. Identify and describe the statistical nature of concepts and laws in thermodynamics, in particular: entropy, temperature, chemical potential, Free energies, partition functions. CO-2. Use the statistical physics methods, such as Boltzmann distribution, Gibbs distribution, Fermi-Dirac and Bose-Einstein distributions to solve problems in some physical systems. CO-3. Apply the concepts and principles of black-body radiation to analyze radiation phenomena in thermodynamic systems. CO-4. Make connections between applications of general statistical theory in various branches of physics.
PHYMS-204 Electrodynamics	CO-1. Apply Maxwell's equations to a variety of problems involving time dependent phenomena. CO-2. Solve problems involving the propagation and scattering of electromagnetic waves in a variety of media. CO-3. Demonstrate an understanding of the characteristics of electromagnetic radiation. CO-4. Have a good understanding of Special Relativity, especially as applied to electrodynamics.
PHYMS-205 Laboratory	CO-1. Capable of using components of digital electronics for various applications. ' CO-2. Able to design and perform scientific experiments as well as accurately record and analyze the results of experiments. CO-3. Use various numerical methods in describing/solving physics problems. CO-4. Learn use of graphical methods in data analysis and solving physics problems. CO-5. Measure conductivity, resistivity solids.
M. Sc Physics 3rd Semester	
PHYMS-301 Quantum Mechanics-II	CO-1. To develop the ability to understand concepts and to perform calculations of scattering of particles. CO-2.To explain the relativistic quantum mechanical equations, namely, Klein-Gordon equation and Dirac equation CO-3. To describe second quantization and related concepts. CO-4. To explain the formalism of relativistic quantum field theory.
PHYMS-302 Material Science	CO-1.To understand the basics of crystal structure that is how it is made up of , its smallest unit and how closely they packed.

	CO-2. Understand the concept of magnetism in materials CO-3. Able to understand the concepts of NMR,ESR etc. CO-4. To understand the concept of phase diagrams,and phase transitions CO-5. Understand the working of tunneling microscope ,scaning tunneling microscope etc. CO-6. To understand the concept of spin -lattice and lattice -lattice interactions. CO-7. Understand the Diamagnetism, Paramagnetism ferromagnetism and antiferromagnetism quantum mechanically.
PHYMS-303 Nuclear Physics	CO-1.Understand the structure of nuclei, and simple nuclear models such as the liquid drop model and the shell model. CO-2. Learn techniques in scattering theory which are relevant in nuclear physics – partial waves, Born approximation and compound nucleus formation; CO-3. Understand the main types of nuclear decays, and with models for calculating these and the associated selection rules; CO-4. Learn the key features of nuclear fission and fusion and their applications;
PHYMS-304 High Energy Physics	CO-1. Understand the concept of Mandelstam variables and their use in scattering problems. CO-2 Recognise and name the six flavours of lepton and the six flavours of quark. CO-3. Understand that all leptons and quarks have corresponding antiparticles CO-4. Appreciate that quarks and antiquarks combine to form baryos, antibaryons and mesons. CO-5. Write balanced strong interactions understanding the role of gluons. CO-6. Write balanced weak interactions, understanding the role of W and Z bosons
PHYMS-305 Laboratory	CO-1. Measure magnetic properties and magnetic behavior of magnetic materials. CO-2. Describe the lattice dynamics of simple lattice structures in terms of dispersion relations. CO-3. Design and carry out scientific experiments as well as accurately record and analyze the results of experiments. CO-4. Solve physical problem, enabling development of critical thinking and analytical reasoning. CO-5. Explore application of computational physics in frontier areas of pure and applied research in physics and allied fields.
M. Sc Physics 4th Semester	
PHYMS-401 Electronics-II	CO-1. To understant the basic theorems of electronics like Norton's theorem ,Thevenin's theorem etc. CO-2. Understand the electronic circuits and analises of the circuits by using these theorems. CO-4. To understand the concepts of Digital electronics and working of A/D and D/A converters. CO-5. Understand the working of Electronic filters . CO-6. Understand the basic differential amplifier and its DC &AC analysis. CO-7. Able to understand OP-AMP. CO-8. Able to understand the use of OP-AMP as integtater differentiator etc.

PHYMS-402 (b) Nuclear & Particle Astrophysics	CO-1. A historical perspective of the development of Astronomy CO-2. Conceptual understanding of basic principles involved
PHYMS-403 (a) Nano Physics	CO-1. Demonstrate the understanding of length scales concepts, nanostructures and nanotechnology. CO-2. Identify the principles of processing, manufacturing and characterization of nanomaterials and nanostructures. CO-3. Apply the electronic microscopy, scanning probe microscopy and nanoindentation techniques to characterize the nanomaterials and nanostructures. CO-4. Evaluate and analyze the mechanical properties of bulk nanostructured metals and alloys, nanocomposites and carbon nanotubes.
PHYMS-403 (b) Mesoscopic Physics	CO-1. Compare new the new concepts of nano-electronics with the present-day technique, and understand their fundamental limits. CO-2. Use simple models to calculate the basic energy and length scales for mesoscopic phenomena which are physically relevant. CO-3. Identify various basic device concepts in a variety of physics systems.
PHYMS-404 (c) Opto – Electronics	CO-1. Know various physical processes of optoelectronic transitions, and be able to employ basic relations between material optical properties and devices in optoelectronics. CO-2. Define the principles of functioning of most important optoelectronic devices. CO-3. Explain and implement the equations, which determine main characteristics of optoelectronic devices and optical fibers. CO-4. Analyze operational modes of photonic devices, in order to select suitable type for given applications. CO-5. Understand the interconnections between device design, mode of operation and characteristics, and the overall efficiency of optoelectronic devices and signal transmission.
PHYMS-405 Project Work	CO-1. Introduce student to the basics and methodology of research in physics, which is done via theory, computation and experiments either all together or separately by one of these approaches. CO-2. It is intended to give research exposure to students at M.Sc. level itself

BSc with Zoology

Programme Outcomes

1. Develop a positive attitude of the students towards scientific knowledge and sustainable development

2. Knowledge of animal diversity, its importance, its threats and conservation methods.

3. Knowledge of basics of existence of life, significance of evolution and ecology.

4. Relate the understanding of different fields of Zoology and basic sciences.

5. Awareness and develop basic experimental skills, observation in the field and biological techniques used for scientific research.

Program Specific Outcomes for Zoology

Knowledge of zoology and its branches makes one capable to identify different animals belonging to different groups and use it for benefit of mankind. In the graduate level, a basic foundation is constituted in the students for better understanding of the zoology specific fields such as genetics, molecular biology, animal physiology, entomology, fish and fisheries. In fields like parasitology, medical entomology and applied zoology, we get knowledge of different disease causing organisms and their control measures.

Course Outcomes

Courses		**Outcomes** After completing these course student will have the knowledge of;
B.Sc. 1st year	Animal Diversity ZOOL 101	CO.1 classification of non chordates and chordates with examples
B.Sc. 1st year	Comparative Anatomy and Developmental Biology of Vertebrates ZOOL 102	CO.2 differences in different physiological systems and embryological development in vertebrates
B.Sc. 2nd year	Physiology and Biochemistry ZOOL 201	CO.3 different human physiological system and metabolic processes; structure of biomolecules and molecular mechanisms of various metabolic processes such as respiration.
B.Sc. 2nd year	Genetics and Evolutionary Biology ZOOL 202	CO.4 understanding of basic concepts of heredity and variation in the organisms, also provides information about causes of various genetic abnormalities; different evolutionary events
B.Sc. 2nd year	Medical Diagnostics ZOOL 203	CO.5 various bio medical diagnostic techniques such as CT scan, MRI and X-rays
B.Sc. 2nd year	Apiculture ZOOL 204	CO.6 culturing of the honey bees, their social life, techniques involved in apiary and different bee diseases
B.Sc. 5th SEMESTER	Applied Zoology ZOOL 301	CO.7 usefulness of organisms and their benefits to mankind as well as disease causing organisms which spread various diseases like malaria, dengue and sleeping sickness etc
B.Sc. 5th SEMESTER	Sericulture ZOOL 303	CO.8 culturing and rearing of silk worm for the production of silk
B.Sc. 6th SEMESTER	Reproductive Biology ZOOL 302	CO.9 human reproductive systems and related mechanisms and various birth control methods
B.Sc. 6th SEMESTER	Aquarium Fish Keeping ZOOL 304	CO.10 aquatic life of fishes and their culturing, production and transportation and different fish diseases

BA with Economics

Program outcomes

After completing the graduation with economics the students will be able to:-

Po- 1 : understand the economics behaviour of the consumer and producer of the society.

Po-2 : understand the interdependence between the economics and other optional subject.

Po-3 : serve the society by being good and responsible citizen.

Po-4 : serve the society by holding the charge as an officer in the govt. services.

Po-5 : Get the employment opportunities in the different fields skilled semi-skilled.

Po-6 : Adopt and apply socio- economic value from the different courses.

Po-7 : Apply the theoretical knowledge into behavioural terms in their lives.

Po-8 : Acquire and apply the skills from the skill enforcement courses.

Program specific outcomes

After completing the graduation with economics the students have specific knowledge/skill and learning, viz.

PSO-1: To find out the optimum or best situation for the consumer and producer under different constrains.

PSO-2: The student will be able to know about the different economic activities in the Indian Economy.

PSO-3: The students can be differentiating between economic and non- economic activities.

PSO-4: The students will be able to understand the difference between the Micro and Macro economies.

PSO-5: The student will understand the process of govt. Budget and different terminologies thereof.

PSO-6: The student will able to carry out the economic survey of their village and localities.

PSO-7: The student will able to go for higher education in the field economics.

PSO-8: The advanced learners will be able to complete the graduation level competitive test of agricultural officer, Indian economic services (IES).

PSO-9: The student will able to different economic problems, their causes and probable solution.

Course outcomes

1 Principles of microeconomics-1(ECONA101)

2 Principles of microeconomics-2(ECONA102)

3 Principles of macroeconomics-1(ECONA201)

4 Principles of macroeconomics-2(ECONA202)

5 Indian Economy (ECONA301)

6 Economic History of India (ECONA302)

7 Economy of Himachal Pradesh (ECONA303)

8 Development Economics (ECONA305)

9 Economics of Rural Development (ECONA204)

10 Demography (ECONA206)

11 Public finance (ECONA310)

12 Money and Banking (ECONA311)

Co-1 To know the problems of scarcity, different theories of consumer and producer equilibrium.

Co-2 The equilibrium of firm under perfect competition, Monopoly and imperfect competition and also different theory of factor prices.

Co-3 To know and calculate national income and different related concepts. The employment determination by classical and Keynesian money and banking.

Co-4 To drive accelerator and multipliers and understand their working, inflation causes and measure to control, about IS-LM curves and balance of payment (BOP).

Co-5 To know about the different consumer concept and consumer activities of Indian Economy.

Co-6 The student will we able to understand the chronological evolution and development of different concept, and theories in economies.

Co-7 The student can understand section wise economies of Himachal Pradesh viz agriculture, industry, service and economic infrastructure of HP.

Co-8 The student will we able to distinguish among different concept of development, factors responsible for development or under development of an economy.

Co-9 The student can understand different factor of rural area, the specific economic problem and solution for these problems.

Co-10 The student can know and understand different concept of demography, theories of demography migration and role of population in economic growth.

Co-11 The student will we able to know about theories of public finance govt. budget and its components.

Co-12 The student will we able to know and understand money its function, banking system, central bank, marketing policy and financial market.

BA with English

Programme outcome

After completing BA with English, students have various avenues to pursue their career goals. Some of them can be enumerated as under:

1. To go for higher education.
2. To pursue a career in Journalism.
3. To go for B.Ed. to become a school teacher.
4. To prepare for all competitive examinations.
5. To opt for a career in Electronic and Print media.

6. To work for NGOs as a writer.
7. To act as an anchor or host in various events.

Programme Specific Outcomes:

Soft Skills

The students are not only motivated to learn facts and to score good marks in exams but also to sharpen their soft skills so that they can manage their emotional intelligence in various situations for better observance and reaction. Soft skills also make them perform well in interviews, group discussions and public speaking. They develop the sense and need of self awareness and self regulation that becomes crucial in adaptability and problem solving.

Course Specific Outcomes:

Creative Writing, Book and Media Reviews

This course helps students develop their creative faculty of mind and make them identify, analyze, interpret and describe values and themes that appear in literary and cultural texts. They become dexterous in putting ideas in socio-political contexts and to frame their arguments and narratives effectively. These skills open various career routes for students such as writing books/magazines/journal articles/film reviews etc., becoming part of NGOs and supporting them with writing skills, playing the role of an anchor in various programmes, writing narratives and dialogues for films/theatre/serials etc.

Outcomes of various courses/ Programmes:

1) ENG CE 101 English-1 Core English (Compulsory) for B.A. and B.Com. And
2) ENG CE 201 English-11 Core English (Compulsory) for B.A. and B.Com.

B.A. English (Compulsory) courses curriculum have been designed to impart basic knowledge about English language and Literature. These courses are inclusive of genres such as Poetry, Prose, and story. These courses are elementary and practical introduction to the analytical and terminological distinctions that are relevant to the study of the structure of English words and sentences. Topics include: Word structure and word-formation, lexical and phrasal categories, grammatical functions and semantic roles, coordination and subordination, clause types, tense and aspect, mood, information structure. All classes will involve practical analysis of linguistic material.

3) ENG DSC102/ENG HONS
DSC-1A English Literature-1 (Essays, Stories and Poems)

4) ENG DSC103/ENG HONS GE 102

DSC-1B English Literature-2 (Poems, Short-Stories and Essays)

5) ENG DSC 202/ENG HONS GE 203
DSC- 1C British Literature (Play and Novel)

6) ENG DSC 203/ENG HONS GE 204
DSC-1D Literary Cross Currents

Courses from 03 to 06 designed to give a student the following insights:

A. identifies and articulates the main themes in the text by discerning ideas and issues that recur throughout the text

• analyzing how plot, character, setting and atmosphere, and style synthesize to create meaning
• making connections between literary texts and their knowledge of self, the world, other texts and other readers

• exploring what texts reveal about their writers' beliefs and perspectives

B. recognizes the significance of the contexts (e.g., cultural, historical, social, economic, political) in which texts are written, in shaping the texts' main concerns

C. consider the ways in which texts explore socio -cultural practices, beliefs and values in relation to the human condition

7) ENG AEEC/SEC 204
AEEC/SEC - 1: Creative Writing, Book and Media Reviews

This course designed to give students the knowledge of literary terms and students build on connections between their literary text and other texts (e.g., poems, short stories, novels, and films)

8) ENG AEEC/SEC 205
AEEC/SEC-2
Translation Studies and Principles of Translation

By the end the student will read the following:

Definition of Translation—translating from source language to target language

Purpose of Translation—Translation as a literary, cultural, and knowledge bridge, self-other interaction &

Approaches to Translation:

1. Domestication: Readability in the target language
2. Foreignisation: Faithfulness to the source language

9) ENG AEEC/SEC 301

AEEC/SEC-3 Technical Writing

By the end the student will be able to:

Prepare Manual, Memorandum, Agenda, Minutes of a Meeting, And PowerPoint Presentation & also read the followings:

Basic Research Methodology

Project Report

a) Format
Margins
Headings
Indentation
Pagination
Type Face and Fonts
Common Abbreviations &

Data Analysis

(i) Qualitative Interpretation

(ii) Quantitative Interpretation

10) ENG AEEC/SEC 302

AEEC/SEC-4 Business Communication

Here students learn the Basic Forms of Communication like:

Communication Models and Processes: Linear, Transitional and Interactive

Effective Communication

Principles of Effective Communication

Formal and Informal Communication

Barriers and Gateways to Communication

Practices in Business Communication

- Group Discussion
- Mock Interview
- Seminars
- Individual and Group Presentations

11) ENG DSE 303 DSE –1A Soft Skills

This course highlights the importance of soft skills

Listening Skills:

Comprehending Retaining, Responding, Barriers to Listening, over, coming Barriers to Listening

Teamwork: Working Cooperatively

• Contributing to groups with ideas, suggestions, and effort

• Sense of Responsibility

• Healthy respect for different opinions, customs, and Individual preferences

Emotional Intelligence:

Characteristics of Emotional Intelligence:

• Self-Awareness

• Self-Regulation

• Motivation

• Empathy

• Social and Cultural Sensitivity

12) ENG DSE 304

DSE-1B Academic Writing and Composition

The course gives the following details:

Descriptive

Analytical

Persuasive

Critical

13) ENG GE 306 GE-2 Contemporary India: Women and Empowerment

Key Concepts of the course are:

Sex and Gender, Socialization,

Discrimination - Gendered and Sexual, Stereotyping,

Feminism, Patriarchy, Femininities and Masculinities, Transgender.

BA with Geography

PROGRAMME SPECIFIC OUTCOME

On the completion of B.A. with geography students are able to:

1. Serve as a geographer
2. Work as a teacher in School College.
3. Serve as a conservator in the department of Forest and Soil
4. Work in Disaster Management authority of District, state and National level.
5. Serve as cartographer in map making division of the Government.

6. Work in NGO`s in the field of Urban Planning, Rural development and environmental management.
7. Prepare for competitive exams like IAS, HAS and many more.
8. Work in the population research centres of different level.
9. Work in the field of forest conservation.

COURSE OUTCOMES

1 PHYSICAL GEOGRAPHY (GEOGP101CC)

On the completion of the course the students are able to:

1. Understand the meaning, nature, scope and fundamentals of Physical Geography.
2. Understand the Solar system and its functioning.
3. To examine the origin of the earth scientifically.
4. Understand and recognize the rock types and their formation.
5. Evaluate and understand the concept of cycle of the erosion.
6. Understand, explain and examine the process of weathering and internal structure of the earth.
7. Understand, explain and examine the structure and composition of atmosphere and various phenomenon occur in it.
8. Understand the mechanism of hydrological cycle.
9. Understand the phenomenon of Tides and oceanic currents.

2. GENERAL CARTOGRAPHY (GEOGP102CC)

On the completion of the course the students are able to:

1. Understand the historical background, meaning, nature, and scope of Cartography.
2. Understand the map, its necessity, classifications and significance.
3. Understand the different units of measurement through making of scales practically.
4. Understand the map projection, their classification and preparation of maps with the help of these projections.
5. Construct map projection of cylindrical, conical and zenithal types.
6. Understand the statistical representation of the Data by using line graphs and bar diagrams.
7. Understand the art of construction of climograph, hythergraph and different types of maps like Dot Map Isopleth Map and Choropleth Map.

3. HUMAN GEOGRAPHY (GEOGP201CC)

On the completion of the course the students are able to:

1. Understand the nature, scope and major subfields of Human geography.
2. Understand and the origin and distribution of races of mankind in the world.
3. Understand the major cultural realms of the world.
4. Understand and examine the causes of unequal distribution and density of the population.

5. Understand the demographic transition theory.
6. Understand, examine and evaluate the types and patters of rural and urban settlements.
7. Understand the process of Urbanization in the world.

4 .ENVIRONMENTAL GEOGRAPHY (GEOGP202CC)

On the completion of the course the students are able to:

1. Understand the meaning, nature, scope and fundamentals of Environmental geography.
2. Understand the structure and functions of ecosystem.
3. Understand, examine and evaluate the man and environment relationship along with the concepts of environmental determinism and possibilism.
4. Understand , examine and evaluate Biomes
5. Understand, examine and evaluate environmental Problems.
6. Understand, examine and evaluate environmental protection Act and Environmental Policies of India.

5. REGIIONAL PLANNING AND DEVELOPMENTY (GEOGP203 SEC)

On the completion of the course the students are able to:

1. Understand the concept, need and types of regional Planning and methods of delineation of planning regions
2. Understand, examine and evaluate the regionalization in India.
3. Understand , examine and evaluate the agro ecological regions of India
4. Understand, and evaluate the Growth Pole Theory and Core Periphery model.
5. Understand, examine and evaluate the development initiative programmes in India like ITDP, IWDP, BADP and Damodar Valley Corporation (DVC).

6. REMOTE SENSING AND GPS (GEOGP204 SEC)

On the completion of the course the students are able to:

1. Understand the concept of remote sensing , types and various platforms.
2. Understand, examine the aerial photographs and geometry of the aerial photography.
3. Understand, EMR and interaction EMR with the atmosphere and earth surface and use of EMR in remote sensing
4. Understand the satellite sensors of LANDSAT and IRS.
5. Understand, examine and evaluate the visual interpretation of remote sensing images.
6. Understand the concept and use of GPS.

7. GEOGRAPHY OF INDIA (GEOGP301-1DSC)

On the completion of the course the students are able to:

1. Understand and examine the location and major physiographic divisions of India.
2. Understand, examine and evaluate the climatic factors and climate of India.
3. Understand, examine and evaluate the Soils of India.

4. Understand, examine and evaluate the population and its attributes like: distribution, density, literacy and sex ratio in India.
5. Understand, examine and evaluate the settlements types and patterns along with problems of Urbanization in India.
6. Understand, examine and evaluate the power, agricultural and industrial resources in India.

8. ECONOMIC GEOGRAPHY (GEOGP303-2DSC)

On the completion of the course the students are able to:

1. Understand, the nature and scope, approaches of economic geography.
2. Understand, examine and evaluate the fundamental theories of Economic Geography.
3. Understand, examine and evaluate the various kinds of primary activities.
4. Understand, examine and evaluate the major secondary activities along with the major industrial regions of the world
5. Understand, examine and evaluate the tertiary and quaternary activities.
6. Understand major oceanic routes and International trade of the world.

9. DISASTER MANAGEMENT (GEOGP304-1DSC)

On the completion of the course the students are able to:

1. Understand the concept of hazards, risk, vulnerability and disaster.
2. Understand, examine the causes, impacts and distribution of landslide, earthquake and cyclones.
3. Understand human induced disasters like forest fires and road accidents
4. Understand, examine and evaluate the mitigation process.
5. Understand, examine and evaluate the NDMA and Disaster management at community level
6. Understand, do`s and dont`s during the disaster.

10 GEOGRAPHIC INFORMATION SYSTEM (GEOGP301 SEC)

1. On the completion of the course the students are able to:
2. Understand, the meaning and scope of GIS along with its history.
3. Understand, examine and evaluate data structure: vector and raster.
4. Understand, examine and evaluate georeffrencing and Editing
5. Practical exercise on land use land cover mapping through GIS software.

11. FIELD TECHNIQUES AND SURVEY BASED PROJECT REPORT (GEOGP302 SEC)

On the completion of the course the students are able to:

1. Understand the role, value and importance of the field work.
2. Understand, examine and evaluate the various methods of data collection.
3. Understand, examine and evaluate the questionnaire.

4. Write a project report on the basis of field visit and data collected and analysed.
5. Work in any social research project in future.

12. SUSTAINABILITY AND DEVELOPMENT (GEOGP 306-GE)

On the completion of the course the students are able to:

1. Understand the concept of sustainable development.
2. Understand, examine and evaluate the sustainable development goals of the millennium.
3. Understand, examine and evaluate the national strategies and international experience of the development.
4. Understand the concept of inclusive development with special reference to health and education.
5. Understand development policies and programs.

BA with "Journalism and Mass Communication"

Journalism and Mass Communication is a broad subject which includes study of Print Media, Electronic Media, Digital Media, Advertising, Public Relations and Film Studies and each medium has huge opportunities for the students to make their career not in govt. sector, private sector but also they can start their own media. Community and Alternative Media is one of such field of study which provide such opportunity to the young aspirants. After the completion of degree course in college, students can go for specific course in each field and following are some of the career options they can choose in future where teaching is one option with them.

Course Name	**Course Specific Outcome**	**Different Careers Avenues**
Principles of Communication (BJMCPAC101)	----------	----------
Introduction to Radio and TV (BJMCPAC201)	Career in Electronic Media: All India Radio and Doordarshan (Prasarbharti) Private FM & TV channels.	Director Producer Producer Radio Announcers Radio Jockey Radio Engineers Radio Program Producer, Director Program Executive Transmission Executive Radio Program Editors Floor Manager
Introduction to Advertising and Public Relations (BJMCPAC301)	Career in Public Relations Career in Advertising	APRO, DPRO, Public Information Officers, Public Relation Officers in Business Houses, Political Parties and political personnel, Celebrities and PR Agencies, Event Manager

		Marketing Manager, Sales Person, Voice Over Artist for Advertising, Copy Writer for Advertisers
New Media Communication (BJMCPAC401)	Career in New Media Industry	Professional Bloggers, Digital Content Writer, Professional Writer for Online News Portals, Web Journalist.
Introduction to Photojournalism (BJMCPAD601P)	Career in Photography	Cameraperson, Photojournalist, Freelance Photographer, Wild Life Photographer, Science and Technology Photographer, Advertising and Film Photographer, Digital Photographer.
Reporting, Editing and Feature Writing (BJMCPAS301P)	Career in Print Media i.e. Newspaper, Magazine.	Reporter, Freelancer, Editor, Columnist.
Communication Skills (BJMCPAS501P)	Career in different Counseling Agencies and Departments.	Career Counselor, for personality development counselor.
Film Appreciation Skills (BJMCPAS601)	Career in Film Industry	Script Writer Film editor Film Review Writers Screen Play Writer Film acting

Reeta Kumari

Department of Journalism.

बी. ए. हिंदी

प्रोग्राम आउटकम

स्वामी विवेकानन्द राजकीय महाविद्यालय घुमारवीं ज़िला बिलासपुर हिमाचल प्रदेश
हिंदी विभाग
प्रोग्राम आउट कम बी. ए. हिंदी

Hind -101 प्रयोजनमूलक हिंदी	विद्यार्थियों को सरकारी एवं अर्द्ध सरकारी, सामाजिक, व्यावसायिक आदि क्षेत्रों में होने वाले विभिन्न पत्राचार व व्याकरण की व्यावहारिक जानकारी प्राप्त हुई।
Hind -102 हिंदी साहित्य का इतिहास	विद्यार्थियों को हिंदी साहित्य के आदिकाल ,भक्तिकाल व आधुनिक काल की विभिन्न परिस्थितियों,प्रवृतियों,प्रमुख कवियों का परिचय तथा विभिन्न गधविधाओं के विकास की जानकारी प्राप्त हुई।
Hind -103 मध्यकालीन हिंदी कविता	विद्यार्थी कबीर ,तुलसीदास ,सूरदास,मीराबाई,भूषण ,बिहारी व रसखान के काव्य सौन्दर्य व वर्तमान समय में उनके साहित्य की प्रासंगिकता को समझने में सक्षम हुए। कबीर, तुलसीदास जैसे कवियों को पढ़ कर विद्यार्थी अपने समय की समस्याओं व समाज की विसंगतियों को समझने में सक्षम हुए। विद्यार्थियों में साम्प्रदायिक सदभाव को बढौतरी हुई।
HIND 201 अनिवार्य हिंदी (compulsory)	विद्यार्थी हिंदी के चारों काल से परिचित हुए तथा उस समय के प्रमुख कवि व लेखक की कविता ,कहानी व निबंध के माध्यम से बाल मनोविज्ञान ,अच्छे नागरिक की आवश्यकता ,स्त्रियों की स्थिति, साम्प्रदायिकता ,व्यवस्था व समाज में इंसानी रिश्तों के क्षरण के कारणों को समझने में सक्षम हुए।
Hind-202 हिंदी आधुनिक कविता (DSC-ID)	विद्यार्थियों को आधुनिक युग के प्रमुख कवि भारतेन्दु हरिश्चंद्र से लेकर प्रगतिवादी कवि नागार्जुन तक के जीवन परिचय ,काव्यगत प्रवृतियों तथा कविताओं के माध्यम से अभिव्यक्त आम जनमानस की मानसिकता का परिचय प्राप्त हुआ।
HInd-203 हिंदी गद्य साहित्य (DSE-IC)	विद्यार्थियों को उपन्यास,कहानी व निबंध के माध्यम से मानव जीवन व समाज में व्याप्त बिभिन्न समस्याओं व विसंगतियों का भावनात्मक स्तर पर बोध प्राप्त हुआ।
HInd-204 कार्यालयी हिंदी (SEC-1)	विद्यार्थियों के भाषा व भाषा के विविध प्रकार ,हिंदी भाषा के उदभव, विकास तथा कार्यालयी स्तर पर हिंदी के प्रयोग व कार्यालयी अनुवाद की समस्याएँ,पत्राचार व परिभाविक शब्दावली का यथोचित ज्ञान प्राप्त हुआ।
HInd 206 अनुवाद विज्ञान SEC-2	विद्यार्थियों को अनुवाद की परिभाषा ,उपयोग,विभिन्न प्रकार के अनुवाद व समस्याएँ ,अनुवाद के क्षेत्र में बिभिन्न संस्थाओं के योगदान की जानकारी प्राप्त हुई।
HInd-301 रंग आलेख एवं रंगमंच (SEC-3)	विद्यार्थियों को नाटक ,उदभव,विकास ,प्रकार ,विभन्न प्रकार के नाटक ,प्रमुख नाटककार ,रंगमंच के प्रमुख रूप ,भारतीय व पाश्चात्य नाटक के प्रमुख तत्व तथा रंगमंच के विभिन्न पहलूओं की जानकारी प्राप्त हुई।
HInd-305 लोक साहित्य (SEC-4)	विद्यार्थियों को लोक साहित्य की परिभाषा लोक साहित्य के प्रमुख रूप लोक गीत ,लोक नाटक ,लोककथा ,लोक गाथा के साथ इनके विभिन्न प्रकार व प्रसिद्ध लोकगाथाओं (हिमाचल) का ज्ञान प्राप्त हुआ।
Hind 306	विद्यार्थियों को छायावादी कवियों के बाद प्रमुख कवियों की कविताओं के

(DSE-IB) छायावादोत्तर हिंदी कविता	माध्यम से उस युग की प्रमुख प्रवृत्तियों व समकालीन बोध की अभिव्यक्ति का ज्ञान प्राप्त हुआ।
Hind307 G.E.-1 आधुनिक भारतीय साहित्य	विद्यार्थी रवीन्द्रनाथ की गीतांजलि ,अरविन्द के अस्तित्ववादी दर्शन ,मार्क्स के मार्क्सवादी दर्शन स्वाधीनता संग्राम व भारतीय साहित्य पर इसके प्रभाव तथा अनंतमूर्ति के संस्कार उपन्यास व विजय तेंदुलकर के " घासीराम कोतवाल" के माध्यम से जीवन के विविध पहलूओं से अवगत हुए।
Hind-308 (GE-2) सर्जनात्मक लेखन	सृजनात्मक लेखन विषय के द्वारा विद्यार्थियों को रिपोर्ताज व फीचर लेखन के विषय सामग्री, सामग्री निर्धारण, लेखन प्रविधि, उद्देश्य, साक्षात्कार व स्तम्भ लेखन, दृश्य सामग्री से सम्बंधित लेखन व पत्रकारिता के क्षेत्र का व्यावहारिक ज्ञान प्राप्त हुआ।

COURSE OUTCOME B.A.MUSIC (VOCAL & INST.)

COURSE

MUSA101-103TH ,102,104PR,201,203TH ,202,204PR, MUSIC801,803TH 802,804PR	विद्यार्थियों को इन कोर्सेज में कियात्मक एवं सैद्वान्तिक पक्ष की शिक्षा दी जाती है। इसके अंतर्गत इन्हें संगीत का प्राभिक ज्ञान जैसे अंलकार आरोह अवरोह संगीत का परिचय और संगीत के प्राचीन ग्रन्थों का ज्ञान थाट और उनसे उत्पन्न राग ,रागों की रचनाएं ,विभिन्न ताल तीन ताल , एक ताल , दादरा, कहरवा, रूपक ताल , झप ताल इत्यादि। लय, लयकारी, थाट जनक राग जैसे कल्याण भोपाली भैरव खमाज काफी रागों का सम्पूर्ण परिचय शास्त्रीय संगीतज्ञों का जीवन चरित जैसे तानसेन पंडित बी0डी0 पुलस्कर पंडित भातखंण्डे उस्ताद जाकिरहुसैन इत्यादि विभिन्न वाद्यों का प्रयोगात्मक एवं सैद्वान्तिक ज्ञान जैसे. सितार तानपूरा तबला हारमोनियम इत्यादि । घरानेदार गायकी एवं घरानों से सम्बन्धित कलाकारों का परिचय एवं उनकी संगीत में देन इत्यादि से परिचित करवाया जाता है।
SEC-MUSIC701.702.703, 704	इन कोर्सेज के अन्तर्गत संगीत के प्रयोगात्मक पक्ष को उजागर किया जाता रहा है जैसे उन्हे तानपूरा हारमोनियम सितार तबला इत्यादि को बजाना एवं उन्हे ट्यून करना सिखाया जाता है और उनके विभिन्न भागों से भी परिचित करवाया जाता है। तबले पर विभिन्न तालों के ठेके जैसे तीन ताल एक ताल कहरवा दादरा और शास्त्रीय संगीत पर आधारित फिल्मी गीतों का परिचय एवं प्रस्तुती । इसके अतिरिक्त लोक संगीत एवं सुगम संगीत की समूह में प्रस्तुति करवाई जाती है। छात्रों को विभिन्न सागीतिक सम्मेलनों एवं दूरदर्शन/आल इंडिया रेडियों इत्यादि में ले जाकर उनकी जानकारी एवं उन पर रिपोर्ट इत्यादि बनवाना और कलाकारों से रूहबरू करवाया जाता है। इसके अतिरिक्त नवीनतम प्रयोगात्मक संगीत में पॉवर प्वांइट प्रैसेन्टेसन द्वारा महान संगीतज्ञों के जीवन पर आधारित लघु फिल्म इत्यादि एवं शास्त्रीय संगीतज्ञों की प्रस्तुतियॉ दिखाकर विद्यार्थियों में शास्त्रीय संगीत के प्रति चेतना एंव रूचि को बढावा दिया जाता है।
GENERIC MUSIC 901TH 902PR	इन कोर्सेज के अन्तर्गत इन्टरफैक्लटी विद्यार्थियों को संगीत के कियात्मक एवं सैद्वान्तिक पक्ष का प्रारम्भिक ज्ञान दिया जाता है। जैसे स्वर,ताल,राग,अंलकार,आरोह,अवरोह,पकड इत्यादि एवं शास्त्रीय संगीतज्ञों के जीवन चरित्र एवं संगीत के क्षेत्र में योगदान से परिचित करवाया जाता है।

Programme Specific Outcomes	वर्तमान मे देश विदेश में युवाओं मे म्यूजिक बैंड बनाने और परफार्म करने का ट्रैड जोर पकडता जा रहा है इस प्रकार के बैडज में वोकल आर्टिस्ट गायक और इस्ट्रूमैन्टल आर्टिस्ट वाद्य यंन्त्र कलाकार दोनो का ही समन्वयन होता है। स्कूलों, कालेजो, और अन्य छोटे स्तरों पर इस प्रकार के सैंकडो हजारों बैडस आज अस्तित्व में आ चुके है । म्यूजिक इंडस्ट्री :– इस उद्योग में कई प्रकार के म्यूजिक आधरित प्रोफेशनलो की अहम भूकिा होती है, इनमें विशेष तौर पर म्यूजिक साफटवेयर प्रोगामर कम्पोजर ,म्यूजिशियन, जैसे कार्यकलापों के अलावा म्यूजिक बुकस की पब्लिशिंग, म्यजिक एलबम रिकार्डिग ,म्यूजिक डीलर,म्यूजिक स्टूडियों के विभिन्न विभागों का उल्लेख किया जा सकता है। टेलीविजन :– मयूजिक एडिटर, साउंड रिकार्डिस्ट , प्रोडक्शन , आर जे0 एवं डी. जे0 म्यूजिक लाइसेंस में ऐसे जानकार और अनुभवी लोगों की जरूत पडती है। स्टेज परफार्मेंस :– म्यूजिक शो शास्त्रीय गायन, वादन,सुगम गायन, वादन, लोक संगीत गायन,वादन एकल एवं समूह टेलीविजन म्यूजिक प्रोग्राम म्यूजिक कम्पीटीशन आर्म्ड फोर्सेज बैंडज , सिंफनी आर्केस्ट्रा,डांसबैड, नाईट क्लब कंसर्ट शो , रॉक एवंज ैज ग्रुप इत्यादि मे भी इनकी भूमिका रहती है । म्यूजिक थेरेपिस्ट :– विकलांगता के शिकार बच्चों और लोगों के अलावा मानसिक तनाव से ग्रस्त व्यक्तियों के उपचार में आजकल संगीत का अत्याधिक महत्वपूर्ण स्थान होगया है। इनके लिए हस्पताल मैन्टल टस्थ सेंटरों नर्सिग होम्स इत्यादि में रोजगार के अवसर हो सकते हैं। टीचिंग :– म्यूजिक टीचर के रूप में स्कूलों कॉलेजों और अन्य संगीत प्रशिक्षण संस्थाओं में भी करियर बनाया जा सकता है इनमें विशेषता प्राप्त टीचर का अत्यधिक महत्व होता है इन विशेषताओं में खासतौर पर म्यूजिक थ्यरी म्यूजिक हिस्ट्री एंड लिटरेचर , म्यूजिक एजुकेशन , म्यूजिकोलोजी,इलेक्ट्रानिक म्यूजिक, कम्पोजिशन अथवा म्यूजिक थेरपी की बात की जा सकती है । इन सब के अतिरिक्त फिल्म इंन्डस्ट्री चर्च म्यूजिक, म्यूजिक अरेंजिंग, म्यूजिक साफटवेयर प्रोडक्शन , म्यूजिक वर्चुअल रिएलटी साउंड एंवायरनमेंट इत्यादि जैसी भी विधाओं में भविष्य बनाया जा सकता है।

BA with Political Science

Program Outcomes

After completion of BA Program students should be able to……

1 students enable to develop academic proficiency in the subfield of understanding Political Science, Colonialism in India and constitutional Democracy, Comparative Government and politics, International Politics, Political theory, Political Thought, Political ideologies.
2 Student enable to develop and able to demonstrate skills in conducting as well as presenting research in political science.
3 Students enable to analyze political and policy problems and formulate policy options.
4 Students enable to discuss the major theories and concepts of political science and its subfields, and also deliver thoughtful and well articulated presentation of research findings.

SPECIFIC OUTCOMES

On completion of BA (POLITICAL SCIENCE) students are able to:

1. Serve as a politician.
2. Work as a teacher in colleges, schools.
3. Serve as political party member, political advisor, and well citizen of India.
4. Can admit to MA Political Science, LLB, MSW.
5. Work in NGOs.
6. Can prepare for competitive exams.

Detail of courses introduced in BA Program.
1 Introduction to Political Theory
2. Indian govt. and politics.
3. Comparative govt. and politics.
4. Introduction to International Relation.
5. Legislative support.
6. Public Opinion & Survey Research.
7. Themes in comparative political theory
8. Democratic awareness with legal literacy
9. Understanding Globalization
10. Conflict and peace building

Program outcomes:
Students enable to develop their academic proficiency. They can find out major scope in academic and non academic arena from the career point of view, the students have a scope in govt. as well as private sectors. Political organizations or govt. sectors like public administration and law. Teaching and lecturing on Political science is another work opportunity.

BA with Public Administration

Programme Outcome

The aims of undergraduate program in Public Administration are achieved by Core (Foundation) Courses Elective (Specialization) Courses and Skill Enhancement Courses (SEC). The Core Courses are essential to provide basic knowledge of a discipline and framed to promote common educational premises for the same. The specialized courses, on the other hand, allow the students to acquire knowledge in various specializations and subject combinations as per the CBCS requirements. The courses are planned in a manner that the generic or foundational courses along with courses focusing on skill with wider range of application during the first years of the undergraduate program. Specialized courses/ Skill enhancement courses prepare students to build professional competence and has been introduced in the second and final year. At present following courses have been started in the subject:-

1. PUBA 101-A: Administrative Theory -Core Course.
2. PUBA 102-A: Indian Administration -Core Course.
3. PUBA 201-A: Administrative Thinkers- Core Course.
4. PUBA 202-A: Development Administration Core Course.
5. PUBA 203-A: Computer Applications and Office Management-Skill Enhancement Course
6. PUBA 204-A: Human Resource and Logistic Management-Skill Enhancement Course
7. PUBA 501: Leadership Styles and Conflict Management-Skill Enhancement Course
8. PUBA 502: Local Governance Discipline Specific Elective Course
9. PUBA 504: Disaster Management- Generic Elective Course
10. PUBA 601: Stress and Time Management- Skill Enhancement Course
11. PUBA 603: Public Finance and Administration-Discipline Specific Elective Course
12. PUBA 604: E- governance Generic Elective Course

Program Learning Outcomes of General Public Administration

The learner who completes three years of the undergraduate program in Public Administration has been provided a Bachelor's degree i.e. BA with Public Administration. The learning outcomes that a student should be able to demonstrate on completion of a degree level program may involve academic, behavioural and social competencies.

Academic Competence

1. Disciplinary knowledge and methods including data analysis and computer literacy.
2. Basic professional skills pertaining to psychological testing, assessment and counseling.
3. Ability to use skills in specific areas related to chosen specialization (e.g. cognitive, industrial- organizational, clinical, and counseling, health, educational, social, community).
4. Ability to relate and connect concepts with personal experiences and using critical thinking.
5. Curiosity and ability to formulate psychology related problems and using appropriate concepts and methods to solve them.
6. Ability to use various e-resources and social media and negotiating with technological challenges.
7. Articulation of ideas, scientific writing and authentic reporting, effective presentation skills.
8. Dealing with conflicting theories and approaches, learning to withstand ambiguities and understanding the limitations of the discipline.

Personal and Behavioural Competence

1. Self-development, health and hygiene, self-regulation skills.
2. Developing positive attributes such as empathy, compassion, social participation, and accountability.
3. Developing cultural and historical sensibility particularly indigenous traditions, socio-cultural context and diversity.
4. Having conversational competence including communication and effective interaction with others, listening, speaking, and observational skills.
5. Appreciating and tolerating different perspectives.
6. Ability to work both independently and in group and dealing effectively with clients and stakeholders, learning the art of negotiation.

Social Competence

1. Collaboration, cooperation and realizing the power of groups and community.
2. Analyzing social problems and understanding social dynamics.
3. Gender sensitization including gender respect, respect for one's own gender, dealing with gender confusion and gender identity issues.
4. Ethical, social and ecological responsibility including acknowledging the dignity and presence of others, awareness of social order, learning of values and social concern

reflected through activation of social participates (e.g. village surveys, visiting old age homes and spending time with elderly, orphanage community service etc.).

5. Moral and ethical awareness and reasoning involving objective and unbiased work attitude, avoiding unethical behavior such as data fabrication and plagiarism, observing code of conduct, respecting intellectual property rights and being aware of the implications and ethical concerns of research studies.
6. Commitment to health and wellbeing at different levels (e.g. individual, organization, community, society.

BA with Education

Course Outcome

After the completion of these courses students should be able to

Philosophical Foundation of Education	1. Understand the basic concept of education. 2. Understand the individual, social and vocational aims of education. 3. Understand the functions of education. 4. Understand the basic concept of Philosophy. 5. Understand the relationship of Education and philosophy. 6. Understand the contribution of different schools of philosophy (i.e. Naturalism, Idealism & Pragmatism) towards present days of Education. 7. Understand the concept of values. 8. Understand the different methods of inculcation of values.
Sociological Foundation of Education	1. Understand the basic concept of Educational Sociology and Sociology of Education. 2. Understand the sociological determinants of education. 3. Understand the meaning of Social Change and the process of Socialization. 4. Understand the factors that affects the social change. 5. Understand the role of school and teacher in bringing social change. 6. Understand the meaning of school. 7. Understand the need and function of school. 8. Understand the impact of school on community. 9. Understand the concept of culture. 10. Understand the relationship between education and culture. 11. Understand the role of education in cultural development.
Psychological Basis of Education	1. Understand the concept of psychology and Educational Psychology. 2. Understand the different methods of educational psychology. 3. Understand the application of educational psychology in teaching and learning. 4. Understand the concept of growth and development. 5. Understand the concept of individual differences. 6. Understand the concept of intelligence and IQ. 7. Understand the concept of creativity. 8. Understand the concept of learning and factors that affects learning. 9. Understand the concept of motivation.
Development of Education in India	1. Understand the concept of Vedic, Buddhist and Islamic Education. 2. Understand the development of Education in Pre-Independence Era (Macaulay's Minutes1835, Wood Dispatch 1854 & Hunter Commission 1882). 3. Understand the development of education in post Independence period

	with special reference to University Education Commission 1948-49, Secondary Education Commission 1952-53 & Kothari Commission 1964-66) 4. Understand the development of Education in Modern India.
Yoga	1. Understand the concept of Yoga. 2. Understand the contribution of Yoga in human development. 3. Understand the different types of yoga. 4. Understand the contribution of yoga towards peace and harmony.
Life Skills Education	1. Understand the concept life skills. 2. Understand the role of life skills in health promotion. 3. Understand the importance of life skills in growing mind. 4. Understand the methods and techniques of developing life skills.
Pedagogy of Education	1. Understand the concept of pedagogy. 2. Understand the different types of pedagogical approaches 3. Understand the pedagogical skills' 4. Understand the teaching methods and techniques. 5. Understand the learning resources.
ICT in Education	1. Understand the concept of ICT with its role in teaching learning process. 2. Understand the challenges in integrating ICT in school education. 3. Understand the concept of communication and also knows about the barriers of communication. 4. Understand the technologies for classroom. 5. Understand the new trends in ICT.
Educational Management	1. Understand the concept of educational management. 2. Understand the approaches of management. 3. Understand the ways of effective leadership in educational management. 4. Understand the management of teaching learning process. 5. Understand institutional planning and management.
Inclusive Education	1. Understand the concept of inclusive education with its importance and objectives. 2. Understand the children with special needs. 3. Understand the techniques and aids for the education of children with special needs 4. Understand the policies and programs of inclusion.
Education for Peace	1. Understand the fundamental of peace education' 2. Understand the role of teacher as peace builder. 3. Understand the agencies of peace education. 4. Understand the philosophical resources of peace education 5. Understand the methods and approaches of peace education
Educational Thoughts and Practices	1. Understand the educational thoughts of western philosophers i.e. pestalozzi, John Deway & Bertrand Russel Understand the basic contribution of prominent Indian philosophers to education 2. Understand the Rabindranath Tagore's ides on education. 3. Understand the contribution of Radha Khrisnan to the field of higher education. 4. Understand the contribution of Plato to the field of education

BA with Sociology

Programme Outcomes

Introduction to Sociology (SOCL-101)	After successful completion of course students will be able of demonstrate knowledge of core sociological concepts. Students will be able to think sociologically and identify relation between social structure, interact identities and inequalities.
Society in India (SOCL -102	Students will get acquainted with structure and changing nature of Indian society. It also makes them aware about various segments and unity of Indian society.
Sociological Theories(DSC-IC) (SOCL-201)	Students get acquainted with sociological thought of Pincers of sociology. It further helps students in developing a critical thinly. It will further help them to analyze and evaluate how thieves are impacted by social and historical conditions.
Techniques of social Research (SEC-1) (SOCL-203)	It will help in implementing scientific approach in students. It will further impart basic research skills students get acquainted to various techniques that can be used in social science for research.
Sociology of averment (SEC-2) (SOCL-204)	This course helps students in analyzing implications of environmental change for people communities flora and wildlife. Students will be able to examine complex relations between people nature and natural environment.
Methods of Sociological enquiry (DSC-2C)(SOCL-202)	After completion of course students will have the understanding of role of qualitative and quantitative methods in sociology. They will be able to identify basic methodological approaches and disvalue general role of methods in building sociological knowledge.
III years Population Studies (SEC-3)	On successful completion course students will explain demographic changes in world and India. They will be able to apply demographic theories and concepts to study present and past patterns of population.
THEORY AND PRACTICE OF DEVELOPMENT(SEC-4)	Students will get acquired with conceptual meaning of development. The will learn the difference between social and economic growth and how the parameters of book are important in development .
Marriage Family kinship (DSE-IA)	Students will become familiar with concepts and theories related to marriage, family and kinship. They will further learn about the changing patterns of marriage an kinship.
Social Stratification	This will help students to know how the society is divided into various strata's based upon caste, class, gender , religion and ethnicity. They will also get acquainted with theories of social stratification.
Polity and Society in India (GE-1)	This subject will help students to understand the concept of state, nation and civil society. It will also help them to evaluate the impact of religion and caste in Indian Politics.
Economy & Society (GE-2)	This subject enables students to understand the process of social and economic inequality. It will also help them to describe how social values and economic trade- offs impact public and private properties. They will also get acquainted to socioeconomic theories which will help them in developing critical thinking.

BA with Tourism and Travel Management

Program Outcomes

Specific Outcomes: On completion of BA in Tourism &Travel Management students are able to work in and as:

Government sector

- Manager in Tourism Boards (State as well as Central)
- Government Tourist information officer
- Government run Hotels
- Tour Guides and Escorts
- Airlines
- Transportation services

Private sector

- Travel agencies
- Tour operators
- Travel consultants
- Airlines
- Airports
- Visa and travel document service firms
- Tourist information officer
- Cruise lines
- Tour Guide
- Customer service manager
- Event manager
- Tour manager
- Tourism promoter / marketer
- Work as a teacher in colleges, schools/Universities

Entrepreneurship skills

- One may start own travel agency,
- Ticketing firm
- Tour agency
- Travel consultancy
- Tourist information service

Education

- PG courses such as MA, M.Sc. Master of Tourism Studies
- Master of Tourism Administration
- MBA in Travel and Tourism management.

List of courses introduced in BA -Tourism and Travel Management

Introduction of Travel and Tourism Management

Learning Outcome: The students would be equipped with diverse historical knowledge like chronology, places, events, experiences and narratives as well as understanding the idea of Travelling and Tourism in historical context. Students would be able to find the job opportunity in the field of cultural studies & practices.

Tourism Resources of India

Learning Outcome: Helps in better understanding of Indian tourism resources and its relationship with development of tourism industry also helps in the preparation of competitive exams from tourism stream. In long run, this course facilitates their comprehension of the tourism industry better and further policy making of the same.

Travel Agency & Tour Operation

Learning Outcome: The students gain knowledge about the operations and modus operandi of the travel agency and Tour operation business units, which are working as the intermediaries in the tourism industry and provide an understanding of the procedures of setting up a travel agency and its functions. Students would be able to find the job opportunity in the Travel agencies.

Tourism Marketing

Learning Outcome: Understand the basic knowledge of the concepts of marketing like needs, wants, demands, market and marketing. Explain the concept of market segmentation & need for market research in tourism industry. List the phases of a destination according to the life cycle theory. Apprehend the ingredients of marketing mix including its expanded versions. It also gives an insight into pricing methods - the factor influencing the pricing decision, pricing objectives and pricing policies. Students would be able to know how to market and promote the tourism products.

Tourism Organizations & Associations

Learning Outcome: To aim at providing knowledge about roles and functions of the various national and international organizations of tourism along with freedoms of air and open Sky policy. Students would be able to know the role of various organizations which are working in the field.

Transport Service in Tourism

Learning Outcome: Apprehend the concept of various Modes of transport in India, to aim at providing few case studies of Air India and other important International Airlines. Students would be able to know the significance of Transportation sector in the industry.

Researching for Hospitality & Tourism Management

Learning Outcome: Imparting knowledge about the basics of research-objectives, types, approaches, process and problems encountered in research and to develop the learning to define a research problem, facilitate understanding of sampling, data collection, construction of questionnaire and understanding of the basic tools of data analysis- Parametric & non parametric tests, interpretation of results & presentation. Students would to able apply the research in the tourism projects and plans and also help the destination in yielding much profit to the local economy.

Tourism Impacts

Learning Outcome: Understand the concepts and typology of tourism. Delineate the various impacts generated by tourism. Know the demand and supply characteristics of tourism and also explains the different motivational theories related to tourism different motivational theories related to tourism. Students would be able to know how tourism have positive and negative impacts on society, culture, and environment and how they can be minimize and how it leads sustainable growth and development.

Leadership Development Program

Learning Outcome: Will help students to become good future leaders and to derive optimal productivity from their work peers and it will equipped them with ***skills*** that will help them lead a team of employees to a more productive and profitable goal.

Writing Skills for Tourism

Learning Outcome: Understand the concepts and aspects of report writing, process, contents of a report and referencing.

पाठ्यक्रम अध्ययन प्रतिफल

विषय : संस्कृत

हिमाचल प्रदेश विश्वविद्यालय ने सत्र 2018-2019 से CBCS के अंतर्गत वार्षिक शिक्षा प्रणाली को अपनाया जिसके अधीन संस्कृत विषय में जो पाठ्यक्रम शिक्षार्थियों को निर्धारित किया गया , उसके अनुसार संस्कृत विषय को मुख्य – विषय के रूप में चयन करके बी. ए. करने के उपरांत विद्यार्थी निम्न रूप से लाभान्वित होगा –

१. बी.ए. प्रथम वर्ष में संस्कृत काव्य एवं संस्कृत गद्यकाव्य मुख्य लेख्य के रूप में निर्धारित हैं I इनके अध्ययन से संस्कृत काव्य एवं गद्यकाव्य के इतिहास के विषय में ज्ञान प्राप्त होगा I सूर्यवंश एवं चन्द्रवंश के राजाओं की विशेषताओं के अध्ययन से विद्यार्थी में सद्गुणों का संचार होगा I इसके साथ अनिवार्य संस्कृत में नीति साहित्य के अध्ययन से पंचतंत्र की कहानियों एवं नीतिशतक के माध्यम से नीति सम्बन्धी ज्ञान को अर्जित करके अपने को सभ्य एवं शिष्टाचार से सम्पन्न कर सकता हैं I योग्यता संवर्धन अनिवार्य पाठ्यक्रम (AECC) के अन्तर्गत उपनिषद् , गीता एवं पाणिनीय शिक्षा के अध्ययन के उपरांत विद्यार्थी को भारतीय संस्कृत एवं धर्म के आधार स्तम्भ उपनिषदों में वर्णित आत्मा ,परब्रह्म, सृष्टि, पुनर्जन्म आदि सिद्धांतों की जानकारी प्राप्त होगी तथा गीता के अध्ययन से आत्मा की अमरता ,निष्काम कर्मयोग ,संसार की नि:सारता तथा ईश्वर के वास्तविक स्वरूप की चर्चा से आत्म सुधार, इन्द्रिय-निग्रह,सदाचरण एवं सत्य – सम्भाषण की प्रेरणा मिलेगी I पाणिनीय शिक्षा के अध्ययन से वर्णों के संख्या एवं उच्चारण स्थान की जानकारी से भाषा व्यवहार एवं भाषा लेखन में सुधार होगा I

२. बी. ए. द्वितीय वर्ष में संस्कृत नाटक के अन्तर्गत प्रतिमानाटक के अध्ययन से विद्यार्थी अपने सांस्कृतिक इतिहास को नाटकीय कथानक के माध्यम से आत्मसात् करेगा तथा संस्कृत व्याकरण तथा व्याकरण एवं संयोजन विषयों के अध्ययन से संस्कृत भाषा पर उसकी पकड़ मजबूत होगी तथा वाक्य विन्यास में कुशलता आएगी I कौशल संवर्धन पाठ्यक्रम (SEC) एक में आयुर्वेद के मूल सिद्धांतों के अध्ययन से विद्यार्थी स्वयं

अपनी दैनिक दिनचर्या निश्चित कर सकता हैं I पथ्य-अपथ्य का सेवन ,प्रकृति का हमारी आयु में योगदान, शरीर की वात पित्त ,कफ आधारित प्रकृति ,किस ऋतु में कौन सा

आधार सुपाच्य हो सकता हैं आदि आयुर्वेद के मूल मंतव्यों से अवगत होकर अपने स्वास्थ्य का स्वयं प्रहरी बन सकता हैं I दूसरे SEC पाठ्यक्रम में संस्कृत छंद एवं गायन विषय के अध्ययन से संस्कृत ग्रंथों में विद्यामान शास्त्रीय संगीत के सुरों का ज्ञान प्राप्त हो सकेगा I

३. बी.ए. तृतीय वर्ष में मुख्य लेख्य 301 में गीता के बिभिन्न अध्यायों के अध्ययन से व्यक्तित्व विकास के ऐतिहासिक दृष्टिकोण की जानकारी विद्यार्थी को प्राप्त होगी I आत्मा का स्वरूप ,सृष्टि का आरंभ, ब्रह्मविद्या की जिज्ञासा ,समाज में यज्ञ एवं दान का महत्व तथा त्रिविध गुणों के स्वरूप के विषय में अध्ययन करके कई तरह की आध्यात्मिक जिज्ञासा शांत हो सकेगी तथा द्वितीय पत्र 302 में साहित्यिक समालोचना के अन्तर्गत काव्य के स्वरूप , प्रयोजन ,लक्षण ,वाक्य के स्वरूप एवं भेद आदि के ज्ञान से साहित्य में विद्यमान काव्य , गद्यकाव्य ,नाटक ,रूपक एवं चम्पूकाव्य आदि के लेखन से सम्बंधित समस्त जानकारी उपलब्ध हो सकेगी I कौशल संवर्धन पाठ्यक्रम SEC -03 में भारतीय रंगशाला के अध्ययन से रंगमंच से सम्बद्ध नृत्य एवं अभिनय आदि का सम्पूर्ण ज्ञान प्राप्त हो सकेगा तथा SEC -04 में भारतीय वास्तु शास्त्र विषय के अध्ययन से प्राचीन भारत में हमारे शास्त्रों के अनुसार भवन निर्माण विधि का ज्ञान विद्यार्थी प्राप्त कर सकेगा I

इस तरह संस्कृत को मुख्य विषय बनाकर बी. ए. करने वाला विद्यार्थी विनम्र,सभ्य,शिष्ट ,आत्म संयमी एवं मानवीय मूल्यों तथा उच्च संस्कारों से सम्पन्न होकर समाज को भी सही दिशा दे सकता हैं I

BA with History

Course Outcome

Course Name	Course Outcome
History of India from Earliest Times up to 300 CE	1. Students got the knowledge of Paleolithic, Mesolithic and Neolithic culture. 2. Students understand the civilization: origin, urban features, economy, society and religion of Harappan culture.

	3. Students got the knowledge of Mauryan Dynasty: Administration and Economy. 4. Students got the knowledge of Buddhism, Jainism and Magadha expansion.
History of India from 300 to 1206	1. Students understand the state and administration of the Guptas and Vakatakas. 2. Students understand the political structure, religion, economy and cultural development. 3. Students will be able to know about the Harsha's Kingdom, Buddhism and Nalandas. 4. Students able to get the knowledge of the Arabs administration.
History of India , c. 1206-1707	1. Students understand the foundation, expansion and consolidation of the Sultanate of Delhi. 2. Students learn about the regional political formation of Vijayanagara and Bahamani Kingdoms. 3. Students perceive the knowledge of Sher Shah's administration and revenue reforms. 4. Students able to understand the disintegration and decline of the Mughal Empire.
History of India , c. 1707-1950	1. Students understand the 18th century India in r/o society, economy and culture. 2. Students get the knowledge of expansion and consolidation of British power with reference to Bengal, Mysore and Maratha. 3. Students understand the socio-religious reform movement in the 19th century and after. 4. Students understand the uprising of 1857. 5. Students understand the peasant resistance to colonial rule. 6. Students understand the revolutionary movement for Indian Independence. 7. Stdents understand the Gandhian thought, techniques and movements. 8. Students understand the Indian Constitution and its features.
Historical Tourism	1. Students able to understand tourism and heritage. 2. Students understand the built heritage in r/o of temple architecture, Stupa architecture and Indo-Persian architecture. 3. Students understand the temple architectures in Himachal Pradesh as tourist attractions: A study of Chamba, Kangra and Mandi. 4. Students understand tourism in Himachal Pradesh.
Course Name	**Course Outcome**
An Introduction to Archaeology	1. Students understand the origin and development of archaeology in India. 2. Students understand the management of archaeological evidences. 3. Students perceive the knowledge of discovering human experience through archaeology. 4. Students understand the numismatic and epigraphic sources. 5. Students understand the method of surveying and techniques of excavation.
Modern and Contemporary World History I: 1871-1919	1. Students understand the main characteristics of modern and contemporary history. 2. Students understand the emergence of Italy and Germany as unified nations. 3. Students understand the emergence of USA after the Civil War. 4. Students know about the emergence of Japan as a world power. 5. Students understand the nationalist movements in Asia.

	6. Students understand the end of the czarist regime in Russia. 7. Students understand the revolution of 1905. 8. Students understand the First World War and its aftermath.
Modern and Contemporary World History I: 1919-1992	1. Students understand the Versailles to Locarno treaties and their political consequences. 2. Students know about the league of Nations 3. Students understand the era of great depression of 1929. 4. Students know the causes of the Second World War. 5. Students understand the nationalist movements and decolonization. 6. Students understand the Chinese revolution of 1949. 7. Students know about the cold war and its ideological and political origins. 8. Students understand the impact of the cold war on Europe, Korea, Vietnam and Cuban crisis. 9. Students understand the concept of globalization. 10. Students understand the Feminist and ecological movements. 11. Students understand the question of human right.
Indian History and Culture	1. Students understand the environment; culture, tradition and practice in Historical overview. 2. Students get the knowledge of oral and codified information on medicinal plants, water & water bodies. 3. Students understand the issues of settlements and landscapes and social differentiations. 4. Students know about the social inequality and gender: status within household. 5. Students understand the employment status and distribution of resources. 6. Students understand the cultural heritage.
Introduction to Indian Art	1. Students understand the key terms in art appreciation. 2. Students get the knowledge of Indian Sculpture, Iconography: Hindu, Buddhist and Jaina. 3. Students understand the temple, Mosque and Mausoleums architecture. 4. Students know about the Rock Cut Temple of Masrur and Colonial architecture in Shimla. 5. Students understand the Indian Painting historically in r/o Mural painting Ajanta, Mughal; miniature style and Phari School of painting; Guler Kangra paintings.
Women in Indian History	1. Students understand the theory and concepts of gender and patriarchy. 2. Students understand the women's history in India. 3. Students understand the Brahmanical and non-Brahmanical patriarchy in India. 4. Students understand the women in medieval India. 5. Students understand the women and literary activities in medieval era. 6. Students understand social reforms and women in the 19th century.
Environmental Issues in India	1. Students understand the human-nature interactions. 2. Students understand the geography, ecology and cultures in Pre-Colonial India 3. Students understand the resistance to new regimes: Peasants, tribal and pastoralists. 4. Students understand the Independent India and environment.

	5. Students get the knowledge of forests, human- wildlife conflict, and threat to bio-diversty.

PROGRAM OUTCOMES: M.A POLITICAL SCIENCE

1. Enable to develop their academic proficiency.
2. Enable to find out major scope in academic and non academic arena
3. Students can get placement in teaching profession, civil services, NGOs and Research centers.
4. Students have scope in govt. as well as private sector
5. Students are able to inculcate democratic values like Cooperation, Coordination, Law and Justice in their behavioral approach.

B.Com

- This program could provide industries, banking sectors, insurance companies etc. Well trained professionals to meet the requirement.
- Students can independently start up their own business.
- Students can get through knowledge of finance and commerce.
- After completing graduation students can get skills regarding various aspects like marketing manager, selling manager over all administration abilities of the company.

Course Name	Course outcomes
Financial Accounting	• To enable the students to learn the basic concept and practical application of accounting • To find out the technical expertise in maintaining the books of accounts. • Develop the ability to use accounting information to solve a variety of business problems. • Develop and understand the nature and purpose of financial statement in relationship.
	• To know of the recent changes in the field of

Personal selling and salesmanship	marketing. • To study the basic concept of marketing. • To know the process of marketing. • To understand the effectiveness of sales organization • This course will help the students to become a good advertisers and sales executive
Business mathematics and statistics	• To understand the different concept of sampling and collection of data. • To understand the application of metrics in business • Study the concept of regression and properties of correlation and regression. • Study the concept of diagrammatic representation and central tendency of given data. • To study the techniques and concept of different type of index
Entrepreneurship	• To students learn the various strategies and method of mobilizing resources and use advantages offered by the govt. • Students are able to be entrepreneur. • They are learned the SWOT of Business analysis. • To develop entrepreneurship awareness among the students.
Micro economics	• To provide students knowledge of micro economics concepts and analytical approach to the subject matter. • To apply economic reasoning to solve the business problem. • To know about relevance and use of various economic theories.
Income tax law & Practice	• This subject provides the brief knowledge of calculation of income tax. • In order to familiarize the different know-how and heads of income and its components. • Students can understand income tax system properly and can get the knowledge of different tax provisions.
Advanced Accounting	• To provide the knowledge of various accounting concepts. • To impart the knowledge about accounting methods, procedures and techniques. • They can make wise decision in business activities. They enable to prove proficiency with ability to engage in competitive exams like CA, CS etc.
	• Students learn about corporate entities that are

Company law	permitted to be set up. • Company incorporation and rules and procedure for running to know. • Rights and obligation of shareholders and other stakeholders including employees and creditors. • To impart students with the knowledge of fundamentals of company law and provision of companies act 2013.
Management accounting	• The students understand about the concept of fund flow and cash flow statement. • To imparted knowledge on capital budgeting and decision making technique. • To provide knowledge about the preparation of various kinds of budgets.
Financial management	• To understand the theoretical and practical knowledge of financial management • Have a greater apprehension and understanding of the importance of risk within the context of financial decision making
E-commerce	• Able to handle the electronic payment system. • Know about models of e-commerce. • After the successful completion of this subject the students should have clear knowledge in the fields of e-commerce, e-markets, e-payment system etc.

M.com Course Outcomes

- ❖ Students acquire full subject matter expertise in field of commerce.
- ❖ To familiarize the students with the fundamentals of capital market and money market.
- ❖ Develop advanced theoretical and practical knowledge related to subject.

Course Name	` Course Outcomes
Corporate legal Framework	• This course enables the students to summarise the legal provision relating to companies. • Understand the key role of SEBI in the securities market in India • Acquire knowledge about banking and insurance sector.
Managerial Economics	• Analyze real world economic problem. • Become a managerial economics. • Analyze the real demand and supply condition and access the position of company. • Develop decision making power

	after this completion of course.
Indirect tax	• Know about tax system and GST. • Become a GST practice and consultant. • Know about ITR process and payment system.
Human Resource Management	• This course creates knowledge and understanding regarding human resource. • Students know that how to recruitment done by the company through proper channel. • Students would become acquainted with the career planning and job evaluation methods.
Research Methodology	• This course facilitates the students to understand the basic concept of research. • It enables the students to develop the skill for scientific research for how to collect the data and analysis the data. • It develops the analytical skills of business research. • This paper forms the basis of guidance for preparation of research report.
Security Analysis and Portfolio Management	• This course analyse the selected individual securities through fundamental analysis tools. • This program provides students with basic knowledge about handling the project risk. • Students know about investment and financial instruments. • To provide a theoretical and practical background in the field of investment.
Marketing Management	• To understand the concepts of marketing management. • To learn about marketing process for different types of production and service. • To understand the marketing environment.

Advanced Cost Accounting	• To understand the scope of cost accounting in business activities. • Students know about types of cost and techniques of costing. • To enable students to learn application of different method of costing in manufacturing and service industries.

M.Sc. BOTANY

Programme Outcome in Respect of M.Sc. First & Second Semester:

1. This will help in understanding the diversity of Phycology & Mycology as well as their importance to the man and environment.

2. It is an opportunity to learn about the diversity of micro-organism as well as how they affects plants and animals life, both positively & negatively.

3. Indepth knowledge of Bryophytes & Pteridophytes would help the students in understanding the complexity of plant body, their role in succession as well as their significance to the human beings.

4. The existence of all animals depends upon the plants in the form of food, fodder, fuel, fibers, fertilizers & medicines. In fact plant breeding is the technique to have plants of best quality for our needs.

5. It is the platform to learn about Biostatistics & Computer with particular reference to the biological world.

6. Having the knowledge of cytology and bio-molecules is the need of hour, all this is being imparted to the students.

7. Here is a chance to have an idea about the diversity of spermatophytes and their economic & ethnobotanical significance.

Course Outcome:

1. This will motivate students for research.

2. It will help in conservation of natural resources for the generations to come.

3. Plants are the free of cost source of oxygen to the aerobic organisms. Therefore it will motivate students and general public to plant, protect & preserve trees for our own existence.

4. A lot of self employment opportunities are available in this field.

M.Sc. Chemistry- PO's; CO's

Course Out comes

Name of Course	*A student will have the knowledge of*
Corse I	Group theory
	Hydrides and their specific use in organic synthesis
	Organic reagents for synthesis.
Corse II	Stereochemistry an structure reactivity relationship
	Substitution, elimination and free radical reactions.
Corse III	Will have the knowledge of resonance spectroscopy including NMR, ESR and Mossbauer spectroscopy

	Kinetics of reactions which include fast reactions and their rate measurements
Course IV	Basic knowledge of math to deal with numerical problems
	Basic knowledge of Fortran
Corse V	Metal carbon boding and Organometalic
	Inorganic aspect dealt with the help of spectroscopy.
	Magnetic properties of compounds
Corse VI	Aromatic substitution reactions nucleophilic as well elimination reactions
	Pericyclic reaction chemistry
Corse VII	All the basic laws of thermodynamics (Equilibrium)
	Basic idea about non equilibrium thermodynamics
	.Corrosion and methods to protect metal articles from corrosion
Course VIII	Idea about the cell structure, Nucleic acids and biosynthesis
	Environmental chemistry, pollution and water quality parameters.
Course IX	Will have the practical knowledge complexometric titrations and Iodometric titrations, Partition coefficient calculation, thermochemistry, preparation of colloidal solution. Synthetic organic chemistry
Course X	Photo electron spectroscopy, f block elements and their specific use and extraction,
	Nuclear chemistry and radioactive techniques.
Course XI	Structure elucidation on the basis of IR, NMR.ESR, Mass spectroscopy.
	Photochemical synthesis
Corse XII	Thermodynamics discussion on the basis of statistical aspect
	Quantum chemistry and photochemistry
Special Courses XIIA,B,C	Inorganic photochemistry, Polymeric inorganic reactions and coordination compound spectra. Carbohydrates, vitamins and Enzymes Polarography and DTA Organometalic compounds and their synthetic use
Special Inorganic chemistry Course XV A,B,C	Spectroscopy of inorganic anions, Bioinorganic chemistry
	Organic rearrangement reaction Natural products and their chemistry Pharmokinetics, Antibiotics and other drugs, Polymers and their synthesis
	Quantum mechanics X ray diffraction, superconductivity, statistical mechanics, biophysical chemistry. Surface morphology of polymers
Special Organic chemistry Course XVI A,B,C Special Physical Chemistry Course XVII A,B,C	

Program Out comes	***A student will be able to***
	Fully skilled to teach chemistry at school and college level

	Appear for NET ,SET and can go further for higher studies
	Handle various analytical instruments.
	Work as a chemist in pharmaceuticals and other industry
	Have basic knowledge of medicines
	Understand demographically distribution of all chemicals in nature.

Master of Arts in English

Mission Statement

The written word grounds the Master of Arts in English and Comparative Literature. Its students learn to analyze literature and to write on literary topics at an advanced level. Students complete a rigorous program of courses that introduce them to cutting-edge research while training them to understand a range of theoretical and literary-historical frameworks for understanding literature.

Program Outcomes (POs)

Students will demonstrate an appropriate level of expertise in literary history, literary theory, and rhetoric.

Students will demonstrate high-level proficiency in literary research and in the synthesis of research.

Students will demonstrate critical and analytical skills in the interpretation and evaluation of literary texts.

Students will demonstrate a command of written academic English, including the abilities to

a) Organize and present material in a cogent fashion,

b) Formulate and defend original arguments,

c) Employ effectively the language of their discipline and

d) Write under time constraints.

PO 1: Good knowledge that includes the understanding of recent developments in language and literature.

PO 2: Linguistic skills, critical talents in literature and acumen for a better understanding of the diversity ofhuman experiences.

PO 3: Creative skills to investigate, analyse, and synthesize information, concepts and theories.

PO 4: broadened outlook and sensibility.

PO 5: enhanced aesthetic and intellectual faculties.

PO 6: rewarding careers in arts and education.

PO 7: knowledge, skill and inspiration to qualify for M Phil and PhD programmes and undertake teachingcareers at undergraduate and postgraduate level.

MASTERS PROGRAMME IN ENGLISH

On completing M. A. in English, students will attain:

a): knowledge and insight into English language and Literature on an advanced level

b): openness to new ideas, perspectives and ways of thinking

c): aesthetic sensibility; critical and analytical skills; creativity.

d): skill in organizing and expressing ideas and perspectives with clarity and coherence through writing

and speech.

Course Outcomes

1. The socio-political background of Chaucer's age.

2. The birth of modern literature& the influence of Renaissance on literature.

3. Life and society and literature of the Elizabethan Age

4. University Wits, Metaphysical poetry, Jacobean playwrights.

5. Dramatic and theatrical conventions of Elizabethan theatre.

6. Shakespeare's language and themes

7. Shakespeare's characters (heroes, women, villains, fools and clowns) and compare, contrast and

categorise them.

.8. Discover the importance of nature over order and reason.

9. Have a thorough knowledge of early 19th century novel – historical novel, gothic novel, domestic novel.

10. Analyze the poetry of Wordsworth, Coleridge, Byron, Shelley, Keats and other romantic poets and the Victorian Poets.

11. Discover the impact of Romanticism and Victorian Literature in Modern and recent literature.

12. Comprehend the influence of world wars on the literary canvas of modern age and understand the major literary and social changes that characterize the modern age.

13. Familiarize with various schools of thought in the modern age leading to post modernism.

14. Comprehend the psychological, sociological, cultural, racial, gender issues in texts and history.

15. Tragedy – Comedy – Aristotle's views on tragedy

16. Learn about the contributions of the New Critics

17.Have a thorough knowledge on Structuralism, Deconstruction, Feminism, and Psychoanalysis.

18. Introduces Poets of the Century WB Yeats and T.S.Eliot.

19. Focus on Virginia Woolf and E.M Foster, the very powerful writers of the century.

20. The Background study introduces various concepts like Dada and Surrealism, Stream of Consciousness Technique