Government Degree College Nowshera

Department of Economics

Program Outcome and Course Outcome

Department of Economics

Name of Programme: B.A Economics (UG)

A- Programme Outcomes (POs)

Economics subject enables the learners to build up a professional carrier as economists, financial advisors, economics planners and policy makers. It prepares them to cope up with the stress and strain involved in the process of economic development. Department supports the education and training of students, teachers and research in economics.

PO1- Analyse the economic behaviour of human beings.

PO2- Perform quantitative analysis of Economic variables using tools appropriate for the study

PO3- Demonstrate an understanding of the basic functioning of the national and global economy.

PO4- Apply economic theories and methodologies in analysing economic issues at the local, national and global level

PO5- Deduce reasonable predictions about possible economic outcomes based upon economic conditions and economic theories

B- Program Specific Outcomes (PSOs)

PSO1. An ability to understand economic theories and functioning of basic microeconomic and macroeconomic systems

PSO2: The behavioural patterns of different economic agents, advance theoretical issues and their applications.

PSO3. Acquaint with collection, organization, tabulation and analysis of empirical data. Ability to use basic mathematical and statistical tools to solve real economic problems.

PSO4. Acquaint with basic and applied econometric tools and methods used in economics. The aim of this course is to provide a foundation in applied econometric analysis and develop skills required for empirical research in economics. It also covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models.

PSO5. Delineate the developmental policies designed for developed and developing economics. The course also acquaint with the measurement of development with the help of theories along with the conceptual issues of poverty and inequalities.

PSO6: Acquaint with some basic theoretical concept of public finance.

PSO7: Delineate the fiscal policies designed for developed and developing economics.

PSO8. This course emphasises on environmental problems emerging from economic development. Economic principles are applied to valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments.

PSO9. Acquaint with basic issues of Indian economy and learn the basic concept of monetary analysis and financial marketing in Indian financial markets. This course reviews major trends in economic indicators and policy debates in India in the post-Independence period.

PSO10: Facilitate the historical developments in the economic thoughts propounded by different schools.

PSO11: Learn the development issues of Indian economy.

Course Outcomes (COs)

COURSE CODE	COURSE NAME	COURSE OBJECTIVE
UECTC:101	Micro Economics-I	The objective of this paper is to develop understanding in the students about the concepts and tools of economic analysis.
UECTC: 201	Micro Economics-II	The objective of this paper is to develop understanding in the students about the concepts and tools of economic analysis.
UECTC: 301	Macro Economics-I	To provide the conceptual knowledge of macroeconomic variables for a national economyand to develop understanding about the Macro Economic function of economy and its analysis.
UECTS:302	Financial Economics	The objective of this paper is to provide knowledge about the financial market regarding different financial products and services and their operational aspects in India.
UECTC: 401	Macro Economics-II	To provide the conceptual knowledge of macroeconomic variables for a national economy.
UECTS: 402	Data Analysis	To develop the research insight and acquaint them with application of statistical inference
UECTE: 501	Theories of Money and Banking	This paper develops the calibre of the students to understand the banking procedure with its command on money inflow in the market
UECTE: 502	Economic development and policy in India	To acquaint students with development theories and enhance their orientation about economic development. To provide a macroeconomic understanding of the Indian Economy since Independence it begins with a discussion oftheEconomic backdrop of the Indian Economy at the time of Independence and goes on to examine major dimensions of the Economy's transformation
UECTE: 503	Development Economics	To acquaint students with development theories and enhance their orientation about economic development.
UECTE: 504	Stock Market	This course aims to enable the students to get a complete understanding of the Stock market basics.
UECTE: 505	Basic Economics	To integrate the concept of price and output decisions of firms under various market structure.
UECTE: 601	Quantitative Methods in Economics	Understand various quantitative & statistical Methods. Understand data and draw inference from data, Calculate and interpret statistical values by using statistical tools. Demonstrate an ability to apply various statistical tool to solve business problem,
UECTE:602	Public Finance	To develop the conceptual framework aboutgovernment's public economic policies and annual budgeting.
UECTE:603	International Economics	To provide the knowledge about International trade, Terms and conditions of the trade.
UECTS:604	Rural Development Programmes	It aims at improving the quality of life of people living in rural areas both economically and socially.
UECTE:605	Indian Economy	This course is to provide a macroeconomic understanding of the Indian Economy since Independence it begins with a discussion of the Economic backdrop of the Indian Economy at the time of Independence and goes on to examine major dimensions of the Economy's transformation

Government Degree College Nowshera, J&K
Department of Mathematics

Mathematics Program Outcomes,

Program Specific Outcomes and Course Outcomes

Programme Outcomes:

Students who choose B.A/B.Sc with Mathematics as one subject develop the ability to think critically, logically and analytically and hence use mathematical reasoning in everyday life. Pursuing a degree in mathematics will introduce the students to a number of interesting and useful ideas in preparations for a number of mathematics careers in education, research, government sector, business sector and industry. The programme covers the full range of mathematics, from classical Calculus to Number Theory and Modern Algebra. The course lays a structured Foundation of Calculus, Real analysis & Complex analysis, Abstract Algebra, Differential equations, Partial differential Equations , Linear Algebra and. An exceptionally broad range of topics covering Pure & Applied Mathematics cater to varied interests and ambitions of the students. Skill enhancement Courses enable the student acquire the skill relevant to the main subject. Choices from Discipline Specific Electives provides the student with liberty of exploring his interests within the main subject. The well-structured programme empowers the student with the skills and knowledge leading to enhanced career opportunities in industry, commerce, education, finance and research. Further the programme

• Inculcate critical thinking to carry out scientific investigation objectively without being biased with preconceived notions.

• Equip the student with skills to analyze problems, formulate hypothesis, evaluate and validate results, and draw reasonable conclusions thereof.

• Prepare students for pursuing research or careers in mathematical sciences and allied fields

• Imbibe effective scientific and/or technical communication in both oral and writing.

• Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences.

Programme Specific Outcomes

• Understanding of the fundamental axioms in mathematics and capability of developing ideas based on them.

• Inculcate mathematical reasoning.

• Prepare and motivate students for research studies in mathematics and related fields.

• Provide knowledge of a wide range of mathematical techniques and application of mathematical methods/tools in other scientific and engineering domains.

• Provide advanced knowledge on topics in pure mathematics, empowering the students to pursue higher degrees at reputed academic institutions.

• Strong foundation on Abstract Algebra, Real Analysis and complex Analysis.

• Good understanding of number theory which can be used in modern online cryptographic technologies.

• Nurture problem solving skills, thinking, creativity through assignments, project work.

• Assist students in preparing (personal guidance, books) for competitive exams e.g. NET, NBHM, SET, GATE, etc.

Course Outcomes:

Semester I	**Course : Differential Calculus (UMTTC-101)** **Course Objectives:** The primary objective of this course is to introduce the basic tools of calculus and to understand the extension of the studies of single variable differential calculus to functions of two or more independent variables **Course Learning Outcomes:** This course will enable the students to: i) Understand concepts of limit and continuity on **R** through ϵ-δ definition. ii) Learn the conceptual variations when advancing in calculus from one variable to multivariable discussions. iii) Sketch curves in a plane using its mathematical properties in the different coordinate systems of reference. iv) Learn the applications of mean value theorem and Taylor's theorem.
Semester II	**Course : Differential Equations (UMTTC-202)** **Course Objectives:** The main objectives of this course are to introduce the students to the exciting world of Differential Equations (Ordinary Differential equations and Partial Differential equations) and their applications. **Course Learning Outcomes:** The course will enable the students to: i) Understand basic concepts of Differential Equations ii) Solve first order linear and non-linear differential equation and linear differential equations of higher order using various techniques. iii) Formulate, classify and solve linear and non-linear partial differential equations using various methods; and apply these methods in solving some physical problems.
Semester III	**Course : Real Analysis (UMTTC-301)** **Course Objectives:** The course will develop a deep and rigorous understanding of Real line and Real valued functions and of defining terms to prove the results about convergence and divergence of sequences and series of real numbers and real valued functions. These concepts has wide range of applications in real life scenario. **Course Learning Outcomes:** This course will enable the students to: i) Understand many properties of the real line and learn to define sequence in terms of functions from a subset of Natural no's to Real line. ii) Recognize bounded, convergent, divergent, Cauchy and monotonic sequences and to calculate their limit superior, limit inferior, and the limit of a bounded sequence. iii) Apply the ratio, root, alternating series and limit comparison tests for convergence and absolute convergence of an infinite series of real numbers. iv) The geometrical properties of continuous functions on closed and bounded intervals. v) Sequence and series of Real valued functions along with power series and radius of convergence.
Semester IV	**Course : Algebra (UMTTC-401)** **Course Objectives:** The objective of the course is to introduce the fundamental theory of groups and their homomorphisms. Symmetric groups and group of symmetries are also studied in detail. Fermat's Little theorem and Euler's theorem as a consequence of the Lagrange's theorem on finite groups. Concept of Ring and Field and their homomorphism. **Course Learning Outcomes:** The course will enable the students to:

	i) Recognize the mathematical objects that are groups, and classify them as abelian, cyclic and permutation groups, etc; ii) Link the fundamental concepts of Groups and symmetrical figures; iii) Explain the significance of the notion of cosets, normal subgroups, and factor groups. iv) Learn the fundamental concept of Rings, Fields, subrings, integral domains and the corresponding homomorphisms.
Semester V	**Course : Matrices (UMTTE-501)** **Course Objectives:** The primary objective of this course is to introduce the basic tools of theory of equations and matrices to understand their linkage to the real-world problems. Perform matrix algebra with applications. **Course Learning Outcomes:** This course will enable the students to: i) Understand different types of Matrices and their types. ii) Find Rank and also find eigenvalues and corresponding eigenvectors for a square matrix. iii) Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix, using rank. iv) Find matrix form of basic geometric transformations and interpretation of eigenvalues and eigenvectors of such transformations. v) Diagonalize square matrices and learn its applications.
	Course : Linear Algebra (UMTTE-503) **Course Objectives:** The objective of this course is to introduce the fundamental theory of vector spaces, and Linear Transformations. **Course Learning Outcomes**: The course will enable the students to learn about: i) The fundamental concept of vector spaces with plenty of examples from different mathematical areas and the corresponding vector subspaces. ii) The concept of linear independence of vectors over a field, the idea of a finite dimensional vector space, basis of a vector space and the dimension of a vector space. iii) Basic concepts of linear transformations, the Rank-Nullity Theorem, matrix of a linear transformation, algebra of transformations and the change of basis and Dual space and dual basis of vector space.
Semester VI	**Course : Numerical Methods (UMTTE-601)** **Course Objectives:** To comprehend various computational techniques to find approximate value for possible root(s) of non-algebraic equations, to find the approximate solutions of system of linear equations and ordinary differential equations. Also, the use of Computer Algebra System (CAS) by which the numerical problems can be solved both numerically and analytically, and to enhance the problem solving skills. **Course Learning Outcomes:** The course will enable the students to learn the following: i) Some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations, up to a certain given level of precision. ii) Interpolation techniques to compute the values for a tabulated function at points not in the table. iii) Applications of numerical differentiation and integration to convert differential equations into difference equations for numerical solutions.

	Course : Complex Analysis (UMTTE-602) **Course Objectives:** This course aims to introduce the basic ideas of analysis for complex functions in complex variables with visualization through relevant practicals. Particular emphasis has been laid on De Movries theorem and its applications, Analytic FunctionsCauchy's theorems, series expansions etc. **Course Learning Outcomes:** The completion of the course will enable the students to: i) Employ De Moivre's theorem in a number of applications to solve numerical problems. ii) Understand the significance of differentiability of complex functions leading to the understanding of Cauchy-Riemann equations. iii) Understand analytic functions and to evaluate the contour integrals and understand the role of Cauchy-Goursat theorem and the Cauchy integral formula. iv) Get familiar with liouville's theorem and the Fundamental theorem of Algebra and expand some simple functions as their Taylor and Laurent series.

DEPARTMENT OF PHYSICS

PROGRAMME OUTCOMES: B. Sc. PHYSICS

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 logicalconclusion. **PO-3**. Employ critical thinking and the scientific knowledge to design, carry out, record and analyse 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**. discover the capability to use ICT, Electrical devices and other related resources for life-long learning **PO-6**. To inculcate the scientific temperament in the students and outside the scientific community. **PO-7**. To motivate the students to pursue PG courses in reputed institutions **PO-8**: Students will be capable of oral and written scientific communication and will prove that they can think critically and work independently.
Programme Specific Outcomes	**PSO-1** To understand the basic laws and explore the fundamental concepts of physics **PSO-2**To understand the concepts and significance of the various physical phenomena. **PSO-3**To carry out experiments to understand the laws and concepts of Physics. **PSO-4**To apply the theories learnt and the skills acquired to solve real time problems. **PSO-5**To acquire a wide range of problem solving skills, both analytical and technical and to apply them. **PSO-6**To enhance the student's academic abilities, personal qualities and transferable skills this will give them an opportunity to develop as responsible citizens. **PSO-7**To produce graduates who excel in the competencies and values required for leadership to serve a rapidly evolving global community. **PSO-8**To motivate the students to pursue PG courses in reputed institutions. **PSO-9**This course introduces students to the methods of experimental physics. Emphasis will be given on laboratory techniques specially the importance of accuracy of measurements. **PSO-10**Providing a hands-on learning experience such as in measuring the basic concepts in properties of matter, heat, optics, electricity and electronics
Course Outcomes B. Sc Physics	

Course	Outcomes After completion of these courses students should be able to
UPHTC-101: MECHANICS, OSCILLATION AND RELATIVITY (Credit:4)	**CO-1**. Know the Cartesian, spherical polar and cylindrical co-ordinate systems. **CO-2**.Understand Newton's Laws of motion and their applications such as projectile and rocket motion **CO-3**: Gain the knowledge of motion in central force field **CO-4**. Classify elastic and inelastic scattering **CO-5**: Know the difference between Laboratory and centre of mass system **CO-6**: To understand the Special Theory of Relativity. **CO-7**: Discuss the Michelson- Morley Experiment.
UPHPC-102: PHYSICS (Practicals) (Credit:2)	**CO-1**: A working knowledge of fundamental physics and basic mechanics principles. **CO-2**: The ability to identify, formulates, and solve physics problems. **CO-3**: The ability to formulate, conduct, analyses and interprets experiments in physics. **CO-4**: The ability to use modern physics techniques and tools, including mathematical techniques, graphs and laboratory instrumentation. **CO-5**: Students would perform basic experiments related to mechanics and also get familiar with various measuring instruments would learn the importance of accuracy of measurements.
UPHTC-201: VECTOR CALCULUS, ELECTROSTATICS AND ELECTROMAGNETIC WAVES (Credit:4)	**CO-1**: Understand basics of vector calculus. **CO-2**: Understand divergence, gradient and curl and their physical interpretation. **CO-3**: Understand divergence theorem, Green's theorem, and Stoke's theorem and appreciate its applications. **CO-4**: Understand the basic concepts of electric and magnetic fields. **CO-5**: Understand the concept of conductors, dielectrics, inductance and capacitance. **CO-6**: Gain knowledge on the nature of magnetic materials. **CO-7**: Understand the concept of static and time varying fields. **CO-8**: Gain knowledge on electromagnetic induction and its applications **CO-9**: Gain knowledge on EM waves, propagation and their properties. **CO-10**: Ability to use Maxwell's equations in calculations featuring: both free and stationary electromagnetic waves.
UPHPC-202: PHYSICS (Practical's) (Credit:2)	**CO-1**: Understand physical characteristics of SHM and obtaining solution of the oscillator using experiment. **CO-2**: Students would gain practical knowledge about electricity and magnetism and measurements such as: Resistance, Voltage, current etc.
UPHTC-301 : ELECTRONICS THERMODYNAMICS AND STATISTICAL MECHANICS (Credit:4)	**CO-1**: Know the special purpose Diode. **CO-2**: To study the Transistor Amplifier. **CO-3**: To understand the FET, JFETand MOSFET. . **CO-4**: To study the Regulated Power supply. **CO-5**: To understand the Sequential Logic Circuits. **CO-6**: To study kinetic theory of Gases. **CO-7**:Faraday's Laws, Entropy and other thermal properties of matter. **CO-8**: Know the elementary concept of statistics. **CO-9**: Understand statistical distribution of system of particles. **CO-10**: To study Quantum statistics.
UPHPC-302: PHYSICS (Practicals) (Credit:2)	**CO-1**: Understand the applications of diode, npn transistor, and OP-AMP and logic gates. **CO-2**: Understand half adder and full adder. **CO-3**: Understand tunnel diode characteristics. **CO-4**:Students would gain practical knowledge about heat and radiation, thermodynamics, thermo emf etc. and perform various experiment
UPHTC-401: WAVES AND OPTICS (Credit:4)	**CO-1** : understand the phenomenon of interference and its applications **CO-2** : describe the working of optical instruments like microscopes and telescopes **CO-3** : solve problems related to polarization and interference of light **CO-4** : explain the principles of various lasers **CO-5** : recognize the applications of laser in day to day life **CO-6**: find wavelength of monochromatic light by forming Newton's rings. **CO-7**: The course is important for the students to make their career in various branches of science and engineering, especially in the field of photonic engineering.

UPHPC-402: PHYSICS (Practicals) (Credit:2)	The practical knowledge of wave motion doing experiments: Tuning fork, electric vibrations. They would also learn optical phenomena such as interference, diffraction and dispersion and do experiments related to optical devices: Prism, grating, spectrometers
UPYTE-501:MODERN PHYSICS (Credit:4)	**CO-1**.Understand De-Broglie hypothesis and Uncertainty principle **CO-2**. Derive Schrodinger's time dependent and independent equations **CO-3**. Solve the problems using Schrödinger's steady state equation **CO-4**. Know the properties of nucleus likes binding energy, magnetic dipole moment and electric quadruple moment **CO-5**. To understand the concept of radioactivity and decays law **CO-6**. To study achievement of Nuclear Models of Physics and its limitations **CO-7**. To give an extended knowledge about nuclear reactions such as nuclear fission and fusion **CO-8**. To understand the basic concept of Particle Physics **CO-9**. Understand different operators in Quantum Mechanics
UPYTE-502: PHYSICS (Practicals) (Credit:2)	In this course students would be able to understand Basic experiments of modern physics such as: Determination of Plank's and Boltzmann's constants, Determination of ionization potential, Wavelength of H-spectrum, Single and double slit diffraction, Photo electric effect and determination of e/m
UPYTE-601: SOLID STATE PHYSICS, QUANTUM OPTICS AND ELECTRONICS (Credit:4)	**CO-1**. Know the principles of structures determination by diffraction **CO-2**. To understand the principles and techniques of X-rays diffraction **CO-3**. Understanding the Point Defect, Line Defect with example. **CO-4**. Know the fundamental principles of semiconductors and be able to estimate the charge carrier mobility and density **CO-5**. To give an extended knowledge about magnetic properties like Department of Physicsdiamagnetic, paramagnetic, ferromagnetic, ferrites and superconductors **CO-6**. Know the history of LASERS and its basic concepts. **CO-7**. Understand the basic principle and working of different types of lasers. **CO-8**: Know the applications of lasers in various fields. **CO-9**: Understand the characteristics of LASERS. **CO-10**: Learn safety precaution sand measures while handling the lasers. **CO-11**. To study the Operational Amplifier and their types.
UPYPE-602: PHYSICS (Practicals) (Credit:2)	The students would gain the knowledge of Basic Electronics circuits, network theorems and measuring instruments: They would know about common solid state devices: Semiconductor diodes and transistors. The topics also include the Rectifiers, Filters and their applications, number systems and logic gates which are foundation blocks of digital electronics.

Department of Botany, GDC Nowshera

Name of the Programme:- Bachelor Degree Programme(UG).

A. **PROGRAMME OUTCOMES (POs)**- Upon successful completion of their graduation with Botany as Core Subject, students will gain:-

PO1. Knowledge and understanding about Plant Diversity.

PO2. Practical skills in the field and laboratory experiments.

PO3. Presentation skills (Oral & Writing) in Life Sciences.

PO4. Scientific knowledge in Life Sciences and fundamental metabolism of plants.

PO5. Knowledge about Plant Biodiversity, exploration, estimation and conservation.

B. **PROGRAMME SPECIFIC OUTCOMES (PSOs)**- On successful completion of the B. Sc. Programme in Botany, the students will be able to:-

PSO1. Demonstrate the basic knowledge on the various aspects of plantlife.

PSO2. Develop the ability to communicate effectively the concepts related to the Plant world that he/she has learned in the class.

PSO3. Apply the knowledge acquired in the classes to solve the problems using critical thinking and analytical reasoning.

PSO4. Imbibe the moral and ethical values to lead a peaceful life in a world of multicultural competence.

PSO5. Develop the scientific attitude to become a good researcher in Plant Sciences.

PSO6. Effectively utilize the knowledge so acquired to prepare for the various competitive examinations for career development.

C. **COURSE OUTCOMES (COs)-**
Semester-I
COURSE TITLE:- The Diversity of Microbes and Cryptogams
COURSE CODE:- UBOTC 101 (THEORY)- 4 Credits
UBOPC 102 (PRACTICAL)- 2 Credits
Upon completion of the course, students will be able to:-

CO1. Illustrate the characters of micro-organisms (Viruses, Bacteria, Cyanobacteria, Mycoplasma).

CO2. Identify the micro-organisms and understand their economic importance.

CO3. Understand the structure of plant viruses, their transmission and control measures.

CO4. Learn about the important characteristics, thallus organization and classification of algae; life histories of important algal genera and their economic importance.

CO5. Know about the general characteristics and classification of Fungi; life histories of important fungal genera and the economic importance of Fungi.

CO6. Identification of disease symptoms in host plants infected by fungi, viruses and mycoplasmas.

CO7. Understand the morphology, anatomy and reproductive details of the important genera belonging to Bryophytes and Pteridophytes.

CO8. Learn about the roles of Bryophytes in monitoring and controlling pollution, preventing soil erosion, geobotanical prospecting, horticulture and industries.

CO9. Evolution of sporophyte and alternation of generation in bryophytes.

CO10. Evolution of heterospory, stelar system and alternation of generation in pteridophytes.

Semester-II

COURSE TITLE:- Characteristics and Systematics of Seed Plants
COURSE CODE:- UBOTC 201 (THEORY)- 4 Credits
UBOPC 202 (PRACTICAL)- 2 Credits
Upon completion of the course, students will be able to:-

CO1. Learn about the process of fossilization, types of fossils and few representatives of gymnosperm and angiosperm fossils.

CO2. Know about the general characteristics and classification of gymnosperms.

CO3. Compare the morphology, anatomy and reproductive details of important gymnosperms (Cycas, Ephedra and Pinus).

CO4. Understand the origin of angiosperms; history of angiosperm taxonomy andvarious systems of angiosperm classification.

CO5. Analyse the role of ICN, BSI and herbarium preparation techniques.

CO6. Understand the principles and rules of Botanical Nomenclature; taxonomic ranks and principle of priority.

CO7. Know about the classification systems and tools in angiosperm taxonomy; contributions of anatomy, embryology, cytology and phytochemistry in the field of taxonomy.

CO8. Learn about various angiosperm families and their economic importance.

CO9. Evaluate the features of dicotyledonous and monocotyledonous plants.

CO10. Construct the floral diagram, compile the floral formulae and discuss the floral features of various angiosperm families.

CO11. Describe the plants growing in the surroundings in taxonomic language and know the botanical names of local plants.

Semester-III

COURSE TITLE:- Plant Anatomy, Embryology and Ecology.
COURSE CODE:- UBOTC 301 (THEORY)- 4 Credits
UBOPC 302 (PRACTICAL)- 2 Credits
Upon completion of the course, students will be able to:-

CO1. Understand the concept, types and organization of meristems.

CO2. Work out the anatomical details of monocot and dicot tissues; the concept of vascularization and the organization and systematic value of epidermal modifications (trichomes and stomata).

CO3. Illustrate the structure and derivatives of secondary meristems; the composition of food and water conducting tissues in plants and the concept of secondary growth.

CO4. Examine the structure and development of male and female reproductive parts of a flower; assess the types of pollination; attractants and rewards for pollinators and pollen-pistil interaction.

CO5. Understand the process of fertilization; post-fertilization events leading to formation of fruit and development of embryo and endosperm.

CO6. Learn the seed formation and seed dispersal strategies.

CO7. Know about atmosphere stratification and composition; greenhouse effect; climate change; community ecology and energy flow through the ecosystem.

CO8. Understand the concept, process and types of ecological succession; climax communities; growth curves; ecotypes and ecads.

Semester-IV

COURSE TITLE:- Plant Physiology and Metabolism
COURSE CODE:- UBOTC 401 (THEORY)- 4 Credits
UBOPC 402 (PRACTICAL)- 2 Credits
Upon completion of the course, students will be able to:-

CO1. Appreciate the various mechanisms underlying the important activities of plants such as absorption of water, minerals, solute transport, transpiration etc.

CO2. Spell out the water relations of plants and infers its relation to plant growth and function.

CO3. Organize the photosystems and experiment with C3, C4 and CAM plants and identify their significant characters.

CO4. Examine the mechanism of photosynthesis; light reaction; dark reaction; oxygen evolving complex etc.

CO5. Understand the mechanism of respiration; ETC and synthesis of ATP.

CO6. Know about the biological Nitrogen Fixation; concept and roles of secondary metabolites; pathways in the synthesis of sec. metabolites etc.

CO7. Gain knowledge about the various types of stresses faced by the plants and the mechanisms adopted by them to overcome these.

CO8. Assess the roles and modes of action of various plant hormones; the concept of seed dormancy and germination; physiology of flowering etc.

CO9. Discuss the roles of photomorphogenesis, photoperiodism and vernalization in plant growth and development

Semester-V

COURSE TITLE:-Cell Biology and Genetics
COURSE CODE:- UBOTE501 (THEORY)- 4 Credits
UBOPE502 (PRACTICAL)- 2 Credits
Upon completion of the course, students will be able to:-
CO1. Understand the structure and functions of cell wall, plasma membrane and various cell organelles typical of a eukaryotic cell.
CO2. Elucidate the physical and chemical structure of chromosomes; reductional and equational divisions; the structure and replication of DNA.
CO3. Know the structure and function of extranuclear genomes; mitochondrial and plastid DNA and plasmids.
CO4. Discuss the organization of DNA in prokaryotes and eukaryotes; concept of gene; genetic code; transcription and translation.

CO5. Understand the types, effect and detection of various chromosomal alterations; types and origin of euploidy and aneuploidy.
CO6. Work out the various types and sources of mutations; transposable elements; DNA damage and repair mechanisms.
CO7. Explain Mendel's laws of inheritance and work out the allelic and non-allelic gene interactions.
CO8. Understand the mechanism of linkage and crossing over; the role of linkage in mapping of genes.

Semester-VI

COURSE TITLE:-Economic Botany and Biotechnology
COURSE CODE:- UBOTE601 (THEORY)- 4 Credits
UBOPE602 (PRACTICAL)- 2 Credits
Upon completion of the course, students will be able to:-
CO1. Understand the origin of major food crops i.e. wheat, maize and rice and their cultivation patterns in India.
CO2. Discuss the Botany, processing and utilization of fibres, non-alcoholic beverages and spices & condiments.
CO3. Learn the cultivation and utilization of major oil crops, pulses, vegetables and fruits.
CO4. Gain knowledge of medicinal plants, firewood and timber-yielding of J&K; sources and extraction of Rubber.
CO5. Assess the cultivation and maintenance of indoor & outdoor ornamental plants.
CO6. Understand the basic concepts of plant tissue culture; micropropagation; somatic embryogenesis and somaclonal variations.
CO7. Learn the concept of biotechnology; recombinant DNA technology; gene cloning and c-DNA library.
CO8. Elaborate the salient features of cloning vectors; mechanism and applications of PCR; use of *Agrobacterium* vectors for gene delivery.
CO9. Know about the transgenic plants and salient achievements in crop biotechnology.

Department of Environmental Science, GDC Nowshera

Name of the Programme: - Bachelor Degree Programme(UG).

A. **PROGRAMME OUTCOMES (POs)**- Upon successful completion of their graduation with Environmental Science as AECC and Skill courses, students will gain:-

PO1. Knowledge and understanding about various Environmental Issues.

PO2. Practical skills in the field and laboratory experiments.

PO3. Presentation skills (Oral & Writing) in Life Sciences.

PO4. Scientific knowledge in Environment Management Practices.

PO5. Environment Friendly skills.

B. **PROGRAMME SPECIFIC OUTCOMES (PSOs)**- On successful completion of the B. Sc. Programme in Environmental Science as AECC or Skill course, the students will be able to:-

PSO1. Demonstrate the concept of Environment, Ecosystem, Biodiversity and Natural resources; along with their conservation.

PSO2. Develop the sense of responsibility towards Environment and take a step towards sustainable development.

PSO3. Apply the knowledge acquired in the classes to solve the problems of solid waste generation in order to make environment clean and healthy.

PSO4. Develop the scientific attitude towards environment by imbibing the concept of EIA and disaster management in this present world of competence.

PSO5. Develop the scientific attitude to become a good researcher in Environmental Science.

PSO6. Effectively utilize the knowledge so acquired to prepare for the various competitive examinations for career development.

C. **COURSE OUTCOMES (COs)-**

Semester-I

COURSE TITLE: - Environmental Studies- 1
COURSE CODE: - UESTS 104 (THEORY) - 2 Credits

Upon completion of the course, students will be able to:-

CO1. Understand the concept, components and importance of Environment and Environmental Studies.
CO2. Illustrate the structure and function of ecosystem and have knowledge of important concepts like food chain, food web and ecological pyramids.
CO3. Know about the various bio-geochemical cycles in ecosystem like carbon cycle, nitrogen cycle and phosphorous cycle.
CO4. Learn about the types, concept and process of ecological succession with examples.
CO5. Understand the concept, levels and values of biodiversity. Also, have an overview of status of Biodiversity in India and at global level.
CO6. Identify the various threats of biodiversity like habitat loss, poaching of wildlife and man-wildlife conflicts.
CO7. Understand the various measures that can be taken for conservation of biodiversity and learn important concepts like ecotourism and protected areas with special reference to Jammu and Kashmir.
CO8. Learn about the various kinds of natural resources like forest resources, water resources, food resources, energy resources and land resources.
CO9. Understand the various uses of these resources and how over-exploitation of the same results in their vanishing.

CO10. Illustrate the various measures that can be taken in order to conserve these resources like afforestation, rain water harvesting, watershed management, organic farming, alternate energy resources use, wasteland reclamation.

Semester-II

COURSE TITLE: - Environmental Studies - 2
COURSE CODE: - UESTS 204 (THEORY) - 2 Credits
Upon completion of the course, students will be able to:-

CO1. Learn about the causes, effects and control measures of air pollution, water pollution, radiation pollution and noise pollution.
CO2. Know about the causes and of solid waste generation; and have a knowledge of solid waste management.
CO3. Understand the important concepts like global warming, ozone depletion, acid rain and natural disasters in order to know the present environmental issues.
CO4. Understand the common diseases that pose threat to human health and safety like air borne diseases, water borne diseases, food borne diseases and vector borne diseases.
CO5. Know the causes, effects and control measures of HIV/AIDS and drug addiction.
CO6. Decipher the role of IT in environment and human health.
CO7. Know about the environmental treaties like Montreal protocol and Kyoto protocol, laws and ethics.
CO8. Learn about salient features of some acts related to environment like Wildlife Protection Act (1972), Water Act (1974), Forest Conservation Act (1980), Air Act (1981) and Environmental Protection Act (1986).
CO9. Describe the structure, composition and functions of National Green Tribunal.
CO10. Understand important concepts like Environmental Ethics and Sustainable Development.

Semester-III

COURSE TITLE: - Solid Waste Management
COURSE CODE: - UESTS 301 (THEORY) - 2 Credits
UESPS 302 (PRACTICAL)- 2 Credits
Upon completion of the course, students will be able to:-

CO1. Understand concept and current scenario of solid waste both in India and at global level as well.
CO2. Work out the sources and classification of solid waste and various factors effecting the generation of solid waste.
CO3. Illustrate the evolutionary concept of legislative measures related to environment and solid waste management.
CO4. Examine the measures that can be taken in handling and segregation of solid waste at source; also various methods of separation and waste reduction.
CO5. Understand the process of collection and transportation of solid waste.
CO6. Learn the various kinds of solid waste management methods or techniques and role of community participation in waste management.
CO7. Know about methods like composting, vermicomposting and farmyard manure used in order to manage organic waste.
CO8. Understand the various types of solid waste disposal techniques like sanitary landfill, incineration, pyrolysis, gasification and injection wells.
CO9. Learn about the techniques used for management of E-waste.

Semester-IV

COURSE TITLE:- Environmental Impact Assessment (EIA)
COURSE CODE: - UESTS 401 (THEORY) - 2 Credits
UESPS 402 (PRACTICAL)- 2 Credits
Upon completion of the course, students will be able to:-

CO1. Understand the concept and general process of EIA; and its historical background
CO2. Spell out the various Environmental Impacts that are to be considered in EIA process and their types.

CO3. Have an overview of EIA notifications to understand the concept in better way.
CO4. Predict and assess various environmental impacts.
CO5. Understand the various EIA methodologies: their types, advantages and disadvantages.
CO6. Know about the concept of EIA documentation and reporting by understanding EIS (Environmental Impact Statement), EA (Environmental Auditing) and EMP (Environmental Management Plan).

Semester-V

COURSE TITLE: - Environmental Pollution and Management
COURSE CODE: - UESTS 501 (THEORY) - 2 Credits
UESPS 502 (PRACTICAL) - 2 Credits
Upon completion of the course, students will be able to:-
CO1. Understand the basic structure of the atmosphere and the emerging issue of air pollution
CO2. Elucidate the various effects of air pollution on biological system and non-biological systems with the help of case studies
CO3. Know the control and management strategies that can help to reduce air pollution
CO4. Discuss the physic-chemical properties of water and know about different types and sources of water pollution
CO5. Understand how water pollution effects man and environment and keen observation of case studies will help to understand it in better way
CO6. Know about the control and management of water pollution
CO7. Explain sources of soil pollution and reasons of soil degradation due to anthropogenic activities
CO8. Understand the effects of soil pollution on soil quality and productivity with the help of case studies
CO9. Know about the emerging environment friendly control measures for soil degradation in the form of bio-fertilizers, organic farming and bio-pesticides

Semester-VI

COURSE TITLE: - Environmental Hazards: concept and management
COURSE CODE: - UESTS 601 (THEORY) - 2 Credits
UESPS 602 (PRACTICAL) - 2 Credits
Upon completion of the course, students will be able to:-
CO1. Understand the types of natural and man-made disasters along with their characteristics, causes and effects
CO2. Discuss the regional (J&K), national (India) and global profile of disasters
CO3. Learn the characteristics of various man-made disasters, wind related disasters, hydrological disasters, geological disasters and environmental disasters
CO4. Gain knowledge of Disaster Management Cycle and how it works.
CO5. Understand the role of ICT, Government, NGO bodies, IT and Media in Disaster preparedness as well as mitigation.

Govt.Degree College Nowshera

Department Of Zoology

Name of The Program:-B.Sc

B.Sc (Zoology as core subject) Program Outcomes, Program Specific Outcomes and Course Outcomes

Zoology Program Outcomes:

=To impart basic knowledge of various disciplines of Zoology and General biology meant for a graduate and for higher studies.
= To acquire basic skills in the observation and study of nature, biological techniques, experimental skills and scientific investigation.
= Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms.
= Analyze complex interactions among the various animals of different phyla, their distribution and their relationship with the environment.
=Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms.
= Understands the complex evolutionary processes and behavior of animals.
= Correlates the physiological processes of animals and relationship of organ system.
=Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species.
=Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, and vermicompost preparation.
= Understands about various concepts of genetics and its importance in human health.
= Apply ethical principles and commit to professional ethics and responsibilities in delivering his duties.
=Apply the knowledge and understanding of Zoology to one's own life and work.
=Develops empathy and love towards the animals.

Program Specific Outcomes:

= Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology.

= Analyze the relationships among animals, plants and microbes.

=Perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Clinical science, tools and techniques of Zoology, Toxicology, Entomology,Nematology, Sericulture, Biochemistry, Fish biology, Animal biotechnology, Immunology and research methodology.

=To explain physiological and biochemical activities and its impact on human bodies.

=Understand the applications of biological sciences in Apiculture, Aquaculture, Agriculture and Medicine.

=To identify socio-economic animals & it's beneficial to humans.

=Gains knowledge about research methodologies, effective communication and skills of problem solving methods.

=Contributes the knowledge for Nation building.

Course Outcomes:-

SEMESTER: 1ST

COURSE NAME: ANIMAL DIVERSITY

COURSE CODE: UZOTC-101(Theory) UZOPC-101 (Practical)

=After successfully completing this course, students will be able to:

-Understand general taxonomic rules on animal classification.

-Observe the diversity in non-chordates and chordates and their systematic position.

-Classify Protista up to phylum using examples from parasitic adaptation .

-Classify Phylum Porifera to Echinodermata with taxonomic keys.

- Describe Phylum Nematoda and give examples of pathogenic Nematode.

-Classify phylum Protochordates to Mammalia.

-Imparts conceptual knowledge of invertebrates and vertebrates, their adaptations and associations in relation to their environment.

-Understand economic importance of some classes.

- Learn dissection of different systems of invertebrates.

- Learn preparation of temporary slide and studied through prepared slides.

- Study of museum specimens.

SEMESTER 2ND

COURSE NAME: COMPARATIVE ANATOMY AND DEVELOPMENTAL BIOLOGY VERTEBRATE

COURSE CODE: UZOTC-201(Theory) UZOPC-201 (Practical)

=After successfully completing this course, students will be able to:

- Understand ontogenetic and phylogenetic developmental in vertebrates.

-The structural comparisons of vertebrate systems in major groups of vertebrates.

-Understand functional anatomy of organs.

-Develop critical understanding how a single-celled fertilized egg becomes an embryo and then a fully formed adult by going through three important processes of cell division, cell differentiation and morphogenesis.

-Gains knowledge about gametogenesis, cleavage mechanisms, gastrulation and role of hormones in metamorphosis and regeneration.

-Elucidate early embryonic development of frog.

-Gain knowledge regarding internal system of vertebrates.

-Understand organs through permanent slides.

-Gain skill about histological slide preparation, staining and mounting

-Analyze and describe zoological concepts, including morphology and anatomy

- Acquire basic understanding of methods and designs that can be used for further study and research.

Semester 3rd

COURSE NAME: ANIMAL PHYSIOLOGY AND BIOCHEMISTRY

COURSE CODE: UZOTC-301(Theory) UZOPC-302 (Practical)

=After successfully completing this course, students will be able to:

-Gain a deep knowledge of physiology.

-Explain various aspects of physiological activities of animals with special reference to humans.

-Understand concepts of digestion respiration excretion the functioning of nerves and muscles.

-Gain deep knowledge in biochemistry and bioenergetics.

-Define and explain the basic principles of biochemistry and bioenergetics useful for biological studies for illustrating different their structure, function and metabolism.

-understand Interactions and interdependence of physiological and biochemical processes.

-Gain skill about various lab tests.

-Gain skill about histological slide preparation, staining and mounting.

-Gain skill about determination of pH and quantitative analysis of blood cells.

Semester 3rd

COURSE NAME: APICULTURE (SKILL ENHANCEMENT COURSE)

COURSE CODE: UZOTS-303

=After successfully completing this course, students will be able to:

-Explain what the prerequisite to get started in beekeeping are.

-Identify where to purchase equipment and demonstrate how to assemble it.

- Name and identify major parts of the honeybee such as the stinger or mandibular parts.

-Describe bee biology and anatomy from the perspective of managing bees.

-Describe the importance of wax and identify what to look for in comb during hive inspections

Semester 4th

COURSE NAME: PRINCIPAL OF GENETICS AND EVOLUTIONARY BIOLOGY

COURSE CODE: UZOTC-401(Theory) UZOPC-402 (Practical)

=After successfully completing this course, students will be able to:

-Understand the mechanism of cell cycle and cell division.

-Understand Mendelian and Non Mendielian inheritance.

-Apply the principles of Mendelian inheritance.

-Understand the cause and effect of alterations in chromosome number and structure.

-understand the central role that genetics play in the life of all organisms.

- Acquire knowledge about the evolutionary history of earth (living and non living).

-Develop a holistic appreciation on the phylogeny and adaptations in animals.

- Understand the evolution of universe and life.

- Understand the process and theories in evolutionary biology.

-Gain knowledge about the distribution of animals on earth, its pattern, evolution and causative factors and its adaptation.

Semester 4TH

COURSE NAME: AQUARIUM FISH KEEPING (SKILL ENHANCEMENT COURSE)

COURSE CODE: UZOTS-403

=After successfully completing this course, students will be able to:

-To learn the scientific method of setting an aquarium.

-Gain knowledge of ornamental fish breeding which is highly professional and attractive avenue for youth

- Understand conditioning factors and how they can be manipulated.

Semester 5th

COURSE NAME: Applied Zoology

COURSE CODE: UZOTE-501(Theory) UZOPC-502 (Practical)

=After successfully completing this course, students will be able to:

- Explain animal associations and their types.

-Acquire knowledge about life cycle and importance of major parasites.

-Understand transmission routes of animal and zoonotic parasites

-Gain knowledge about immunity, antigens-antibodies and their properties

-Understand the culture techniques of prawn, pearl and fish.

-Understand silkworms rearing and their products

-Understand the Bee keeping equipments and apiary management.

-Understand dairy animals' management, the breeds and diseases and learn the testing of egg and milk quality.

- Learn various concepts of lac cultivation.

- Understand Aqua culture systems, induced breeding techniques, post harvesting techniques.

-Gain knowledge about various disease related vectors and their impact on human.

-Understands processes of fisheries, sericulture, along with crop pest management techniques.

-Understands concepts of tissue and cell culture techniques.

Semester 5TH

COURSE NAME: Public Health and Hygiene (SKILL ENHANCEMENT COURSE)

COURSE CODE: UZOTS-503

=After successfully completing this course, students will be able to:

- Identify current national and global public health problems.

- Aware about the issues of food safety, water safety, vaccination, exercise and obesity, exposure to toxins.

- Frame a public health plan during any epidemic or spread of infectious disease etc.

- Analyze case studies of infant mortality and obesity.

SEMESTER 6TH

COURSE NAME: INSECT VECTOR AND DISEASES

COURSE CODE: UZOTE-601(Theory) UZOPC-602 (Practical)

=After successfully completing this course, students will be able to:

-Acquire general morphology of insects

-Understand the role of insects in spread of diseases

-Understand the role of household insects in relation to human health.

-Develop awareness about the causative agents and control measures of many commonly occurring diseases.

- Devise strategies to manage the vectors population below threshold levels, public health importance.

-Justify the control measures of arthropod vectors.

-Collect parasite, vector and pest specimen.

Semester 6TH

COURSE NAME: SERICULTURE (SKILL ENHANCEMENT COURSE)

COURSE CODE: UZOTS-503

=After successfully completing this course, students will be able to:

-Explain what the prerequisite to get started in sericulture are.

-Generation of skilled man power in the field of sericulture.

-Gain knowledge of pre and post cocoon management.

-Gain knowledge of silk worm rearing, mulberry cultivation, pests and diseases associated with silk worm, mulberry and various process involved in silk production.-Describe silkworm biology and anatomy from the perspective of managing silkworm.

- To provide field exposure.

GOVT. DEGREE COLLEGE NOWSHERA
DEPARTMENT OF PUNJABI
SUBJECT: PROGRAMME OUTCOMES AND COURSE OUTCOMES FOR THE SUBJECT PUNJABI.

Punjabi Discipline course- for BA Programme

Course Objective: This course is offered only to those students who take discipline Punjabi as one of their core subjects in BA Programme. The students study a total of 6 papers- 4 core and 2 discipline specific elective- in 6 semesters. The course is meant to acquaint the students with Punjabi Literature and World Literature. Various papers offered in this course include collections of short stories, poetry, novels, plays, Gurmat&Sufi Poetry, Life sketch, Punjabi Feminist Literature. It aims to enhance the literary component and an understanding of various genres and literary ages, ability to critically analyse texts and engage in academic discussion, research work, PhD and Translation.

Skill Enhancement Course- For BA Programme

Course Objective: The skill Enhancement courses (or Ability enhancement Elective Course) are designed to provide value- based and skill-based knowledge and aimed at providing hands-on training, skills etc. The papers offered by the Department- such as Learning Skill of film making, Lexicography, Creative Writing and Drama & Theatre. The objective is to make the students enlarge their skill set for greater employability. The pedagogy used in the teaching of these courses also goes beyond the traditional text- based approach to a more interactive, workshop- based model. It is more task-based than text-based wherein the students' proficiency is monitored at regular intervals.

General Elective (GE)- for B.A. Programme

Course Objective– This is an elective course chosen from an unrelated discipline/subject, with an intention to seek exposure. The Department offers a variety of papers in the present Generic Elective course to students from programme courses who have discipline/subject other than Punjabi. Students are encouraged to opt for four interdisciplinary papers(for honours students) and two for BAProgramme in their General Elective course to expose them to other disciplines and encourage critical innovation through the conflation of various strata of knowledge of diverse subjects.

Papers like Punjabi Drama and Functional Punjabi, Modern Punjabi story and functional Punjabi, Punjabi essay and Functional Punjabi.

Students also have an opportunity of pursing a more focused study of the literature of the Indian. Subcontinent in Literature of the Indian Diaspora, Partition Literature.

A paper like Academic Writing and Composition is especially useful in honing research oriented written articulation of students.

Ability Enhancement Compulsory Course- MIL Punjabi

Course Objective- The Course is a three-tiered structure, addressing different levels of language learning acquired in school. The purpose of this course is to introduce students to the theory, fundamentals and tools of communication and to develop in them vital communication skills which should be integral to personal, social and professional interactions. Communication is basic to human existence and binds society together. In the context of rapid globalization and increasing recognition of social and cultural pluralities, the significance of clear and effective communication has substantially enhanced. The present course aims to address these aspects through an interactive mode of teaching- learning process and by focusing on various dimensions of communication skills such as speaking skills in personal, professional and social context like interviews, dialogue/ conversation, groupsdiscussion; reading skills through reading comprehension as well as writing skills tested through report writing, note making etc.

Core Punjabi- for B.A./B.Com. Programme- taught in 2 semesters

Course Objective: This Course aims to enhance the proficiency in the skills of Listening, speaking, Reading and Writing and tests these skills through a constant monitoring in class. The course has a variety of source readings rather than a prescribed textbook to allow for flexibility, useful in creating language learning tasks and activities for projected outcomes. The objective is to encourage recognition and awareness of different genres like the Punjabi novel and Drama, Medieval narrative poetry and autobiography. Topical and social themes form an integral part of this course and by the end of the two-semester course the learner should have sufficient vocabulary to read and understand biographical sketches, narratives, summaries and understand scripts, speak fluently and narrate at length with minimal errors in syntax.

The course offered activities centred on translation for students, and gives them a composite view of multiculturalism

DEPARTMENT OF SOCIOLOGY

GOVT. DEGREE COLLEGE NOWSHERA

PROGRAMME SPECIFIC OUTCOMES

Sociology seeks to understand all aspects of human social behavior, including the behavior of individuals as well as the social dynamics of small groups, large organizations, communities, institutions, and entire societies. Sociologists are typically motivated both by the desire to better understand the principles of social life and by the conviction that understanding these principles may aid in the formulation of enlightened and effective social policy. Sociology provides an intellectual background for students considering careers in the professions or business. An Honours Graduate student of Sociology should able to develop:

- Critical Thinking: The programme seeks to develop in students the sociological knowledge and skills that will enable them to think critically and imaginatively about society and social issues.
- Sociological Understanding: The ability to demonstrate sociological understandings of phenomena, for example, how individual biographies are shaped by social structures, social institutions, cultural practices, and multiple axes of difference and inequality.
- Written and Oral Communication: The ability to formulate effective and convincing written and oral arguments.
- Better understanding of real life situation: The ability to apply sociological concepts and theories to the real world and ultimately their everyday lives.
- Analytical thinking: Field survey and preparation of dissertation paper is an inseparable part of Sociology Hons Programme. Students have to collect primary data for census as well as his/her research topic and analyse the data to draw conclusions. So, qualitative and quantitative analytical skills are enhanced.
- Observation power: a sensible observation power is necessary to identify the research problems in field study. So a perception about human society slowly grows up.
- Communication skills and Social interaction power: Students of Sociology stream have to work beyond the class room boundary at the time of field study activities. As a result good communication skill develops while interacting with local people.
- Ethical and Social Responsibility: Students have to learn about institutions, folkways , mores, culture, social control ,social inequality, population composition, population policy, society and culture of India. All these help to instill among the students of Sociology a sense of ethical and social responsibility.
- Professional and Career Opportunities: Students will have the opportunity to join professional careers in Sociology and allied fields. Sociology provides an intellectual background for students considering careers in business, social services, public policy

government service, nongovernmental organizations, foundations, or academia. This programme lays foundation for further study in Sociology, Social work, Rural Development, Social Welfare and in other allied subjects.

COURSE OUTCOME SEM 1ST

COURSE TITLE: INTRODUCTION TO SOCIOLOGY

COURSE CODE :USOTC-101 **CREDIT - 6**

The course is intended to introduce the students to a sociological way of thinking. It provides an understanding of the discipline of Sociology and sociological perspective. It also provides foundation for other more detailed and specialized courses in sociology. Students will be able to

- Define Sociology and demonstrate nature, scope and subject-matter of Sociology.
- Demonstrate how Sociology differ from and similar to other social sciences and their areas of interdependence.
- Acquaint themselves with the basic concepts of Sociology like society, community, association, culture, social change, social stratification etc.
- Know the basic social institutions like family, marriage, kinship in a scientific way.
- Understand and demonstrate how self develops through various process of interaction. Demonstrate how societal and structural factors influence individual behaviour.
- Explain social change and the factors affecting social change. Realize the importance of cultural lag to understand social change.

COURSE OUTCOME SEM:2ND

COURSE TITLE: SOCIETY IN INDIA

COURSE CODE:USOTC 201 **CREDIT-6**

The course explores substantive issues in Rural and Urban Sociology. It gives attention to Indian themes. Studying the course students will be able to

- Define Rural Sociology and urbansociology. demonstrate nature, subject-matter and importance of studying Rural Sociology.
- Understand and analyze social, economic and political aspects of rural society and urban society.
- Demonstrate how caste system operates and its importance in rural society.
- Define and demonstrate democratic decentralization of power and importance of Panchayati Raj Institution in bringing about changes in rural society.
- Understand the changes that are taking place in rural society with reference to agrarian reforms and rural development programmes.

COURSE OUTCOME SEM:3RD

COURSE TITLE: SOCIOLOGICAL THEORY

COURSE CODE:USOTC-301 **CREDIT-6**

The course aims to provide a general introduction to sociological theory and thought. The paper acknowledges the contributions of both western and Indian scholars in the development of sociology. It provides the students an opportunity to

- Define sociological theory, understand its features and describe and illustrate the role of theory in building sociological knowledge.
- Introduce themselves to the classical theories of Sociology and contributions of different thinkers in this regard.
- Know the contributions of founding fathers of Sociology in developing sociology as an academic discipline.
- Understand the concepts and contributions of Indian social thinkers in the reform of Indian society as well as to enhance knowledge about society.
- Know the contributions of Indian Sociologists in the development of sociological thought.

COURSE OUTCOME SEM:4TH

COURSE TITLE: RESEARCH METHODOLOGY

COURSE CODE:USOTC-401 **CREDIT-6**

The course is an introductory course on how research is actually done. With emphasis on formulating research design, methods of data collection, and data analysis, it will provide students with some elementary knowledge on how to conduct both, quantitative and qualitative research.The course aims to provide a general introduction to understanding social research and acquaint the students with the different components of social research. sociological theory and thought. It provides the students an opportunity to

- Importance of social research in sociology and how research is applicable in the society.
- Understand the concepts of Sampling, Interview,Observation and so on .
- Research also helpful in understanding the how data are collected in Sociology.
- Know how the technology is also helpful in understanding the research.
- Meaning, scope, types and significance of Social Research.
- How to collect, analyze data and how to write a field report.

COURSE OUTCOME: SEM 5TH

COURSE TITLE: SOCIETY :ISSUES AND PROBLEMS

COURSE CODE:USOTE:502 **CREDIT-6**

This course provides an understanding of the interrelation between society and their problems. The course addresses various problems of Indian society and measures taken to eradicate these problems. It provides the student an opportunity to

- Studied Various social problems in India like poverty, illiteracy, domestic violence,child abuse,Terrorism and measures taken to eradicate the problems.
- To acquaint the students about the problems of rural society and urban society.

COURSE OUTCOME : SEM 6TH

COURSE TITLE: SOCIAL CHANGE DEVELOPMENT AND GLOBALIZATION AND SOCIAL PROBLEMS IN INDIA.

COURSE CODE :USOTE-602 **CREDIT-6**

This course provides an understanding an concept of social change and how the different factors of social change are responsible for change in the society of the interrelation between population and society. Studying the course students will gather knowledge on

- To acquaint the students with the concepts of social change, Development and globalization.
- To understand the theories of social change and how different factors are responsible for the social change.
- To understand the concept of Globalization and impact of globalization on the society.