



Ajantha Education & Military Preparatory Institutes,
INDRARAJ ARTS, COMMERCE AND SCIENCE COLLEGE,
SILLOD, DIST. AURANGABAD

PROGRAMME - B.Sc. (101)
COURSE OUTCOMES
(F.Y., S.Y., and T.Y.)

Subject : Physics

Course Code	Course Title	On completion of this course the Learner students will be able to understand
B.Sc. F. Y. SEMESTER- I		
Physics: 101	Mechanics, Properties of Matter and Sound	<ol style="list-style-type: none"> 1. To get the knowledge of pendulum. 2. To know basic concepts of elasticity, viscosity, surface tension and sound. 3. To understand the concept of Mechanics, Properties of matter and sound to recognize their application in various real problems. 4. List the various applications of ultrasonic 5. Acquire the knowledge of acoustics.
Physics: 102	Heat and Thermodynamics	<ol style="list-style-type: none"> 1. Listing the basic ideas on heat. 2. Understand the central concept and basic concept of thermodynamics. 3. Solving problems on Heat Transfer, Entropy and Thermal Radiation. 4. Explain Carnot's ideal heat engine. 5. Finding the applications of the physical quantities.
Physics: 103	Practical	<ol style="list-style-type: none"> 1. Apply the knowledge of mathematics and physics fundamentals and an instrumentation to arrive the solution for various problems. 2. Understand the application side of the experiments. 3. Able to calculate g, Y, η, M.I., S.T. and Viscosity by Pousseuilles method 4. Students measure various physical quantities in various systems of units. 5. Develop skill of handling the instruments.
B.Sc. F. Y. SEMESTER- II		
Physics: 104	Geometrical and Physical Optics	<ol style="list-style-type: none"> 1. Understand the physics behind various phenomena in Geometrical and Physical Optics. 2. Understand various phenomenon of light and distinguish Wave Optics, Physical Optics and Quantum Optics. 3. Explain the practical and theoretical knowledge of Newton's ring, Michelson's interferometer. 4. Students will be able to discuss R. P. of optical instrument. 5. Explain various phenomena in polarization.

Physics:105	Electricity and Magnetism	<ol style="list-style-type: none"> 1. Get the knowledge of mathematical physics like vector algebra. 2. Recognize basic terms in electricity and magnetism. 3. Understand the laws of electrostatics and magnetism. 4. Apply theorems to construct and solve electrical circuit. 5. Build up strong problems solving skills by effectively formulate a circuit problem circuit laws and theorem.
Physics:106	Practical	<ol style="list-style-type: none"> 1. Understand the usage of basic laws and theories to determine various properties of the material given. 2. Get the knowledge of CRO. 3. Get the use of dark room in physics laboratory. 4. Use standard method to calibrate the use of spectrometer. 5. Understand the application side of the experiment.
B.Sc. S. Y. SEMESTER- III		
Physics: 201	Mathamatical Statstical Physics and relativity	<ol style="list-style-type: none"> 1. Solution first- and second- order ordinary differential equations with appropriate boundary conditions, 2. Understand how statistics of the microscopic world can be used to explain the thermal features of the macroscopic world. 3. Be able to use thermal and statistical principles in a wide range of applications. 4. Learn a variety of mathematical and computer techniques. 5. Recognize basic terms in Quantum Mechanics. 6. To understand the fundamentals and concepts in the special theory of relativity.
Physics: 202	Morden and Nuclear Physics	<ol style="list-style-type: none"> 1. Develop the concepts of modern physics: basic knowledge of special theory of relativity and general theory of relativity, elementary quantum mechanics, & nuclear physics. 2. Understand the relationship between observation and theory and their use in building the basic concepts of modern physics. 3. Acquire knowledge in the content areas of nuclear focusing on concepts that are commonly used in this area. 4. Develop familiarity with the vast areas of nuclear physics as well as develop an interest in these subjects.

Physics: 203	Practical	<ol style="list-style-type: none"> 1. Students will be able to perform experiments and interpret the results of observation, including making an assessment of experimental uncertainties. 2. Read, understand and interpret physical information-verbal, mathematical and graphical. 3. Impart skills required to gather information from resources and use them. 4. Students would have developed skills and enthusiasms to the best of their potential.
Physics: 204	Practical	<ol style="list-style-type: none"> 1. To carry out experiments to understand the laws and concepts of Physics. 2. To develop experimental, computational and mathematics skills of students. 3. They will be able to use Information communication Technology to gather knowledge at will. 4. Student's developing their experimental skills through a series of experiments which also illustrate major themes of the lecture courses.

B.Sc. S. Y. SEMESTER- IV

Physics: 205	General Electronics	<ol style="list-style-type: none"> 1. Have basic knowledge of semiconductor diode, rectifier and filter circuits. 2. Understand transistor biasing and working principle of Amplifiers. 3. Explain feedback and oscillatory circuits. 4. An idea about Multivibrators and operational amplifiers. 5. Comprehend the operation and characteristics of FET, MOSFET, and UJT.
Physics: 206	Solid State Physics	<ol style="list-style-type: none"> 1. Understand basic concepts and mathematical methods of solid state physics. 2. Practice problem solving by using selected problems in solid state physics. 3. Explore important connections between theory, experiment, and current applications. 4. Develop a basis for future learning and work experience.
Physics: 207	Practical	<ol style="list-style-type: none"> 1. To carry out experiments to understand the laws and concepts of Physics. 2. Understand the central concepts of spectroscopy. 3. To understand the concepts and significance of the various physical phenomena. 4. Use of basic laws to study the spectral properties and optical properties of the given prism and grating. 5. Get depth knowledge of physics in day today life.

Physics: 208	Practical	<ol style="list-style-type: none"> 1. The knowledge of basic principal and application of Electronics is most necessary for a physics students. 2. Students will get the ability to identify almost all electronics compounds and their working principals. 3. The student intened to provid therotical and practical knowledge about electronics. 4. Practical in this course will definitely enable the students to service or repair basic electronics equipments.
B.Sc. T. Y. SEMESTER- V		
Physics: 301	Classical and Quantum Mechanics	<ol style="list-style-type: none"> 1. Have a deep understanding of classical mechanics 2. Understand the fundamentals of the mechanics of continuous systems 3. Be able to solve the Einstein equations, photo-electric effect, quantum effect. 4. Understand wave particle duality using de-Broglies hypothesis for matter waves. 5. Be able to solve Schrodinger time dependent and time independent equation and its applications
Physics: 302	Electrodynamics	<ol style="list-style-type: none"> 1. Have to know applications of law of electrostatics 2. Have a deep understanding of the theoretical foundations of electromagnetic phenomena. 3. Be able to solve the Maxwell equations for simple configurations. 4. Have a understant the interaction of electromagnetic waves with matter.
Physics: 303	Practical	<ol style="list-style-type: none"> 1. To create the curiosity to know the basis idea about research. 2. Able to know working LDR, LASER etc 3. Be able to perform the basics tasks for research in these areas. 4. Creativty in physics experiment and write the experimental manual.
Physics: 304	Practical	<ol style="list-style-type: none"> 1. Be familiar with techniques used in applications of diode laser. 2. To carry out experiments to understand the concepts of Physics. 3. Be able to perform basic experiments opical fiber and optics 4. Be able perform a statistical analysis of observed data with the help of excell sheet. 5. Be able to write down the analysis of an experiment.

B.Sc. T. Y. SEMESTER- VI

Physics: 305	Atomic, Molecular Physics and LASER	<ol style="list-style-type: none">1. Able to know the basic concept of different atom model.2. To develop the experimental ideas with the help of coupling, different rules and effect.3. Gain the knowledge of discovery of Raman effect and its applications.4. To learn the concept of LASER and its applications in various field.
Physics: 306	Non-conventional energy sources and Optical fiber	<ol style="list-style-type: none">1. To study non-conventional energy sources such as biomass, wind energy etc.2. Able to desining and use of solar photovoltaic systems.3. Understand the concept of optical fiber4. To create the skill for fiber fabrication with different techniques
Physics: 307	Practical	<ol style="list-style-type: none">1. Be able to perform basic experiments heat2. Be able perform a statistical analysis of observed data with the help of excell sheet.3. Be able to write down the results of an experiment in the proper style.
Physics: 308	Practical	<ol style="list-style-type: none">1. Be able to perform basic experiments on optics2. Be able design and perform an arrangement skill of appratus.3. Be able to develop the skill for writing the report of educational visit.4. Be able perform a statistical analysis of observed data,

Subject : Chemistry

Course Code	Course Title	On completion of this course the Learner students will be able to understand
B.Sc. F. Y. SEMESTER- I		
Chemistry: I	Inorganic Chemistry	<ol style="list-style-type: none"> 1. Understand basic concept regarding Atomic structure including Atomic orbitals, Quantum numbers, Electronic Configuration and Bohr's Atomic model. 2. Become familiar with different periodic properties of various elements, their trends in periodic table and able to predict and explain their chemical behavior. 3. Able to do comparative study of S-block elements, understand their diagonal relationship, study their hydrides which extended to study their role in biosystem. 4. Comparative study of Group 13 to Group 17 elements.
Chemistry: II	Organic Chemistry	<ol style="list-style-type: none"> 1. Develop critical understanding of structure and bonding of Organic molecules, role of different electronic effect like resonance, hyper conjugation, inductive effect and steric effect. 2. Learn the fundamental principles and develop understanding of Organic reaction mechanism. 3. Learner will be able to identify different types of isomers, assign D, L and R, S nomenclature of organic compound and can distinguish between geometrical isomers. 4. Understand the Alkane Chemistry; in these regard methods of preparation and chemical reactions with special emphasis given to the Chlorination, Nitration, Sulphonation and Catalytic Oxidation. 5. Construction of foundation of alkene chemistry via developing the concept of Saytzeff rule, Hofmann elimination and Markownikoffs rule. 6. Predict the aromaticity using Huckel's rule and able to differentiate between aromatic, anti-aromatic and non-aromatic compounds.

Lab course: I	Practical	<ol style="list-style-type: none"> 1. Facilitate the learner to make solution of various concentrations: it includes conversion of moles to gram, grams to mole, Defining concentration, Dilution of Solution and to understand the fundamentals of volumetric analysis. 2. Able to identify acidic and basic radicals from given binary mixture in inorganic qualitative analysis. 3. Build a capacity to verify theoretical principle experimentally, interpret experimental data leads to improve analytical skills.
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B.Sc. F. Y. SEMESTER- II

Chemistry: III	Physical Chemistry	<ol style="list-style-type: none"> 1. Understanding mathematical ideas leads to enriched Physical Chemistry understanding. 2. Develop in-depth understanding of different states of matter including Solid, Liquid, Gaseous and Colloidal State. 3. Interpret rate law for Zero, First, Second, Pseudo Second order reaction and gathered knowledge of Catalysis.
Chemistry:IV	Inorganic Chemistry	<ol style="list-style-type: none"> 1. Learn the Xenon chemistry. 2. The bonding fundamentals of both covalent and ionic compounds, predicting geometry of simple molecules, MO theory use in homonuclear and heteronuclear diatomic molecules. 3. Acquire the knowledge of fundamentals of Nuclear Chemistry with real life applications. 4. Calibrate pipette & burette, gathered knowledge of indicators and oxidizing agents in the titrations.
Lab course: II	Practical	<ol style="list-style-type: none"> 1. Perform the Organic Qualitative Analysis. 2. Determine nature, functional group, elements, physical constant and prepare derivative of given sample. 3. To carry Organic Estimations.

B.Sc. S. Y. SEMESTER- III

Chemistry: V	Organic Chemistry	<ol style="list-style-type: none"> 1. Application of knowledge to solve problems, deduce structures and synthesize simple organic molecules using studied organic functional groups and reactions. 2. Identify and correlate relationship between Organic chemistry and other disciplines are noted.
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Chemistry: VI	Physical Chemistry	<ol style="list-style-type: none"> 1. Master the concept of Thermodynamics and construct problem solving skills. 2. Understands the concept of Entropy, Helmholtz and Gibbs function. 3. Learner will know and understand the world of Chemical Equilibrium and its importance.
Lab course: III	Practical	<ol style="list-style-type: none"> 1. Developed expertise relevant to the professional practice of Chemistry. 2. Experience in procedures and experimental methods applied in analytical and practical task of Physical Chemistry. 3. Demonstrate proficiency in Gravimetric Estimations and Complexometric Titrations skills.
B.Sc. S. Y. SEMESTER- IV		
Chemistry: VII	Inorganic Chemistry	<ol style="list-style-type: none"> 1. Differentiate between different acid and base concept. 2. Acquired preliminary understanding of coordination compounds. 3. Learn transition elements along with Lanthanides and Actinides.
Chemistry: VIII	Physical Chemistry	<ol style="list-style-type: none"> 1. Know the meaning of phase, components and degree of freedom. 2. Interpret Raoult's law and Henry's law. 3. Master the core concepts and develop depth understanding of Electrochemistry.
Lab course: IV	Practical	<ol style="list-style-type: none"> 1. Developed skills in procedures and instrumental methods applied in practical task of Physical Chemistry. 2. Skill development in preparation, derivitization and purity check by TLC or Column chromatographic of Organic compounds. 3. Proficiency in Organic estimations.
B.Sc. T. Y. SEMESTER- V		

Chemistry: IX	Physical Chemistry	<ol style="list-style-type: none"> 1. State postulates of Quantum Mechanics, able to solve Schrodinger wave equation for particle in 1D and 3D Box. 2. Realize the importance of Physical spectroscopy in structural elucidation and underlying mechanism. 3. Demonstrate a sound knowledge of Photochemistry principles and their application. Describe and explain photochemical processes with suitable theoretical models, and apply established experimental methods for investigation of these processes. 4. Know different physical and chemical methods for nanomaterial synthesis and extended knowledge about use of plants and microorganism in nanoparticle synthesis.
Chemistry: X	Organic Chemistry	<ol style="list-style-type: none"> 1. Application of NMR, UV and IR Spectroscopy in structural determination of organic compounds. 2. How to design synthesis of organic molecules through enolates. 3. Demonstrate advanced level knowledge in Organometallic Chemistry using Organomagnesium, organozinc and organolithium compounds.
Lab course: V	Practical	<ol style="list-style-type: none"> 1. Separation and identification of components in Binary mixture. 2. Research skill development via Inorganic qualitative analysis (Semi-Micro Analysis) and impart problem solving skill through Inorganic quantitative analysis through volumetric and gravimetric analysis and their advantages.
B.Sc. T. Y. SEMESTER- VI		
Chemistry: XI	Inorganic Chemistry	<ol style="list-style-type: none"> 1. Know the limitations of Valence Bond theory, Detail understanding of Crystal field theory with Crystal field splitting. 2. Enriched the knowledge of electronic Spectra of transition metal Complexes. 3. Introduced to principle of Chromatographic technique of separation of mixture of compounds.

<p>Chemistry: XII</p>	<p>Organic Chemistry</p>	<p>4. Gain the knowledge of heterocyclic compounds, their methods of preparation and importance. 5. Use of corresponding information in synthesis of biologically and clinically active drugs. 6. Able to distinguish between mono, di and polysaccharide and revealed the mechanism for their interconversion.</p>
<p>Lab course: VI</p>	<p>Practical</p>	<p>7. Synthesize organic compounds and their purity check by TLC. 8. Use of Conductometer in titration method to determine strength of given mixture or compound. 9. Developed skill development for use of Potentiometer and Refractometer to find out concentration of given compound in unknown solution.</p>

Subject : Mathematics

Course Code	Course Title	On completion of this course the Learner students will be able to understand
B.Sc. F. Y. SEMESTER- I		
Mathematics: 101	Differential calculus	<ol style="list-style-type: none"> 1. Understand basics of limit and continuity of a function. 2. Understand derivative of a function, derived function and geometrical interpretation of a derivative. 3. Learn to find successive differentiation and how to use Leibnitz theorem. 4. Learn how to apply mean value theorems. 5. Understand basic of a partial differential equation and how to apply Euler's theorem on homogeneous functions. 6. Learn the basics of differential operators.
Mathematics: 102	Differential equations	<ol style="list-style-type: none"> 1. Learn how to solve differential equation of the first order and first degree. 2. Learn how to solve linear differential equations with constant coefficients. 3. Learn how to solve linear differential equations with variable coefficients. 4. Learn how to solve exact differential equation. 5. Learn how to solve ordinary Differential equation with more than two variables. 6. Learn about derivation of a partial differential equation by the elimination of constants and by the elimination of arbitrary functions.
B.Sc. F. Y. SEMESTER- II		
Mathematics: 201	Integral calculus	<ol style="list-style-type: none"> 1. Learn different methods of the integrations. 2. Learn to find integration of algebraic rational functions. 3. Learn to find integration of the trigonometric functions. 4. Learn to find areas of the plane regions. 5. Learn to find volumes and surfaces of the revolution.
Mathematics: 202	Geometry	<ol style="list-style-type: none"> 1. Learn the basic concepts about the plane and to find plane passing through given three points. 2. Learn to find length of a line and equations of a line passing through given points. 3. Learn more about sphere, cones, cylinders and conoids and study their geometrical interpretation.

B.Sc. S. Y. SEMESTER- III

Mathematics: 301	Number Theory	<ol style="list-style-type: none">1. Learn about division algorithm.2. Learn to solve linear Diophantine equation in two variables.3. Find the greatest common factor using the Euclidean algorithm.4. Investigate the proof of the fundamental theorem of arithmetic.5. Solve the system of linear congruence.6. Use Wilson's theorem and Fermat's little theorem as the basis for primality tests and factoring algorithm.7. Learn about the number-theoretic functions.8. Learn about the Euler's phi function and Euler's theorem.
Mathematics: 302	Integral transforms	<ol style="list-style-type: none">1. Students will be able to know the use of beta and gamma functions.2. Students will be able to know the use of Laplace transform.3. Learn to solve ordinary Differential equation by Laplace transform.4. Learn find Fourier transform of the function.5. Understand relationship between Fourier transform and Laplace transform.
Mathematics: 303	Mechanics-I	<ol style="list-style-type: none">1. Understand forces acting on a particle.2. Learn about equilibrium of forces acting on a particle.3. Learn about forces acting on a rigid body.4. Learn about Center of a gravity of some uniform bodies.

B.Sc. S. Y. SEMESTER- IV

Mathematics: 401	Numerical Methods	<ol style="list-style-type: none">1. Solve algebraic and transcendental equations using an appropriate numerical method.2. Learn to apply different interpolation formulae.3. Learn about curve fitting and approximations.4. Solve a linear system of equations using an appropriate numerical method.5. Learn different method to find more numerical solutions of a ordinary differential equations.
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Mathematics: 402	Partial Differential Equations	<ol style="list-style-type: none"> 1. Learn to solve linear partial differential equation of order one. 2. Learn to solve nonlinear partial differential equation of order one. 3. Learn to solve linear homogeneous partial differential equation with constant coefficient. 4. Learn to solve non homogeneous linear partial differential equation. 5. Learn to solve partial differential equation reducible to linear form with constant coefficient. 6. Learn to solve partial differential equation of second order.
Mathematics: 403	Mechanics-II	<ol style="list-style-type: none"> 1. Learn the concept of a Kinematics and dynamics of a particle in two dimensions in two dimensions. 2. Understand the Newton's law of motion. 3. Understand the concept of motion of a projectile and motion in a resisting medium. 4. Love areal velocity in Central orbits.

B.Sc. T. Y. SEMESTER- V

Mathematics: 501	Real Analysis-I	<ol style="list-style-type: none"> 1. Understand the concepts of a sequence of real numbers. 2. Student will be able to check whether the sequence of real numbers is a convergent or divergent by appropriate method. 3. Understand the concepts of a series of real numbers and alternating series. 4. Understand the concepts of a conditional convergent and convergence of a series of real numbers. 5. Understand the concepts of Jacobians.
Mathematics: 502	Abstract Algebra-I	<ol style="list-style-type: none"> 1. Understand the concepts of a group and subgroups. 2. Understand the concepts of normal subgroups and quotient group. 3. Understand the concepts of rings and subrings. 4. Understand the concepts of a ideals of a rings and quotient rings.
Mathematics: 503	Mathematical Statistics-I	<ol style="list-style-type: none"> 1. Understand the Concepts of a Frequency Distribution and Measures of Central Tendency 2. Understand the Concepts of Measures of Dispersion Skewness and Kurtosis 3. Learn how to apply some concepts of theory of probability.

Mathematics: 504	Ordinary Differential Equations	<ol style="list-style-type: none"> 1. Learn to solve linear ordinary differential equations of first order. 2. Learn to solve ordinary differential equations with constant coefficients. 3. Understand initial value problem for second order ordinary Differential equation.
Mathematics: 505	Programming in C-I	<ol style="list-style-type: none"> 1. Learn the basic concept of C-Programming. 2. Understand about data type, variables, and constants. 3. Learn about operators and expressions.
B.Sc. T. Y. SEMESTER- VI		
Mathematics: 601	Real Analysis-II	<ol style="list-style-type: none"> 1. Understand the concept of the metric space and limits of metric spaces. 2. Understand the concept of continuous functions of metric spaces. 3. Learn different theorems on complete metric spaces and on compact metric spaces. 4. Understand the concepts of a Riemann integral function. 5. Understand basic concept of a Fourier series.
Mathematics: 602	Abstract Algebra- II	<ol style="list-style-type: none"> 1. Understand the basic concepts of a vector space. 2. Learn about linearly independent and linearly dependent of a vectors and basis of vector spaces. 3. Understand the concept of inner product spaces.
Mathematics: 603	Mathematical Statistics-II	<ol style="list-style-type: none"> 1. Understand the concepts of mathematical expectation, generating functions. 2. Understand the concept of theoretical discrete probability distributions and theoretical continuous functions. 3. Understand the concepts of Correlation and Regression.
Mathematics: 604	Ordinary Differential Equations-II	<ol style="list-style-type: none"> 1. Learn to solve linear equations with variable coefficients. 2. Learn to solve linear equation with regular singular point.
Mathematics: 605	Programming in C- II	<ol style="list-style-type: none"> 1. Able to use different loops in C-Programming. 2. Able to use array in C-Programming

Subject : Botany

Course Code	Course Title	On completion of this course the Learner will be able to understand
Semester-II		
Course – I	Diversity of Cryptogams-I Theory	<ol style="list-style-type: none"> 1. Classify, develop an understanding and their adaptive of viruses, bacteria, Lichens, algae and Fungi based on their characteristics and structures 2. Examine the general characteristics of viruses, Mycoplasma, bacteria, Lichens, algae and Fungi and their cell reproduction. 3. Identify, demonstrate the principles and application of viruses, Mycoplasma, bacteria, Lichens, algae and Fungi 4. Increase the awareness and appreciation of human friendly viruses, bacteria, algae and their economic importance.
Course - II	Morphology Of Angiosperms (Theory)	<ol style="list-style-type: none"> 1. To understand various types of plant habits. 2. To study various vegetative and reproductive parts of Angiospermic plant body. 3. To study reproductive shoot i.e. flower. 4. To study various modifications in plant parts and its purpose.
Course - III.	Diversity Of Cryptogams-I (Practical)	<ol style="list-style-type: none"> 1. Demonstrate proficiency in the experimental techniques and methods of appropriate analysis of Algae, Fungi, Lichen, Mycoplasma. 2. Observations of disease symptoms in host infected fungi 3. Learn the microscopic technique, familiarize with the external and internal structure of lower group organisms 4. Demonstrate skills in laboratory, field work related to Algae, Fungi, Lichen, Mycoplasma 5. 5. To study various vegetative parts and structure of Flower.
Semester-II		
Course – IV	Diversity Of Cryptogams-Ii (Theory)	<ol style="list-style-type: none"> 1. Demonstrate an understanding of Bryophytes and Pteridophytes 2. Develop critical understanding on morphology, anatomy and reproduction of Bryophytes, and Pteridophytes 3. Understanding of plant evolution and their transition to land habitat.
Course - V	Histology, Anatomy, and	<ol style="list-style-type: none"> 1. To learn about the basic concepts of Histology, Anatomy and Embryology.

	Embryology (Theory)	<ol style="list-style-type: none"> To study various types of tissues and their functions. To study the mechanism and types of pollination. To study basic procedure and significance of double fertilization. To study structure of the Embryo, Monocot seed and Dicot seed.
Course - VI	Histology, Anatomy, and Embryology (Practical)	<ol style="list-style-type: none"> To understand the concept of Tissues, Primary and secondary growth in plants. To study structure of the Monocot and Dicot seed.
Semester-III		
Course - VII	Taxonomy of Angiosperm Theory	<ol style="list-style-type: none"> To learn the basic concepts of Taxonomy. To study three basic functions of taxonomy i.e. Identification, Nomenclature and Classification. To learn about various Angiospermic families and its economic value. To understand about modern trends in taxonomy.
Course - VIII	Plant Ecology (Theory)	<ol style="list-style-type: none"> Understand basic concepts of plant ecology and core concepts of biotic and abiotic Classify the soils on the basis of physical, chemical and biological components Evaluate energy sources of ecological system and Examine the structure and functions of eco-system. Assess the adaptation of plants in relation to light, temperature, water, wind and fire
Course - X	Practical Plant Ecology	<ol style="list-style-type: none"> Interactions between plants and biotic and a biotic environment Students can understand morphological and anatomical adaptations of plants. Identify the types of soils and their properties. Students will be able to demonstrate proficiency in the experimental techniques and methods of analysis appropriate for Ecological.
Course - IX	Taxonomy of Angiosperm, Practical	<ol style="list-style-type: none"> To learn about various Angiospermic families with the help of plant specimens.
Semester-IV		
Course - XI	Gymnosperm and Utilization of Plants (Theory)	<ol style="list-style-type: none"> To learn about the structure and reproduction of species of Gymnosperms. To study representatives of fossil forms. To study some economically important plants and their uses. To study Utilization of plants and their uses for wellbeing of human.
Course - XII	Plant Physiology, Theory	<ol style="list-style-type: none"> Know importance and scope of plant physiology. Understand Water relation of plants with respect to various physiological processes. Understand the process of photosynthesis in higher

		<p>plants with particular emphasis on light and dark reactions, C3 and C4 pathways</p> <ol style="list-style-type: none"> Understand the respiration in higher plants with particular emphasis on aerobic and anaerobic respiration
Course - XVI	Practical	<ol style="list-style-type: none"> Students will be able to demonstrate proficiency in the experimental techniques and methods of analysis appropriate for all physiological experiments Apply knowledge in real life.
Semester-V		
Course - XV	Cell Biology and Molecular Biology Theory	<ol style="list-style-type: none"> Identify the concept that explains chemical composition and structure of cell wall and membrane Compare the structure and function of cell organelles & explain the development of cells The eukaryotic cell cycle and mitotic and meiotic cell division Learner will know & analyze the structures and chemical properties, Replication and Types of DNA & RNA
Course - XVI	Biodiversity of Angiosperm-I Theory	<ol style="list-style-type: none"> To educate students about concept of biodiversity, its exploration, estimation and conservation. To learn about various Angiospermic families and its economic value. To understand about Plant taxonomy and their systematic classification systems To understand about modern trends in taxonomy. To enlightened about the role of taxonomy in conservation of biodiversity.
Course - XVII	Cell Biology and Molecular Biology (Practical)	<ol style="list-style-type: none"> Students will be able to demonstrate proficiency in the experimental techniques and methods in cell biology and biotechnology related experiments
Course - XVIII	Biodiversity of Angiosperm-I Practical	<ol style="list-style-type: none"> To learn about various Angiospermic families with the help of plant specimens.
Semester-IV		
Course - XIX	Genetics and Biotechnology –(Theory)	<ol style="list-style-type: none"> To learn about the structure and reproduction of species of Gymnosperms. To study representatives of fossil forms. To study some economically important plants and their uses. To study Utilization of plants and their uses for wellbeing of human.
Course - XX	Biodiversity of	<ol style="list-style-type: none"> To educate students about concepts of biodiversity, its exploration, estimation and

	Angiosperm – II (Theory)	<p>conservation.</p> <ol style="list-style-type: none"> 2. To learn about various Angiospermic families and its economic value. 3. To understand about Plant taxonomy and their systematic classification systems 4. To understand about modern trends in taxonomy. 5. To enlightened about the role of taxonomy in conservation of biodiversity
Course - XXI	Practical	<ol style="list-style-type: none"> 1. Learners will be able to solve the problems based on genetic interaction, incomplete dominance, co dominance, inter allelic genetic interactions, multiple alleles and quantitative inheritance etc. 2. Students can perform practicals based on Biotechnology. They are able to prepare Models of all cell organelles, DNA, RNA
Course - XVIII	Biodiversity of Angiosperm I & II	<ol style="list-style-type: none"> 1. To learn about various Angiospermic families. 2. To learn about identification tools like Keys, Floras etc.

Subject : Zoology

Course Code	Course Title	On completion of this course the Learner students will be able to understand
B.Sc. F. Y. SEMESTER- I		
Zoology: 101	Protozoa to Annelida	<ol style="list-style-type: none"> 1. Able to describe general taxonomic rules on animal classification 2. Understand classification of Protozoa up to phylum Annelida using examples 3. Easily classify Phylum Protozoa up to phylum Annelida with taxonomic keys 4. Describe and understand Phylum with their evolution.
Zoology: 102	Cell Biology	<ol style="list-style-type: none"> 1. Structural and functional aspects of basic unit of life i.e. cell concepts understand. 2. Describing organization of cell with DNA, RNA and understanding about cancer. 3. Understanding of scientific microscopes use in cell biology. 4. Understand about Micro techniques use for cell study.
Zoology: 103+104	Practical	<ol style="list-style-type: none"> 1. Students can identified invertebrates 2. Able to explain Leech for Digestive, Excretory & Reproductive systems and Earthworm for Nervous System & Reproductive system 3. Learn about cell organelles with the help of chart 4. Learn cell division 5. Learn about micro techniques and microscopes
B.Sc. F. Y. SEMESTER- II		
Zoology: 201	Arthropoda to Echinodermata and Protochordata	<ol style="list-style-type: none"> 1. Able to describe general taxonomic rules on animal classification 2. Understand Classification of Arthropoda up to phylum Echinodermata and Protochordata using examples 3. Classification of Arthropoda up to phylum Echinodermata & Protochordata with taxonomic keys 4. Able to describe and understand Phylum Protochordata with their evolution.
Zoology:202	Genetics – I	<ol style="list-style-type: none"> 1. Understand Mendelian and non mendelian inheritance 2. Student can explain Multiple Alleles and Cytoplasmic Inheritance. 3. explain role of chromosome in sex determination 4. Understanding of mutation.
Zoology:203+204	Practical	<ol style="list-style-type: none"> 1. Learn about Invertebrates & Protochordata. 2. Able to explain nervous system 3. Mounting of animal parts 4. Mutation in Drosophila 5. Understand the human blood group 6. Understanding of genetics with the help of problem solving method.

B.Sc. S. Y. SEMESTER- III		
Zoology: 301	Vertebrate Zoology	<ol style="list-style-type: none"> 1. Imparts conceptual knowledge of vertebrates, their outline classification. 2. Development in Amphibia (frog), parental care. 3. Able to describe Poisonous and non-poisonous snake 4. Able to explain Flight adaptation and migration in birds 5. Understanding of Placentation in Mammals
Zoology: 302	Genetics- II	<ol style="list-style-type: none"> 1. Genes and its expression understanding 2. Concept behind genetic disorder, gene mutations- various causes associated with inborn errors of metabolism 3. Human genetics, microbial genetics 4. Understanding of Genetic Engineering
Zoology: 303	Practical	<ol style="list-style-type: none"> 1. Students able to identify vertebrates specimens 2. Able to explain brain, Cranial nerve, Afferent and efferent blood vessels 3. Able to explain Urinogenital system, 4. Arterial system, Venous System, Brain of Rat. 5. Mounting of Placoid, Cycloid and Ctenoid scales of fish 6. Learn embryological development of chick according to hours of incubation.
Zoology: 304	Practical	<ol style="list-style-type: none"> 1. Student learn about DNA model 2. Understand protein synthesis with the help of charts/models 3. Estimation of DNA from animal tissue 4. Understand about karyotypic study of human being 5. Able to detect Barr body from epithelial cell 6. Understanding of sex linked inheritance with the help of problems solving method 7. Learn about gene frequency and mutants of man
B.Sc. S. Y. SEMESTER- IV		
Zoology: 401	Animal Physiology (Special Emphasis On animals)	<ol style="list-style-type: none"> 1. Students are taught the detailed concepts of digestion respiration excretion the functioning of nerves and muscles with reproduction physiology 2. Students gain fundamental knowledge of animal physiology 3. Students will gain skill to execute the roles of a biology teacher or medical lab technicians with training as they have basic fundamentals
Zoology: 402	Biochemistry & Endocrinology	<ol style="list-style-type: none"> 1. Student will gain knowledge about enzymes, carbohydrates, proteins, lipids 2. Explanation of Endocrine system of vertebrate with histological studies of important glands like pituitary, thyroid, adrenal gland and pancreases

Zoology: 403	Practical	<ol style="list-style-type: none"> 3. Students learn the digestive enzymes from cockroach/Human Saliva 4. Able to count RBC/WBC, haematin crystal formation, Hb% from blood 5. Understand the effect of isotonic, hypotonic, and hypertonic solutions on blood cell 6. Able to detect nitrogenous waste product 7. Estimate Oxygen consumption 8. Histological study of endocrine glands.
Zoology: 404	Practical	<ol style="list-style-type: none"> 1. Student able to prepare solutions of given %, normality and molarity 2. Study of analytical instrument principle & applications 3. Detection of amino acid by paper chromatography 4. Qualitative test for organic compound 5. Able to make quantitative estimation of protein from animal tissue 6. Learn endocrine glands with the help of permanent histological slides.
B.Sc. T. Y. SEMESTER- V		
Zoology: 501	Ecology	<ol style="list-style-type: none"> 1. Student can explain basic concepts of ecology 2. Understand biotic and abiotic factors of Ecology. 3. Learn Dynamics of Population and ecology of Communities. 4. Learn dynamics of ecosystem 5. Able to explain brief knowledge of major ecosystem
Zoology: 502	Fishery sciences –I	<ol style="list-style-type: none"> 1. Understands concepts of fisheries, and capture fisheries in India. 2. Gaining knowledge about freshwater, brackish water and marine water fishery 3. Students learn about remote sensing technique use in fishery
Zoology: 503	Practical	<ol style="list-style-type: none"> 1. Students learn pond ecosystem 2. Able to determine different parameters of soil 3. Able to make water analysis 4. Understand Study of animal association ship with example (Charts/photo) 5. Estimation of population density 6. Preparation of permanent slide
Zoology: 504	Practical	<ol style="list-style-type: none"> 1. Learn about fresh water fishes 2. Learn about brackish water fishes 3. Learn about marine water fishes 4. Able to make water analysis
B.Sc. T. Y. SEMESTER- VI		
Zoology: 601	Evolution	<ol style="list-style-type: none"> 1. Students will gain knowledge about Imparts knowledge regarding the various theories of evolution, concept 2. Understanding of origin of life, Darwinism, environmental forces of evolution 3. Basic pattern of evolution, species and speciation 4. Explanation about fossils.

Zoology: 602	Fishery sciences -II	<ol style="list-style-type: none"> 1. It is deal with applied point of zoology in which student learn about Fish culture 2. Student understand fish techniques like fish preservation and processing 3. Gaining knowledge about different types of craft and gears (tools) used in fishery.
Zoology: 603	Practical	<ol style="list-style-type: none"> 1. Understand embryological evidences of evolution with the help of slide/chart/pictures. 2. Observe and learn Adaptive modification in feets of birds and mouth parts of insects 3. See successive stages of evolution in human or horse 4. Learn patterns of speciation 5. Understanding of Study the homologous and analogous organs
Zoology: 604	Practical	<ol style="list-style-type: none"> 1. Learn about Primary productivity of ponds 2. Identification, classification and culturaable significance of fishes 3. Collection and identification of fish parasites and worms 4. Identification of crafts and gears.





DR. BABASAHEB AMBEDKAR
MARATHWADA UNIVERSITY,
AURANGABAD

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सा विद्या या विमुक्तये

Ajantha Education & Military Preparatory Institutes,

**INDRARAJ ARTS, COMMERCE AND SCIENCE COLLEGE,
SILLOD, DIST. AURANGABAD**

PROGRAMME - B.A. (102) COURSE OUTCOMES

(F.Y., S.Y., and T.Y.)

Subject : English

Course Code	Course Title	On completion of this course students will be able to understand
B. A. F. Y. SEMESTER- I & II		
ENG- C0-I	English Compulsory - <i>The Communication</i>	<ol style="list-style-type: none"> 1. Know the process of beginning and growth of English language and grammar . 2. Know about various innovative ways of using English language in verbal and non-verbal communications. <ol style="list-style-type: none"> i. Write clearly, effectively, and creatively, and adjust writing style appropriately to the content, the context, and nature of the subject. 3. Think about the relation between language and literature
ENG- OPT - 01	English optional I - <i>Introduction to Language</i>	<ol style="list-style-type: none"> 1. Know about grammar , sentences , word clause , Noun phrase, Verb phrase etc. 2. Trace the difference between NP & VP also adjectives and adverb phrases. 3. Contemplate on the practical use of grammar in texts and other literature 4. Solve various examples related to grammar content as above
ENG- OPT - 02	English optional I - <i>Introduction to Literature</i>	<ol style="list-style-type: none"> 1. Trace the developmental history of English Literature 2. Show familiarity with major literary forms such as Novel, Short story, Drama 3. Be acquainted with major religious, political and social movements from 14th to 19th century and their influence on literature. 4. Learn various interpretative techniques to approach literary texts of varied genres. 5. Be acquainted with major religious, political and social movements from 14th to 19th century and their influence on literature. 6. Learn various interpretative techniques to approach literary texts of varied genres.

B. A. S. Y. SEMESTER- III & IV

<p align="center">CLE-2</p>	<p align="center">English Compulsory - Learning Languages Skills</p>	<ol style="list-style-type: none"> 1. Strengthen their ability in Listening, Writing, Speaking and Reading by both at theoretical & practical level. 2. Read and understand canonical texts written by different writers across different ages. 3. Differentiate between grammatical properties and its use in writing in order to enable them to write & speak English consciously. 4. Acquaint them with a keen & subtle way in which the English Language is used.
<p align="center">ENG- OPE - 03</p>	<p align="center">English optional III - Literature In English (1550-1750)</p>	<ol style="list-style-type: none"> 1. Know about the meaning and scope of the various concepts of Literature 2. Study and interpret representative writings from the 16th and 17st century. 3. Acquaint themselves with the great tradition of modern European literature 4. Examine various literary techniques and strategies that writers of 17th century use in writing their texts, and demonstrate an understanding of these technique. 5. Reflect upon the great upheaval that the world has undergone during 16 & 17th century and the constructive role of literary activism/movements in restoring humane values
<p align="center">ENG- OPE - 04</p>	<p align="center">English optional IV - Literature In English (1750-1900)</p>	<ol style="list-style-type: none"> 1. Pinpoint how far literary language deviates from ordinary language 2. Learn how many meanings reveals in a literary text. 3. Trace the history of English literature in the period of 1750-1900 4. Critical interaction with literature from different perspectives.

B. A. T. Y. SEMESTER- V & VI

OPE -5	English optional V - Twentieth Century English Literature	<ol style="list-style-type: none"> 1. Able to get the introduction of Modern English Literature as production of age. 2. Familiarize various literary forms and its use in texts 3. Probe into the literary and aesthetic merits of popular fictions. Approach and appreciation of twentieth century literature.
OPE-6	English optional VI - Introduction to Literary Criticism	<ol style="list-style-type: none"> 1. Learn the history of literary criticism and various literary theories. 2. Apply critical and technical theory and vocabulary to describe and analyze, and formulate an argument about literary and other texts. 3. Think about the non-fixity of meaning of literacy texts. 4. Develop a skill in applying various literary theories in interpreting a specific text.
OPE-7	English optional VII - Indian Writing In English	<ol style="list-style-type: none"> 1. How and why Indian literature emerged as a distinct field of study. 2. Trace the development of history of English literature from its beginning to the present day. 3. Interpret the works of great writes of Indian writers in English. 4. Demonstrate, through discussion and writing, an understanding of significant cultural and societal issues presented in Indian English literature.
OPE-8	English optional VIII - Project Work on History of English Literature from Renascence to age of T.S.Eliot	<ol style="list-style-type: none"> 1. Lead to see how texts are affected by context of various literary authors right from the age of Renascence to age of T.S.Eliot 2. Identify and evaluate appropriate research sources, 3. Incorporating the sources into documented academic writing, formulate original arguments in response to those sources. 4. Apply appropriate research methodologies to specific problems

विषय : हिंदी

विषय क्रमांक	पाठ्यक्रम का विषय	पाठ्यक्रम की उपलब्धता
बी.ए. प्रथम वर्ष – प्रथम सत्र		
हिंदी: SL-1	सामान्य हिंदी – 1	<ul style="list-style-type: none"> हिंदी कथा साहित्य तथा रचनाकारों का परिचय देना । छात्रों में श्रवण, लेखन, पठन, क्षमता को बढ़ाना । समाज के विकास के लिए हिंदी भाषा के योगदान को सीखते हैं। भाषा और अधिग्रहण कौशल सीखने में इंटरनेट और कम्प्यूटर जैसी नई तकनीक का उपयोग करना । हिंदी भाषा की व्यावहारिक उपयोगिता, पत्राचार का परिचय देना । अनुवाद कौशल को आत्मसात करके अनुवादक के रूप में रोजगार निर्मिती के अवसर ।
हिंदी: OH-1	हिंदी वैकल्पिक – I– उपन्यास साहित्य	<ul style="list-style-type: none"> हिंदी उपन्यास साहित्य के विकासक्रम तथा प्रमुख रचनाकारों का परिचय । साहित्य और भाषा के माध्यम से सामाजिक मुद्दों को संबोधित करना । साहित्य के माध्यम से मानवीय जीवनमूल्यों में वृद्धि के माध्यम से छात्रों के समग्र व्यक्तित्व में सुधार करना । नैतिक मूल्यों का जीवन में उपयोग करना ।
हिंदी: OH-2	हिंदी वैकल्पिक – II– नाटक साहित्य	<ul style="list-style-type: none"> हिंदी नाटक तथा रंगमंच का विकास तथा परिचय । हिंदी नाटकों में मनोरंजन तथा व्यावसायिक नाटकों के माध्यम से समाज में जागरुकता निर्माण । नाटक लेखन और अभिनय कौशल में विकास । पारंपारिक लोकनाट्य और आधुनिक नाटकों के माध्यम से भारतीय कला संस्कृति का संवर्धन ।
बी.ए. प्रथम वर्ष – द्वितीय सत्र		
हिंदी: SL-2	सामान्य हिंदी – 2	<ul style="list-style-type: none"> हिंदी कथा साहित्य तथा रचनाकारों का परिचय देना । छात्रों में श्रवण, लेखन, पठन, क्षमता को बढ़ाना । समाज के विकास के लिए हिंदी भाषा के योगदान को सीखते हैं। भाषा और अधिग्रहण कौशल सीखने में इंटरनेट और कम्प्यूटर जैसी नई तकनीक का उपयोग करना । हिंदी भाषा की व्यावहारिक उपयोगिता, पत्राचार का परिचय देना । अनुवाद कौशल को आत्मसात करके अनुवादक के रूप में रोजगार निर्मिती के अवसर ।
हिंदी: OH-3	हिंदी वैकल्पिक – III– हिंदी गद्य साहित्य	<ul style="list-style-type: none"> हिंदी साहित्य में व्यंग्य विधा का परिचय देना। हिंदी की विभिन्न गति की अभिव्यक्तियों को आत्मसात करना। सामाजिक समस्याओं के बारे में छात्रों में जागरुकता पैदा करना।
हिंदी: OH-4	हिंदी वैकल्पिक – IV– एकांकी साहित्य	<ul style="list-style-type: none"> हिंदी एकांकी तथा एकांकीकारों का अध्ययन करना। एकांकी नाटकों के माध्यम से अभिनय कौशल तथा सामाजिक समस्याओं को उजागर करना। साहित्यिक प्रयासों के अंदर देखने के लिए छात्रों को बढ़ावा देना।

बी.ए. द्वितीय वर्ष – तृतीय सत्र

हिंदी: SL-3	सामान्य हिंदी – 3	<ul style="list-style-type: none"> हिंदी साहित्य के विविध विधाओं से परिचय। हिंदी साहित्य में रुचि उत्पन्न करना तथा श्रवण, वाचन, लेखन कौशल का विकास। छात्रों को व्यावसायिक कामों में हिंदी भाषा का उपयोग करने के लिए प्रेरित करना। मीडिया और फिल्म उद्योग के लिए लेखन कौशल का उचित मार्गदर्शन। छात्रों की भाषाविज्ञान क्षमता को समृद्ध करने के लिए प्रेरणा। रोजगार के अवसरों के बारे में छात्रों को जागरूक करना।
हिंदी: OH-5	हिंदी वैकल्पिक – V- कथेत्तर साहित्य	<ul style="list-style-type: none"> हिंदी कथेत्तर साहित्य का परिचय तथा रचनात्मक प्रक्रिया और गद्य के विकास में योगदान के लिए प्रेरित करना। हिंदी साहित्य के मूल्यों तथा संस्कृति का अध्ययन कर समय व्यक्तित्व में सुधार करना। हिंदी अनुसंधानात्मक कार्य में सहायता।
हिंदी: OH-6	हिंदी वैकल्पिक – VI- प्रयोजनमूलक हिंदी 1	<ul style="list-style-type: none"> हिंदी भाषा के नामकरण तथा विकास से छात्रों को अवगत कराना। हिंदी भाषा के मानकीकरण की प्रक्रिया सीखना। हिंदी भाषा की रचनात्मक प्रक्रिया और संचार की क्षमता विकसित करना। हिंदी भाषाई विकास में देवनागरी लिपि के महत्व को परिचित कराना। संचार माध्यमों में हिंदी भाषा के विकास में संचार माध्यमों की उपलब्धता सिखना।
बी.ए. द्वितीय वर्ष – चतुर्थ सत्र		
हिंदी: SL-4	सामान्य हिंदी – 4	<ul style="list-style-type: none"> हिंदी साहित्य के विविध विधाओं से परिचय। हिंदी साहित्य में रुचि उत्पन्न करना तथा श्रवण, वाचन, लेखन कौशल का विकास। छात्रों को व्यावसायिक कामों में हिंदी भाषा का उपयोग करने के लिए प्रेरित करना। मीडिया और फिल्म उद्योग के लिए लेखन कौशल का उचित मार्गदर्शन। छात्रों की भाषाविज्ञान क्षमता को समृद्ध करने के लिए प्रेरणा। रोजगार के अवसरों के बारे में छात्रों को जागरूक करना।
हिंदी: OH-7	हिंदी वैकल्पिक – VII- आधुनिक हिंदी विधा	<ul style="list-style-type: none"> हिंदी काव्य साहित्य में नए रचनाकारों के कविताओं में साहित्यिक सौंदर्य के प्रति दृष्टिकोण निर्माण कराना। साहित्यिक पहलुओं से छात्रों के लेखन कौशल को बढ़ावा देना। आधुनिक हिंदी साहित्य आलोचनात्मक लेखन विधा का परिचय।
हिंदी: OH-8	हिंदी वैकल्पिक – VIII- प्रयोजनमूलक हिंदी 2	<ul style="list-style-type: none"> हिंदी की पारिभाषिक शब्दावली तथा शब्द संपदा से छात्रों को अवगत कराना। हिंदी भाषा के संवैधानिक महत्व से अवगत कराना। हिंदी राष्ट्रभाषा का प्रसार तथा राष्ट्रहित में उसकी उपयोगिता से छात्रों को सीखाना।

बी.ए. तृतीय वर्ष – पंचम सत्र		
हिंदी: OH-9	हिंदी वैकल्पिक – IX– प्रादेशिक साहित्य	<ul style="list-style-type: none"> • प्रादेशिक मराठी साहित्य का ज्ञान। • छात्रों को मराठी –हिंदी के तुलनात्मक साहित्य में अनुसंधानात्मक कार्य के लिए प्रेरणा। • मराठी दलित साहित्य का परिचय तथा अनुवाद कौशल को बढ़ावा देना।
हिंदी: OH-10	हिंदी वैकल्पिक – X– आदि तथा मध्यकालीन हिंदी साहित्य का इतिहास	<ul style="list-style-type: none"> • हिंदी साहित्य लेखन की परंपरा से अवगत कराना। • हिंदी साहित्य के प्राचीनकाल के रचनाकारों के साहित्य में अभिरुची तथा परिसंस्कार निर्माण करना। • साहित्यिक शोध दृष्टिकोण में वृद्धि कराना। • साहित्य में सांस्कृतिक, सामाजिक और नैतिक मूल्यों को समझने के लिए मूल्यांकन दृष्टि का विकास करना।
हिंदी: OH-11	हिंदी वैकल्पिक – XI– साहित्यशास्त्र . 1	<ul style="list-style-type: none"> • हिंदी तथा संस्कृत आचार्यों का साहित्य के निर्माण में योगदान सीखाना • छात्रों को साहित्य में रुचि निर्माण कर साहित्य सृजन की क्षमता को बढ़ावा देना। • भाषिक कौशल को सीखाना।
हिंदी: OH-12	हिंदी वैकल्पिक – XII– प्रकल्पकार्य	<ul style="list-style-type: none"> • छात्रों में पठन, लेखन कौशल का विकास। • साहित्य की विविध विधाओं में अनुसंधानात्मक दृष्टि का विकास। • सामाजिक परिवर्तनों का साहित्य पर पड़े प्रभावों को अवगत कराना। • छात्रों में चिकित्सात्मक दृष्टिकोण का निर्माण करके साहित्य के महत्व को जीवन में उपयोग लाना।
बी.ए. तृतीय वर्ष – षष्ठ सत्र		
हिंदी: OH-9	हिंदी वैकल्पिक – XIII– मध्यकालीन काव्य	<ul style="list-style-type: none"> • मध्यकालीन कवि तथा काव्य का परिचय। • भारतीय भक्तिकाव्य में विविध रचनाओं से सांस्कृतिक मूल्यों का अध्ययन। • छात्रों में हिंदी की ऐतिहासिक, सामाजिक, राजनीतिक पार्श्वभूमि को समझाना। • साहित्यिक प्रेरणा कौशल का विकास।
हिंदी: OH-10	हिंदी वैकल्पिक – XIV– आधुनिक हिंदी साहित्य का इतिहास	<ul style="list-style-type: none"> • हिंदी साहित्य में आए नए परिवर्तनों को छात्रों को परिचय देना। • आधुनिक हिंदी साहित्य में विविध रचनाकारों के साहित्य में अभिरुचि उत्पन्न करना। • हिंदी साहित्य की समृद्धता को दर्शाना।
हिंदी: OH-11	हिंदी वैकल्पिक – XV– साहित्यशास्त्र . 2	<ul style="list-style-type: none"> • हिंदी साहित्य विधाओं का सैध्दांतिक परिचय। • भाषिक कौशल का विकास। • हिंदी भाषा के व्यापक रूप से विकास करने में विविध प्रतिकों का महत्व सिखाना।
हिंदी: OH-16	हिंदी वैकल्पिक – XVI– प्रकल्पकार्य	<ul style="list-style-type: none"> • छात्रों में पठन, लेखन कौशल का विकास। • साहित्य की विविध विधाओं में अनुसंधानात्मक दृष्टि का विकास। • सामाजिक परिवर्तनों का साहित्य पर पड़े प्रभावों को अवगत कराना। • छात्रों में चिकित्सात्मक दृष्टिकोण का निर्माण करके साहित्य के महत्व को जीवन में उपयोग लाना।

Subject : Economics

Course Code	Course Title	On completion of this course students will be able to understand
B. A. F. Y. SEMESTER- I		
Economics: - I	Micro Economics	<ol style="list-style-type: none"> 1. Microeconomics Students will be able to apply supply and demand analysis to examine the impact of government regulation and it also enable them to explain determinants of demand, responses of market and the benefits of exchange. 2. Demonstrate an understanding, usage and application of basic economic principles. 3. Describe and apply the methods for analyzing consumer behaviour through demand and supply, elasticity and marginal utility. 4. Understand the role of alternative property rights in resource allocation Identify and appraise various models of how markets are organized, and the price and output decisions for maximizing profit.
Economics: - II	Indian Economy	<ol style="list-style-type: none"> 1. Develop ideas of the basic characteristics of Indian economy, its potential on natural resources. 2. Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development. 3. Grasp the importance of planning undertaken by the government of India, have knowledge on the various objectives, failures and achievements as the foundation of the ongoing planning and economic reforms taken by the government. 4. Understand agriculture as the foundation of economic growth and development, analyse the progress and changing nature of agricultural sector and its contribution to the economy as a whole. 5. Not only be aware of the economy as a whole, they would understand the basic features of Mizoram's economy, sources of revenue, how the state government finance its programmes and projects.

B. A. F. Y. SEMESTER- II

<p align="center">Economics: - III</p>	<p align="center">Price Theory</p>	<ol style="list-style-type: none"> 1. The theory of price is an economic theory that states that the price for any specific good or service is based on the relationship between its supply and demand. 2. The optimal market price, or equilibrium, is the point at which the total number of items available can be reasonably consumed by potential customers. 3. Supply may be affected by the availability of raw materials; demand may fluctuate depending on competitor products, an item's perceived value, or its affordability to the consumer market.
<p align="center">Economics: - IV</p>	<p align="center">Money Banking & Finance</p>	<ol style="list-style-type: none"> 1. Identify the principles behind the workings of the financial systems. 2. Explain about the evolution of financial markets and various credit instruments; and the evolution of money and its functions. 3. Analyze the operations of equity and debt (bond) markets including interest-rate movements. 4. Synthesize the history, evolution, structure, operations and regulation of modern central banking and financial systems together with the design and conduct of monetary policy, with particular focus on the Asia- Pacific. 5. Apply the principles of modern commercial banking and operational issues within a globalized economic system.

B. A. F. Y. SEMESTER- III

<p align="center">Economics: - V</p>	<p align="center">Macro Economics</p>	<ol style="list-style-type: none"> 1. Define and explain the process of calculating national income, identify its components, demonstrate circular flow of income, analyse the various income identities with government and international trade, define the concept of green accounting. 2. Understand Say's law of market, classical theory of employment and Keynes objection to the classical theory, demonstrate the principle of effective demand and income determination. 3. Explain the meaning of consumption function, relationship between APC and MPC, consumption and income, concept of multiplier and analyse the theories of absolute and relative income hypotheses. 4. Macroeconomics It provides knowledge regarding the formulation of broad economic policies that maximize the level of national income, providing economic growth to achieve sustainability, full employment, price stability, external balance, increasing productivity in the long run.
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Economics: - VI	Development Economics	<ol style="list-style-type: none"> 1. Set up and keep current a database concerning career opportunities for undergraduate majors and undergraduate options in economics. 2. Encourage majors and option students to consult department advisors concerning career goals, and the develop study programs consistent with those career goals. 3. Economic thought Gives idea to the students about the systematic development of economic theories beginning from pre-modern and modern era. 4. Economics of development It makes the students to understand the aspect of development process in low income counties. Its focus is on improving the potential for the mass of population through health and education.
B. A. F. Y. SEMESTER- IV		
Economics: - VII	Public Finance	<ol style="list-style-type: none"> 1. Understand the sources of finance both public and private, demonstrate the role of government to correct market failures and possible advantage of public financing. 2. Attain the advantages and knowledge of public investments and other government expenditures. Understand the causes of growing public expenditures for various programmes and policies within and outside the country. 3. Understand the possible burden, benefits and distribution of various types of taxes among various classes of people, know the general trend and impact on general welfare and arouse them to suggest good and bad tax system. 4. Understand the needs of public borrowing from all possible sources to meet necessary public investment/expenditures. Also be alerted to find sources for repayment. Deliver effectively the preparation of budget and how they are passed in the house. 5. Understand the changes in size and flexibility of state and central
Economics: - VIII	Statistical Method	<ol style="list-style-type: none"> 1. Identify and define basic statistics techniques which are needed for studying in psychology and education the educational data. 2. Outline the distinct method of using raw data in the form of frequency distribution. 3. Apply knowledge of statistical measures such as Mean, Median and Mode for analysis and interpretation of data. 4. Analyze the different measures of dispersion that are useful in the field of psychology and education. 6. Develop skills and knowledge to apply educational data through graphs for analyzing different descriptive measures.

B. A. F. Y. SEMESTER- V

<p align="center">Economics: - IX</p>	<p align="center">International Economics</p>	<ol style="list-style-type: none"> 1. Identify the basic difference between inter-regional and international trade, understand how international trade has helped countries to acquire goods at cheaper cost and explain it through the various international trade theories. 2. Show the benefits of international trade in a way how nations with strong international trade have become prosperous and have the power to control world economy and how global trade can be one of the major contributors of reducing poverty. 3. Explain how restrictions to international trade would limit a nation in the services and goods produced within its territories and at the same time explain that a rise in international trade is essential for the growth of globalization. 4. Show the importance of maintaining equilibrium in the balance of payments and suggests suitable measures to correct Disequilibrium as well. 5. Be aware of the changes in the composition as well as direction of foreign trade after international trade and know the causes and effects of deficits in the balance of payments, measures adopted to correct the deficits and identify the need for having trade reforms.
<p align="center">Economics: - X</p>	<p align="center">Agricultural Economics</p>	<ol style="list-style-type: none"> 1. Students will be able to recognize and examine the relationships between inputs and outputs in their agricultural field to make effective and profitable decisions. 2. Students will understand how all aspects of agriculture combine and are used by scientists, marketers, and producers. 3. Students will understand how employer characteristics and decision-making at various levels enhance the success of an agricultural enterprise. 4. Students will be able to demonstrate critical thinking and problem solving skills as they apply to a variety of animal and or plant production systems.
<p align="center">Economics: - XI</p>	<p align="center">History of Economic Thought</p>	<ol style="list-style-type: none"> 1. Describe the main schools of economic thought 2. Analyze the different schools of economic thought 3. Compare and contrast different schools of economic thought 4. Compare and contrast different property arrangements 5. Discuss whether or not Economics is a science & Analyze the issue of 'value' 6. Analyze the issue of 'competition' 7. Discuss the impact of the nature of man on property arrangements 8. Discuss the role of the government in the economy 9. Outline the role, if any, of ethics/morality in Economics

Economics: - XII	Project Work	<ol style="list-style-type: none"> 1. Demonstrate the skill to identify, extract and determine the scales and orientation of Aerial Photos and Satellite Imagery. 2. Demonstrate the skill in image rectification, identification of features and classification of features with the help of GIS software. 3. Acquaint themselves with the basic concepts and principles of Economics.
B. A. F. Y. SEMESTER- VI		
Economics: - XIII	Research Methodology	<ol style="list-style-type: none"> 1. Collect appropriate data needed, manipulate and draw inferences, describe the concept of statistical averages, use and apply central tendency, dispersion, skewness, and kurtosis. 2. Demonstrate the basic concept of probability, theoretical distribution, probability theorems; solve probability problems by applying probability concept. 3. Explain concept of correlation, analyze and interpret covariance and correlation coefficient, illustrate ordinary least squares and use it to estimate regression coefficient. 4. Describe the components of time series, apply time series analysis in business scenarios, illustrate the different types of index numbers, and calculate index numbers. 5. Measure mortality rates, population growth, reproduction rate, rate of natural increase, net reproduction rate, knowledge in understanding how the population profile of a country is changing, estimate population trend.
Economics: - XIV	Industrial Economics	<ol style="list-style-type: none"> 1. Explain, analyze and predict consumer behaviour under conditions of certainty and uncertainty (under different risk attitudes) and implications for individual and market demand for goods. 2. Calculate the minimal cost input factor quantities for a firm and optimal selling prices, supply quantities and resulting profits of firms in different market structures (including perfect competition and various forms of imperfect competition, like monopolies, oligopolies, and monopolistic competition); 3. Analyze the interaction between consumers and firms, apply the concept of market equilibrium and calculate welfare measures such as consumer surplus and social welfare. 4. Perform supply and demand analysis in input factor markets with varying market structures;

<p>Economics: - XV</p>	<p>Indian Economic Thinker</p>	<ol style="list-style-type: none"> 1. Demonstrate key Indian Economic thinkers from ancient to contemporary period. 2. Comparative study of Indian Economic thinkers on similar concepts. 3. Understand the various Indian Economic thinkers in different historical backdrop and different environment shaping them. 4. Understand nature and value of normative thinking. 5. Demonstrate the concepts of political thinkers in the context of new situations.
<p>Economics: - XVI</p>	<p>Project Work</p>	<ol style="list-style-type: none"> 1. Demonstrate the knowledge of the Research Methodology by studying an area and write a project Report which should reflect original interpretation of the theme based on field observations. 2. Take up small research projects independently or offer resources to fellow researchers.

Subject : History

Course Code	Course Title	On completion of this course students will be able to understand
B. A. F. Y. SEMESTER- I		
History - I	Shivaji & His Times (A.D. 1630- A.D.1707)	<ol style="list-style-type: none"> 1. To understand background of Maratha History. 2. To understand geographical condition of Maharashtra. 3. Study of Swarajya & Maharashtra Dharm Concept. 4. Study of Administration & Policy of Maratha state. 5. To identify & Create the spirit of self-kingdom in student.
History - II	History of modern Maharashtra (AD. 1818-AD. 1905)	<ol style="list-style-type: none"> 1. Study of Socio-religious & economic condition of Maharashtra. 2. To understand the early phase of British rule. 3. A study of Colonial rule. 4. Information about National movement in Maharashtra or early reformers in Maharashtra.
B. A. F. Y. SEMESTER- II		
History - III	History of Maratha (AD. 1707 - AD. 1818)	<ol style="list-style-type: none"> 1. How to transfer of power from Chattrapati to Peshwa. 2. Information and Study About Peshwa Bajirao & Peshwai. 3. Study of Panipat. 4. Study of Anglo-Maratha relation.

History - IV	Twentieth century Maharashtra (AD. 1905 - AD. 1960)	<ol style="list-style-type: none"> 1. To learn about national movement. 2. Study of social movement in Maharashtra. 3. Study about Hyderabad freedom struggle (about Marathwada)
B. A. F. Y. SEMESTER- III		
History - V	History of Early India (Up to BC 300)	<ol style="list-style-type: none"> 1. Study of our civilization. 2. Study of Vedic culture of India. 3. Knowing about religions movement & Janpadaj & Mahajanpadaj. 4. To understand Mouryan Empire.
History - VI	British rule in India (AD.1757 - AD. 1857)	<ol style="list-style-type: none"> 1. A study of company & colonial rule in India. 2. Expansion and consolidation of Brithish rule. 3. To study background of 1857.
B. A. F. Y. SEMESTER- IV		
History - VII	History of India (BC. 300- AD. 650)	<ol style="list-style-type: none"> 1. Study & Brief survey of political changes. 2. Knowing about Socio-Economic life of this period in India. 3. Development of AA & Architecture in India.
History - VIII	History of India (AD. 650 - AD. 1200)	<ol style="list-style-type: none"> 1. The study of sources & approaches of early medieval India. 2. Study of social & economical condition of early medieval India. 3. Knowing about literature, language, music & architecture of early medieval India.
B. A. F. Y. SEMESTER- V		

History - IX	Historiography	<ol style="list-style-type: none"> 1. Learn about history writing & their sources. 2. Knowing about new concept of history writing & knowing historians. 3. To study the type of history & use of history.
History - X	History of Indian National Movement (AD. 1885 - AD. 1947)	<ol style="list-style-type: none"> 1. The study of various National Movements in this period. 2. Study of Indian National Congress & Revolutionary movement. 3. Brief account of National movement under the leadership of Mahatma Gandhi.
History - XI	History of India (AD. 1757 - AD. 1885)	<ol style="list-style-type: none"> 1. Study of early phase of British rule. 2. Economy of this period. 3. Study of Socio-religious movement of this period.
History - XII	Project Work	<ol style="list-style-type: none"> 1. To create the various topics for project. 2. Information about how to do project & about subtopics like fort, caves, movements, museums, local history, temples etc.
B. A. F. Y. SEMESTER- V		
History - XIII	Fields of History	<ol style="list-style-type: none"> 1. The study of objectives of field of history. 2. Learning & study of Archeology, musicology. 3. Study & Information about tourism development.
History - XIV	Landmarks in History of Modern World	<ol style="list-style-type: none"> 1. Study about American war of independence. 2. Information about French revolution. 3. Russian & Industrial revolution. 4. Detail study of World War Second.

History - XV	Glimpses of the History of Marathwada (Up to AD. 1948)	<ol style="list-style-type: none"> 1. To discuss about local & political history of Marathwada. 2. Study of Religions movements in Marathwada. 3. Study of Art, Architecture, Temples & Forts in Marathwada. 4. Detail study of Hyderabad freedom struggle.
History - XVI	Project Work	<ol style="list-style-type: none"> 1. Observation & Evaluation of Project work. 2. Discos on the various type of projects.

Subject : Sociology

Course Code	Course Title	On completion of this course students will be able to understand
B. A. F. Y. SEMESTER- I		
Sociology - I	Introduction to Sociology	<ol style="list-style-type: none"> 1. This paper is designed to know about the origin and development of the sociology as a discipline in general and development in India in particular. Every science and branch has its own subject matter so as Sociology, which correspond society and its subject. This paper is designed to study approach, principles, concepts, methods and history of sociology. 2. Understand the meaning of Sociology and its relationships with other social sciences 3. Understand the basic Concepts in Sociology. 4. Understand the major Sociological perspectives. 5. Understand the uses of sociology..
Sociology - II	Individual & Society	<ol style="list-style-type: none"> 1. This paper is designed to study different sections of society and the institution's and other structural elements. 2. Describe the social and cultural change in Indian society 3. Understand the concepts of social structure, social stratification, social change and social control 4. To study different sections of society and the institution's and other structural elements.

B. A. F. Y. SEMESTER- II

Sociology - III	Introduction to Subfields of Sociology	<ol style="list-style-type: none">1. Students will develop an understanding several branches of sociology.2. Introduce the concept of applied form of sociology
Sociology - IV	Indian Social Composition	<ol style="list-style-type: none">1. Understand the basic knowledge of Indian society2. Describe the Unity, Diversity and Values of Indian society3. Provides information regarding democratic beauty of India4. Understand Rural and Agrarian and structure

B. A. F. Y. SEMESTER- III

Sociology - V	Problems of Rural India	<ol style="list-style-type: none">1. Understand the institutional issues in rural India.2. Students develop conceptual understanding about poverty educational and health problems.3. Understand the issues in rural development programme.
Sociology - VI	Contemporary Urban Issues	<ol style="list-style-type: none">1. Understand the contemporary Urban Issues2. Understand the concept of Urbanization3. To create understanding and analytical capacity among students about urbanization, urban communities, urban planning and urban problems.

B. A. F. Y. SEMESTER- IV

Sociology - VII	Population in India	<ol style="list-style-type: none">1. Apply Demographic Concepts and population to explain past and present population characteristics.2. To able to understand the basic concepts of population in India.3. Knowledge of relationship among Older, Adults4. To understand causes and consequences of population change.5. To understand the dynamics of population.
Sociology - VIII	Sociology of Development	<ol style="list-style-type: none">1. Introduce the Sociological concept of development.2. Understand the comparative thought of Thinkers and their approaches development.3. Describe the contemporary concern of development.4. Understand the Indian experience of development.

B. A. F. Y. SEMESTER- V

Sociology - IX	Sociological Traditions	<ol style="list-style-type: none">1. To provide information to the students with the understanding of historical, social-economic and intellectual forces of the rise of sociological theories2. to provide the students with the basic understanding of emergence of Sociological thought and to know about Pioneer sociologist stated theories with their contribution to Sociology.3. it enable the learners to understand social you got edition emergence of sociological thoughts.4. Understand the Sociological thoughts of August compe, Spencer, Emile Durkheim, Karl Marx, Max Weber and other.
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Sociology - X	Introduction to Research Methodology	<ol style="list-style-type: none"> 1. To introduce research methodology to students for better understanding of application of Social Sciences in general and sociology in particular. 2. To provide and equip the students with the procedures, tools and techniques of social research 3. Students able to understand basic knowledge of social research. 4. Understand the basic different Research and social research.
Sociology - XI	Social Problems in India	<ol style="list-style-type: none"> 1. Describe the main social problems in India. 2. To sensitize the students about social problems of contemporary India and to discuss the measures on it. 3. As a nation of diversity and Plural society India witnessed many issues in past and present this course is designed to identify and analyse some of emerging social problems from sociological perspective. 4. This paper will develop a conceptual understanding to study the individual behaviour and social problems. 5. students get acquainted about the various social problems like: corruption's, suicides, white-collar crimes, land acquisition and rehabilitation.
Sociology - XII	Project Work	<ol style="list-style-type: none"> 1. Understand the procedure of research in Sociology 2. Perform various activities in fields. 3. Acquaint themselves with the basic concepts and principles of sociology.
B. A. F. Y. SEMESTER- VI		
Sociology - XIII	Sociological Theories	<ol style="list-style-type: none"> 1. To understand basic theoretical approaches and develop their Sociological thinking while knowing theoretical contribution pop prominent sociologists of their time. 2. Understand the basic knowledge of sociological theories. 3. To understand functionalism, conflict and symbolic interaction theory. 4. Describe the theory of social action, pre-requisites of social system, role set, reference group, power and authority.

<p>Sociology - XIV</p>	<p>Social Research Methods</p>	<ol style="list-style-type: none"> 1. This paper can serve as a helping hand to students to understand primary technique and the use of social research. The course is design in the view of increasing use of computers and statistical tools in social research. 2. Students to understand primary techniques and uses of social research. 3. Understand the process of social research and its stages. 4. To analyse social problem and study of society and social structure, evolution of welfare schemes.
<p>Sociology - XV</p>	<p>Social Disorganisation in Contemporary India</p>	<ol style="list-style-type: none"> 1. With rapid industrialization and modernization Indian society is witnessing drastic changes, with this transformation Indian society also witnessing few negative changes in social institutions. this paper is designed to to elaborate on such changes and to know causes and impact of social disorganization. 2. Understand the concept of social disorganization. 3. Understand the causes of social disorganization 4. Describe the regionalism, factors of regionalism 5. To understand and study of violence and social disorder, problems of naxalism and terrorism
<p>Sociology - XVI</p>	<p>Project Work</p>	<ol style="list-style-type: none"> 1. Demonstrate the knowledge of the Social Research Methodology by studying an area and write a Project Report which should reflect original interpretation of the theme based on field observations. 2. Take up small research projects independently or offer resources to fellow researchers. 3. Understand the field issues of social research. 4. Perform the report writing in standard format.

Subject : Political Science

B. A. F. Y. SEMESTER- I

Political Science -I	Basic Concepts of Political Science	<ol style="list-style-type: none"> 1. To know what is 'State'? What are the constituents of the state, how it does evolved, what are the theories of origin of the state? 2. To understand the meaning and nature of Government, its organs i.e. executive, legislative and judiciary; Types of government. 3. To make sense about the concept of sovereignty, its types; through Austin's theory and Pluralistic theory. 4. To make students aware of Citizenship and Rights through the deep study of meaning, their types, methods of acquisition etc.
Political Science- II	Government and politics of Maharashtra.	<ol style="list-style-type: none"> 1. Study of historical and political background of Maharashtra by understanding Sanyukta Maharashtra movement and state recognition commission. 2. Knowing the organization of state government in Maharashtra; mainly the structure and functioning of its executive, legislative and judiciary. 3. Study and analysis of various movements in Maharashtra in order to understand the social structure of the state, like Co-operation movement, Dalit movement, Peasant movement and Feminist movement.

B. A. F. Y. SEMESTER- II

Political Science -III	Basic Concepts of Political Science	<ol style="list-style-type: none"> 1. Sophistication of the basic concepts like, liberty, equality and justice by focusing their meaning, types and interrelations. 2. To insist the cognizance about Rights through studying meaning nature and its types. 3. Intent to instil apprehension for democracy and its values; its meaning and features; its types; merits and demerits. 4. Detailed study of welfare state to perceive the meaning features and its functions.
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Political Science-IV	Government and politics of Maharashtra.	<ol style="list-style-type: none"> 1. To make students aware of political decentralisation in India, includes historical overview of Panchayat Raj in Maharashtra along with its 'Composition and functioning.' 2. To broaden the understanding and realization of politics in Maharashtra, our students are introduced with political parties and party politics in Maharashtra through the study of their organisation, agenda, programs and performance in all level of elections.
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B. A. S. Y. SEMESTER- III

Political Science -V	Indian Government and Politics.	<ol style="list-style-type: none"> 1. To comprehend student's knowledge of Indian Constitution by studying its sources, preamble and salient features. 2. To make students conscious of core constitutional provisions like fundamental rights and directive principles of state policy. 3. Understanding the structure and functions of union government. i.e. our prime minister, president and parliament. 4. Lawful apprehension of budgetary process and parliamentary committees, like public accounts and estimate committee. 5. Knowing the constitutional institutions like Attorney general, Comptroller and Auditor General.
Political Science -VI	International Relations.	<ol style="list-style-type: none"> 1. To study the concept, international relations shall be introduced to the students with meaning, nature, scope and significance. 2. To analyse the international relations there are major approaches for the study like Ideal, realistic and behavioural approach to the study of international relations. 3. Understanding the national interest and national power with its meaning and determinants. 4. To recognize concept of balance of power by knowing its meaning, techniques, types and relevance for global peace. 5. To be aware of Indian foreign policy through the study of its principles and objectives.

B. A. S. Y. SEMESTER- IV

Political Science -VII	Indian Government and Politics.	<ol style="list-style-type: none"> 1. To know about our union judiciary i.e. Supreme Court by studying its structure, power, functions and powers of judicial review. 2. To illuminate Centre-state relations, legislative, finance and administrative aspects. 3. Study of ideologies and programs of major political parties in India, features of party system in India. 4. To make students aware of election commission, electoral reforms and procedure in India. 5. Students should be conscious about the challenges before our democracy like, corruption, Casteism, communalism, and regionalism.
Political Science -VIII	International Relations.	<ol style="list-style-type: none"> 1. To get students well informed about meaning nature of collective security in context with the UN objectives. 2. To know the concept of Deterrence along with its meaning, type and features. 3. To get aware of major issues in internationalism, like terrorism and environmentalism. 4. Understanding the structure and functioning of international and regional organizations like, IMF, WB, WTO, SAARC, ASEAN etc. 5. To lay emphasize on the study of non-alignment movement (NAM), its meaning, importance, role and relevance.

B. A. T. Y. SEMESTER- V

Political Science -IX	Indian Political Thinkers	<ol style="list-style-type: none"> 1. Knowing the socio-political ideas of Raja Ram Mohan Roy and his contribution to Indian renaissance. 2. To comprehend the religious and political thoughts of Swami Dayanand Saraswati. 3. To appreciate and acknowledge the social, political thoughts and nationalism of G.K. Gokhale. 4. To enlighten with Lokmanya Tilaks views on Nationalism, social reforms and his political ideology of four fold policy. 5. To soulful reading and deep understanding of Mahatma Gandhi and his way of life through the study of his ideas of Satyagrah, Amhinsa, views on religion, and political ideology behind Ram Rajya Concept.
Political Science -X	Western Political Thinkers	<ol style="list-style-type: none"> 1. Study of Plato's thoughts of ideal state, Justice, communism, and his views on education. 2. As a father of political science Aristotle has great stake in the development of the subject by his views on ideal state, citizenship, revolution. Students should study and realize his contribution. 3. To study eminent European political thinker Machiavelli as pioneer of modern age. Especially, his

		<p>thoughts on religion, morality, human nature and his advice to the prince.</p> <ol style="list-style-type: none"> To discuss impression of Thomas Hobbes political thoughts on modern age political systems and governments. His idea of human nature, deliberation of social contract theory and sovereign power. Understanding John Locke's concept of rights, human nature and his social contract theory.
Political Science-XI	Political Ideologies	<ol style="list-style-type: none"> To study the Nationalism and its relevance, its origin, development and advantages. On the conceptual ground, its meaning and features to be studied. To perceive the basic principles, features, types and values of Liberalism. To find out its origin and development, neo-liberalism and classical one. To notice meaning, nature, means, feature and implications of Imperialism. Its significance and evil. To sensitise students toward gender discrimination, detailed account of Feminism is to be studied in this course by means of studying its meaning, evolution, features and assumptions. To be acquainted with the Democracy as an ideology, it provides the virtues, values, types, condition, relevance and future for this concept.
Political Science-XII	Project Work	<ol style="list-style-type: none"> It provides opportunity of experiential learning to the students. To be familiar with research process and methodology. Social and political sensibility tend students to choose the topic for the project.
B. A. T. Y. SEMESTER- VI		
Political Science-XIII	Indian Political Thinkers.	<ol style="list-style-type: none"> To remind ideas and thoughts of Maulana Azad on religion, Hindu-Muslim Unity, his Nationalism and politics. Study of Jawaharlal Nehru's thoughts on Nationalism, Democracy, Socialism, Secularism and his idea of internationalism. Understanding M.N. Roy's political ideas by his Critique of Marxism, concept of Radical humanism and radical democracy. To study the prominent sophist of Indian polity, economy and society, realization of Dr. B.R. Ambedkar's views on religion and society, his idea of democracy, and economic views. Knowing Jayprakash Narayans contribution by studying his views on socialism and democracy; his idea of total revolution.

<p>Political Science-XIV</p>	<p>Western Political Thinkers.</p>	<ol style="list-style-type: none"> 1. Study of Jean Jack Rousseau and his contribution to political science by receiving his ideas of human nature and social contract; his conception of general will. 2. To have a grasp of J.S. Mill's contribution and political thoughts by studying his idea of utilitarianism, idea of liberty and his views on representative government. 3. To have insight in to Karl Marx's thinking by understanding his idea of dialectic materialism, materialistic interpretation of history, theory of surplus value and his views on state and revolution. 4. To have memorised with Harold Laski's Pluralistic theory of sovereignty, and his views on liberty.
<p>Political Science - XV</p>	<p>Political Ideologies</p>	<ol style="list-style-type: none"> 1. To have in-depth understanding of Socialism by its meaning, evolution, types and significance. Underscoring difference between socialism and communism; its basic assumptions. 2. To be conversant with Communism and its basic assumptions, Karl Marx and other communist's contribution. Study of main communist theories and submit its critical evaluation. 3. To comprehend the Fascism, its evolution and causes, basic assumptions, merits and evils. Concept of corporate state, and critical evaluation. 4. To go through insightful study of Anarchism, ideal view and a communist or radical view. Grounds for anarchism, its relevance and examining merit-demerits. 5. As a global issue and a concern for mankind having deep cognizance of Environmentalism by studying basic assumptions, pollution, sustainable development, global efforts etc.
<p>Political Science- XVI</p>	<p>Project Work</p>	<ol style="list-style-type: none"> 1. To be friendly with research tools and techniques. 2. To be experienced with practical work for society. 3. As a part of experiential learning investigating the research problem of selected topic, data collection and analysis. 4. Report writing for project work done by students, 5. To assess students research orientation and innovative outlook, ability of deploying theoretical knowledge in daily or practical life.

B.A. Course (102)

Outcome for MARATHI

Ist & IInd Semester

B.A./B.Sc. Marathi (SL) I & II

Course code MAR001

गद्य पद्य व उपयोजित मराठी
(अभ्यास पत्रिका 1)

&

Course code MAR002

गद्य पद्य व उपयोजित मराठी
(अभ्यास पत्रिका 2)

- 1) निवडक काव्य, कथा, कथा यांचा परिचय होऊन विद्यार्थ्यांचे भाषिक व वांग्मयीन अकलन समृद्ध होईल.
- 2) भाषिक कौशल्याचा विकास होऊन आविष्करण पद्धती समृद्ध होईल.
- 3) स्पर्धा परीक्षा व व्यवहारिक भाषिक कौशल्याचा विकास होईल.
- 4) विविध माध्यमांसाठीच्या लेखनाचा परिचय होऊन ते आत्मसात करता येईल.

B.A.F.Y. Marathi (Opt.) I

Code MAR101

काव्यात्मक साहित्य

(अभ्यास पत्रिका 1)

- १) मराठीतील महत्वांच्या कवींचा व कवितेचा परिचय होऊन काव्यात्मक दृष्टीचा विकास होईल.
- २) आर्थिक-सामाजिक सांस्कृतिक पर्यावरणाची ओळख होईल.
- ३) मानवी जडणघडणीत भाषिक संस्काराच्या योगदानाचे आकलन होईल. ४) वेगवेगळ्या काळातील कवितेच्या निर्मिती प्रेरणा स्वरूप आशय-विषय यांच्या परिचयातून समाज संस्कृतीचे भान तयार होईल.
- ५) मन, भावना, बुद्धी यांच्या विकासाला चालना मिळेल.
- ६) काव्यात्मकता हा मानवी मनाचा सहज व उत्कट भाव आहे. सौंदर्य व कलात्मक दृष्टी मिळून जीवन सुंदर व चैतन्यदायी बनवण्यास साहाय्यभूत ठरेल.

B.A.F.Y. Marathi (Opt.) II

Course code MAR102

नाट्यात्मक साहित्य

(अभ्यास पत्रिका 2)

- १) नाट्यात्मक साहित्याचा परिचय होऊन विविध सामाजिक प्रश्नांची जाणीव निर्माण होईल.
- २) संहिता लेखन व प्रायोगिक नाटक यांचा परिचय होऊन नाट्य माध्यमाची उपयोजितता लक्षात येईल.
- ३) विद्यार्थ्यांना स्वतःच कौशल्ये विकसित करण्यास साहाय्यभूत ठरेल.
- ४) भावना, विचार आणि स्वप्नांचे विवेचन होऊन सामाजिक व वैयक्तिक मनस्वास्थ्य टिकविण्यास मदत होईल.

५) सुप्त कलागुणांचा विकास होऊन नाटकाकडे, साहित्याकडे कल असणाऱ्या विद्यार्थ्यांना नट,नाटककार म्हणून सिद्ध करण्यास मदत होईल.

B.A.F.Y.Marathi (Opt.) III
Corse code MAR103
कथात्म साहित्य
(अभ्यास पत्रिका ३)

- १) कथात्म साहित्य तून अभिव्यक्त झालेल्या समाजातील विविध स्तरांचे दर्शन होऊन सामाजिक बांधिलकी निर्माण होते.
- २) आदर्श समाज आणि राष्ट्रनिर्मितीसाठी संवेदनशील व मानवी मूल्यांची जोपासना करणारा नागरिक निर्माण होण्यास मदत होते.
- ३) कथन आणि श्रवण ही माणसाची स्वाभाविक प्रवृत्ती आहे. कथा वाचनाने व अभ्यासाने विरेचन होऊन मनःस्वास्थ्य टिकविण्यास मदत होते.
- ४) मातृभाषेतील कथा ही जशी प्रादेशिक असते तशीच ती तिथले प्रश्न आणि समस्यांनाही अधोरेखित करत असते. तळागाळातील समाजाचे प्रश्न आणि अवस्था याचे भान निर्माण करते.

B.A.F.Y.Marathi (Opt.) IV
Corse Code MAR104
मुद्रित माध्यमांसाठी लेखन कौशल्ये
(अभ्यास पत्रिका 4)

- १) भाषिक कौशल्यांचा विकास साधला जातो.
- २) विविध माध्यमांसाठी संवाद, समीक्षण, मुलाखत, निवेदन, लेखन आदी गुणांचा विकास साधला जातो.
- ३) भाषिक अभ्यासामुळे व्यक्तिमत्व विकास घडविला जातो.
- ४) वृत्तपत्रे, दृकश्राव्य माध्यमे, प्रकाशन संस्था आदी ठिकाणी मुद्रित शोधक म्हणून आवश्यक गुणांचा विकास साधला जातो.

IIIrd & IVth Semester
B.A/ .B.Sc.Marathi (SL) III & IV
Course code MAR03
गद्य-पद्य उपयोजित मराठी
(अभ्यास पत्रिका ३)
&
Course code MAR04
गद्य- पद्य व उपयोजित मराठी
(अभ्यास पत्रिका 4)

- १) मराठी साहित्यातील प्रवाह आणि प्रकारांची ओळख होईल.
- २) साहित्याची आवड निर्माण होऊन आस्वाद घेण्याची क्षमता विकसित होईल. ३) समाजाकडे बघण्याचा सकारात्मक दृष्टिकोन तयार होईल.
- ४) व्यवहारज्ञान कार्यालयीन
- ५) प्रसारमाध्यमांसाठीच्या कौशल्यांचा विकास होईल.
- ६) माहिती- तंत्रज्ञानाचा परिचय होऊन भाषा आणि तंत्रज्ञान यांचे उपयोजन करता येईल.

B.A.S.Y. Marathi (Opt.)- V & VII
Course code MAR105
आधुनिक मराठी वांग्मयाचा इतिहास (१८०० - १९२०)
(अभ्यास पत्रिका 5)

&

Course code 107

आधुनिक मराठी वांगमयाचा इतिहास (१८००-१९२०)

(अभ्यास पत्रिका 7)

- १) इ.स.१८०० ते १९२० या कालखंडातील सामाजिक व सांस्कृतिक चळवळीचे स्वरूप आणि त्यांचे साहित्यावरील परिणाम लक्षात येतील.
- २) या काळातील साहित्य निर्मितीची पार्श्वभूमी, प्रेरणा, प्रवाह आणि प्रवृत्ती यांची ओळख होईल.
- ३) निबंध, नियतकालिके, वैचारिक लेखन यांच्या अभ्यासाने वैचारिक जडण-घडण होईल.
- ४) कथा, कादंबरी, कविता, नाटक, चरित्र, आत्मचरित्र या साहित्यप्रकाराची व ग्रंथकारांची ओळख होईल.

B.A.S.Y. Marathi (Opt.)- VI

Course code MAR106

दृक-श्राव्य माध्यमांसाठी लेखन कौशल्ये

(अभ्यास पत्रिका 6)

- १) दृक-श्राव्य माध्यमांसाठीच्या लेखन कौशल्यांचा विकास होईल.
- २) नभोवाणी, दूरचित्रवाणी, संगणक यांची ओळख होऊन वेगवेगळ्या संघर्षांचा शोध घेण्यास मदत होईल.
- ३) संवाद, निवेदन, मुलाखत लेखनाचे तंत्र विकसित होऊन व्यावसायिक दृष्टिकोन तयार होईल.
- ४) माध्यमांवरील संहिता, श्रुतिका, बातमी, जाहिराती लेखनतंत्र अवगत होऊन या क्षेत्रात काम करण्यासाठी संधी मिळेल.

B.A.S.Y. Marathi (Opt.) -VIII

Course code MAR108

साहित्य प्रकारांतर आणि साहित्याचे माध्यमांतर

(अभ्यास पत्रिका 8)

- १) साहित्यप्रकारांतराची संकल्पना स्पष्ट होईल.
- २) माध्यमांचे स्वरूप, महत्त्व स्पष्ट होऊन त्याचा साहित्याशी अनुबंध उलगडता येईल.
- ३) माध्यमांतरांसाठीच्या विविध लेखन प्रकारांचा परिचय होईल.
- ४) कथा-पटकथा, चित्रपट, नाटक, जाहिराती, श्रुतिका, नाटिका, एकांकिका, नभोनाट्य या माध्यमांसाठी लेखन कौशल्ये विकसित होतील.

Vth & VIth Semester

B.A.T.Y. Marathi (Opt.) IX & XIII

Course code Z-1198

भारतीय साहित्य विचार

(अभ्यास पत्रिका 9)

&

Course code -----

पश्चात्य साहित्यविचार

(अभ्यास पत्रिका 13)

- १) भारतीय व पश्चात्य साहित्य विचार यांचे आकलन होईल.
- २) साहित्य निर्मिती व साहित्याचे प्रयोजन याविषयी अभ्यासकांनी मांडलेल्या विविध मतांचा परिचय होईल.
- ३) भारतीय साहित्य विचारातील रस विचाराचे उपयोजन आणि पश्चात्य साहित्यातील साहित्यनिर्मिती मागची मानसशास्त्रीय विचारप्रणाली यांची माहिती होईल.
- ४) शब्दशक्ति आणि अर्थविचार यांचे साहित्यातील महत्त्व-विशेष लक्षात येतील.
- ५) साहित्यविषयक मार्क्सवादी दृष्टिकोन समजून घेता येईल.

६) समाजवाद, परित्मतेची संकल्पना, बांधिलकीची संकल्पना अवगत होईल.

B.A.T.Y. Marathi (Opt.) X

Course code Z - 1199

भाषा विज्ञान

(अभ्यास पत्रिका 10)

- १) भाषा म्हणजे काय? भाषेच्या व्याख्या, लक्षणे व स्वरूप यांची माहिती होईल.
- २) भाषा एक संकेत प्रणाली म्हणून समजून घेता येईल.
- ३) मानवी उत्क्रांतीच्या विविध टप्प्यांचे आकलन करून घेता येईल.
- ४) सामाजिक व सांस्कृतिक परंपरांचा कालक्रमिक अभ्यास करता येईल.
- ५) भाषेच्या विविध संकल्पना लक्षात येतील.
- ६) बोलीभाषेच्या अभ्यासाने विविध सामाजिक घटकांच्या संस्कृतीचा अभ्यास करण्याची दृष्टी निर्माण होईल.
- ७) वर्णनात्मक व ऐतिहासिक भाषाशास्त्र अभ्यासाचे महत्त्व लक्षात येईल.

B.A.T.Y. (Opt.) - XI & XV

Course code Z -1136

मध्ययुगीन मराठी वांगमयाचा इतिहास (प्रारंभ ते 1600)

(अभ्यास पत्रिका 11)

&

मध्ययुगीन मराठी वांगमयाचा इतिहास (1601 ते 1800)

(अभ्यासपत्रिका 15)

- १) मध्ययुगीन साहित्याबरोबरच तत्कालीन समाज, संस्कृती यांचे आकलन होईल.
- २) मध्ययुगीन साहित्यनिर्मितीच्या प्रेरणा, प्रवृत्ती आणि स्वरूप यांचे आकलन होईल.
- ३) मध्ययुगातील विविध संप्रदायांचे विचार व मानवी मूल्यांचे आकलन होईल.
- ४) समाज, संस्कृती, परंपरा, विचारधारा, साहित्य यांच्या अभ्यासाची दृष्टी निर्माण होईल.
- ५) काल क्रमिक साहित्यात झालेला बदल व त्याचा सामाजिक, सांस्कृतिक, आर्थिक प्रभाव अभ्यासण्यास मदत होईल.

B.A.T.Y. Marathi (Opt.) XII & XVI

Course code -----

प्रकल्प कार्य

(अभ्यास पत्रिका 12)

&

प्रकल्प कार्य

(अभ्यास पत्रिका 16)

- १) वाचन, आकलन, चिंतन, मनन आणि लेखन कौशल्याचा विकास होईल.
- २) समीक्षणात्मक दृष्टीचा विकास होऊन तटस्थ पद्धतीने व संदर्भानुरूप वैचारिक लेखन करण्याची पद्धती अवगत होईल.
- ३) संशोधनात्मक दृष्टी तयार होऊन साहित्य, समाज, संस्कृती, परंपरा, जीवनमूल्ये यांची मांडणी करण्याची क्षमता विकसित होईल.
- ४) प्रादेशिक व सीमाभागातील भाषिक- विशेष यांचा अभ्यास करता येईल.
- ५) बोलीभाषेतील शब्दविशेषांची नोंद घेता येईल.
- ६) लोकजीवनातील लोकगीते, ओवी, उखाणे, लोककथा इत्यादी संकलन व मूल्यमापन करण्याची दृष्टी प्राप्त होईल.

B.A.T.Y. Marathi (Opt.) XIV

Course code -----

व्याकरण व निबंध

(अभ्यास पत्रिका 14)

- | स्पर्धा परीक्षेच्या पूर्वतयारीसाठी या पेपरचे अतिशय महत्त्व आहे.
- | शब्द, शब्दांच्या जाती व शब्दसंग्रह अवगत होईल.
- | संधी, समास आणि अलंकार या भाषिक रूपाचे आकलन होईल.
- | समासाचे प्रकार ओळखता येतील.
- | अलंकार म्हणजे काय? अलंकाराचे प्रकार आणि भाषेतील महत्त्व सांगता येईल.
- | निबंध लेखनाच्या अभ्यासाने कमी शब्दात भावना, विचार, अभिव्यक्त करण्याचे तंत्र अवगत होईल.

(101A)



Ajantha Education & Military Preparatory Institutes,
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B.Sc. Computer Science (103)
COURSE OUTCOMES
(F.Y., S.Y., and T.Y.)

Course Code	Course Title	On completion of this course the learner students will be able to understand
B.Sc. F. Y. SEMESTER- I		
Comp. Sci.: CS01	Computer Fundamentals	<ol style="list-style-type: none"> 1. Demonstrate a basic understanding of computer hardware and software. 2. Demonstrate problem-solving skills. 3. Apply logical skills to programming in a variety of languages. 4. Utilize web technologies. 5. Demonstrate basic understanding of network principles
Comp. Sci.: CS02	Digital Electronics	<ol style="list-style-type: none"> 1. Understand different Number systems, Codes, Logic Gates, Boolean laws & Theorems. 2. Simplify the Boolean functions to the minimum number of literals using Karnaugh Map 3. Gain knowledge about combinational circuits and sequential circuits. 4. Can design various synchronous and asynchronous circuits using flip flop. 5. Design Counters, Shift Registers using J-K / D Flip Flop. 6. Design Counters, Shift Registers using J-K / D Flip Flop.
Comp. Sci.: CS03	Practical	<ol style="list-style-type: none"> 1. To acquire knowledge in Pc Software (Ms Office) 2. Introduction to Ms Word and working with documents carrying out editing, formatting, creating, inserting tables and charts. 3. Introduction to spreadsheets & its application, working with spreadsheets. 4. Computing and formatting spreadsheets. 5. Distinguish between analog and digital systems. 6. . Identify the various digital ICs and understand their operation. 7. Apply Boolean laws to simplify the digital circuits. 8. Design simple logic circuits.
B.Sc. F. Y. SEMESTER- II		
Comp. Sci.: CS04	Operating System I	<ol style="list-style-type: none"> 1. Able to understand the role played by system software's such as assembler, interpreter, linker, loader and compilers. 2. Studies various machine architectures and explains various loading, linking Facilities. 3. Able to understand machine independent and dependent Compiler features. 4. Understands Operating System Process Concepts and Interrupt Processing 5. Learns various process management concepts including scheduling, synchronization, deadlocks and multithreading 6. Student will master issues related to file system interface,

		implementation and disk management
Comp. Sci. : CS04	Programming in C	<ol style="list-style-type: none"> 1. Understands the basic structure, operators and statements of C language. 2. Define decision making statements and solve problems based on it. 3. Learns that it serves as a basic language of all advanced computer languages. 4. Gains knowledge about arrays functions and solve problems based on it. 5. Know the alternative ways of providing solution to a given problem.
Comp. Sci.: CS106	Practical	<ol style="list-style-type: none"> 1. General understanding of structure of modern computers 2. Purpose, structure and functions of operating systems 3. Become familiar (if not already) with the C language, gcc compiler, and Make files 4. Understand the high-level structure of the Linux kernel both in concept and source code 5. Acquire a detailed understanding of one aspect (the scheduler) of the Linux kernel <ol style="list-style-type: none"> 1. Understand the logic for a given problem. 2. Write the algorithm of a given problem. 3. Draw a flow chart of a given problem. 4. Recognize and understand the syntax and construction of C programming code. 5. Gain experience of procedural language programming.
B.Sc. S. Y. SEMESTER- III		
Comp. Sci. : CS07	Advance C programming	<ol style="list-style-type: none"> 1. Make use of different data-structures like arrays, pointers, structures and files. 2. Understand how to access and use library functions. 3. Understand function declaration and definition. 4. Understand function declaration and definition. 5. Write programs to print output on the screen as well as in the files. 6. Know the alternative ways of providing solution to a given problem.

Comp. Sci. : CS08	Data Structure	<ol style="list-style-type: none"> 1. Able to choose an appropriate data structure to specific problem. 2. Choose among alternative data structures to solve specific data-representation and algorithmic problems. 3. Students will be able to define basic static and dynamic data structures and relevant standard algorithms for them: stack, queue, dynamically linked lists, trees, graphs, heap, priority queue, hash tables, sorting algorithms. 4. Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures. 5. Formulate new solutions for programing problems or improve existing code using learned algorithms and data structures. 6. Evaluate algorithms and data structures in terms of time and memory complexity of basic operations.
Comp. Sci. : CS09	Practical	<ol style="list-style-type: none"> 1. Understanding a functional hierarchical code organization. 2. Ability to define and manage data structures based on problem subject domain. 3. Ability to work with textual information, characters and strings. 4. Ability to work with arrays of complex objects. 5. Understanding a concept of object thinking within the framework of functional model. 6. Understanding a concept of functional hierarchical code organization. 7. Understanding a defensive programming concept. Ability to handle possible errors during program execution
Comp. Sci. : CS10	Practical	<ol style="list-style-type: none"> 1. Ability to analyze algorithms and algorithm correctness. 2. Ability to summarize searching and sorting techniques. 3. Ability to describe stack, queue and linked list operation. 4. Ability to have knowledge of tree and graphs concepts.
B.Sc. S. Y. SEMESTER- IV		
Comp. Sci. : CS011	Programming in CPP	<ol style="list-style-type: none"> 1. Apply and implement major object oriented concepts like message passing, function overloading, operator overloading and inheritance to solve real-world problems. 2. To study the designing of complex classes: Friend Functions and Static member functions, Inline functions. 3. To be taught about Inheritance: Single Inheritance, Multiple Inheritance, Multi-level Inheritance, Hierarchical Inheritance and Hybrid Inheritance. 4. Learn Objects, Classes, Methods, Constructors and Destructors.
Comp. Sci.: CS012	DBMS Using SQL	<ol style="list-style-type: none"> 1. Master the basic concepts and appreciate the applications of database systems. 2. Master sound design principles for logical design of databases, including the E-R method and Normalization approach. 3. Be familiar with the relational database theory, and be able to write relational algebra expressions for queries. 4. Be familiar with a commercial relational database system (Oracle) by writing SQL using the system.

		5. Master the basics of SQL and construct queries using SQL.
Comp. Sci.: CS013	Practical	<ol style="list-style-type: none"> 1. Identify importance of object oriented programming and difference between structured oriented and object oriented programming features. 2. Able to make use of objects and classes for developing programs. 3. Able to use various object oriented concepts to solve different problems
Comp. Sci.: CS014	Practical	<ol style="list-style-type: none"> 1. Construct problem definition statements for real life applications and implement a database for the same. 2. Design conceptual models of a database using ER modeling for real life applications and also construct queries in Relational Algebra. 3. Create and populate a RDBMS, using SQL. 4. Write queries in SQL to retrieve any type of information from a data base. 5. Analyze and apply concepts of normalization to design an optimal.
B.Sc. T. Y. SEMESTER- V		
Comp. Sci. : CS015	Software Engineering	<ol style="list-style-type: none"> 1. Understand basic concepts of software engineering. 2. Shows the Software Requirements Analysis and Specifications. 3. Knows about Quality of Software with ISO 9000, SEI CMM. 4. Knows about Quality of Software with ISO 9000, SEI CMM. 5. Analyse the principles of requirement Engineering
Comp. Sci.: CS016	Web Designing	<ol style="list-style-type: none"> 1. Familiarity about the internet access, web browsing and hyper text. 2. Usage of the search engine and Electronic Mail. 3. To use the lists and add images in HTML. 4. Creating a link within a web page and creating a table. 5. Create links to Video Files.
Comp. Sci.: CS017	Practical	<ol style="list-style-type: none"> 1. Complete all required reading, including link to external material. 2. Reviews questions and answers included throughout the case study. 3. Elements of care. 4. Content and the circle of care. 5. To identify the key points or issue.

Comp. Sci.: CS018	Practical	<ol style="list-style-type: none"> 1. Calculate a capital budgeting. 2. Creating a advertisement banner using image box control. 3. Preparation of resume using HTML Tag. 4. Creation of database using Data control, option button, check box and date picker. 5. Preparation of frame and display of multiform document
B.Sc. T. Y. SEMESTER- VI		
Comp. Sci. : CS019	Data Communication and Networking	<ol style="list-style-type: none"> 1. Understands the concepts of OSI and the TCP - IP reference models CO. 2. Learn the concepts of error detection & correction methods. 3. Working of Internetworking & devices, Routing techniques. 4. Describe protocols like DNS, SMTP, SNMP, FTP, HTTP etc. 5. Students will get the concepts of Security
Comp. Sci. : CS020	Ethics and Cyber Law	<ol style="list-style-type: none"> 1. Introduction and concept of cyber law and cyber law in E-commerce contract aspects. 2. Write up the security and intellectual property aspects. 3. Clear understanding about the evidence and criminal aspect. 4. To know the global trends in India. 5. Students will get the concepts of Security.
Comp. Sci. : CS021	Practical Seminar	<ol style="list-style-type: none"> 1. To study research papers for understanding of a new field, in the absence of a textbook, to summarise and review them. 2. To impart skills in preparing detailed report describing the project and results 3. To identify promising new directions of various cutting edge technologies. 4. To effectively communicate by making an oral presentation before an evaluation committee
Comp. Sci.: CS022	Practical Project	<ol style="list-style-type: none"> 1. To give a practical exposure to the process of software development life cycle. 2. To develop a quality software solution by following the software engineering principles and practices. 3. Students are also encouraged to take up a research oriented work to formulate a research problem and produce results based on its implementation/simulation/experimental analysis. 4. Methods and tools to design, implement, test, document, and maintain a computer-based system. 5. Apply research methods, techniques, and problem solving approaches from the field of research in which they are specializing. 6. Access, retrieve and evaluate relevant professional information reliably. 7. Methods and tools for analyzing complex real-world problems and devise computer-based solutions.



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PROGRAMME - Certificate Courses (104) **COURSE OUTCOMES**

Addon / Value Added Certificate Courses

Course Code	Course Title	After completing the course learner will acquire,
104 (1)	Communication Skills in English	<ol style="list-style-type: none"> 1. Communication skills by giving adequate exposure will improve the four basic skills of language such as Speaking, Reading, Listening and writing. 2. Recognize and operate in various styles and registers in English. 3. Get rid of his present flaws and mistakes in pronunciation and grammar. 4. Identify and repair the voids in his present vocabulary and pronunciation targeting those specific array of words which create a barrier in his thought process. 5. Impart better writing skills by sensitizing the learners to the dynamics of effective writing. 6. Build up the learners confidence in oral and interpersonal communication by reinforcing the basics of pronunciation specially.
104 (2)	Basic Computer Literacy	<ol style="list-style-type: none"> 1. Acquire confidence in using computer techniques available to users. 2. Recognize the basic components of computers and terminology. 3. Understand data, information and file management. 4. Create documents using Word processor, Spreadsheet & Presentation Software. 5. Will learn about making Power Point Presentations. 6. Understand computer networks, Internet. 7. Browse the internet, content search, email and collaborate with peers. 8. Use e-Governance applications. 9. Use computer to improve existing skills and learn new skills.
104 (3)	Yoga and Wellness	<ol style="list-style-type: none"> 1. Will understand right perspective through the first-hand experience and learning the science and the practice of yoga. 2. Will learn the basic science of health and wellness. 3. Get educated as an Yoga Instructor. 4. Will understand the types of Yoga and imparts the practical knowledge of Yogasana, Kriyas, Bandhas, Mudras, Yogic Therapy and Pranayama. 5. Will understand Sutra Yoga and the philosophy mentioned in those sutras. The role of SatvikaAhara is also based alongside Asanas.

		<ol style="list-style-type: none"> 6. Will be able to implement of the philosophy of Yoga in everyday life.
104 (4)	Gandhian Thoughts	<ol style="list-style-type: none"> 1. Will understand the meaning of nonviolence and peace in life. 2. Will be able to create awareness about Gandhian thought and spread it among the youth generation. 3. Will understand and be able to cultivate the moral values based on Gandhian philosophy and its relevance in life. 4. Will understand and be able to create awareness about adopting simple living and cooperative community life. 5. To provide knowledge in the area of Gandhi's moral, religious and social philosophy.
104 (5)	Soil Analysis	<ol style="list-style-type: none"> 1. Details about Soil analysis, 2. Will be able to know Types of soil, Soil pollutants and role of soil testing for environment. 3. Can understand uses of soil analysis. 4. Will be able to determine pH of given soil sample. 5. Will be able to determine nutrient content (NPK) of soil. 6. Will be able to determine salinity of given soil sample. 7. Will be able to determine micronutrient content of soil sample. 8. Finally get skills of soil analysis to help the farmers of the region.