Maratha VidyaPrasarakSamaj's
S.V.K.T Arts, Commerce & Science College Deolali Camp Nashik.
Program Outcomes, Program Specific Outcomes, and Course specific Outcomes

2022-23

Department of Botany

Program outcome: B.Sc. (Botany)	
1	Apply the knowledge of biology to make scientific queries and enhance the comprehension potential.
2	It also provides opportunities to learn experimental concepts related with life science.
3	Successful transfer of scientific knowledge both orally and in writing.
4	Function as an individual, as a member or a leader to perform a task in class room situation or during field study.
5	Acquired the skills in handling scientific instruments, planning and performing in laboratory experiments. The skills of observations and drawing logical inferences from the scientific experiments. Analyzed the given scientific data critically and systematically and the ability to draw the objective conclusions. Been able to think creatively (divergently and convergent) to propose novel ideas in explaining facts and figures or providing new solution to the problems.
6	Insist the significance of conserving a clean environment for perpetuation and sustainable development. study incessantly by self to cope with growing competition for higher studies and employment.

7	Developed scientific outlook not only with respect to science subjects but also in all aspects related to life. Realized that knowledge of subjects in other faculties such as humanities, performing arts, social sciences etc. can have greatly and effectively influence which inspires in evolving new scientific theories and inventions. Imbibed ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.

Program Specific outcome : B.Sc. (Botany)	
1	Students acquire fundamental Botanical knowledge through theory and practical as well as to explain basis plant of life, reproduction and their survival in nature
2	To enrich knowledge through problem solving, minor/major projects, seminars, tutorials, review of research articles/papers, participation in scientific events, study visits.
3	Helped to understand role of living and fossil plants in our life.
4	To create awareness about cultivation, conservation and sustainable utilization of biodiversity
5	To know advance techniques in plant sciences like tissue culture, Phytoremediation, plant disease management, formulation of new herbal drugs etc.
6	Students able to start nursery, mushroom cultivation, biofertilizer production, fruit preservation and horticultural practices.
7	To help students to build-up a progressive and successful career in botany

Course outcome : B.Sc. (Botany) Semester I		
Class	**Course Title**	**Outcome**
F.Y.B.Sc. Sem-I	BO-111- Plant life and utilization I	• Study of cryptogams to understand their Diversity, know evolution of algae, fungi and bryophytes. • Discuss about morphological structure, classification, reproduction & economic importance of algae. • Study and impart knowledge about the general Characteristics, structure, reproduction, life history and economic importance of fungi. Understand the features of Lichens. To get knowledge about classification, mode of reproduction and detailed study of some important bryophytes.
	BO-112-Plant morphology and Anatomy	• Understand the floral morphology of angiosperms and different theories related to the evolution of advanced leaf like or floral parts of the plants. • To understand the types of an inflorescence and its significance. To provide knowledge about morphological and internal structure of plants. • Students identify the different plants on the basis of its morphological and anatomical structure • Plant anatomy and embryology are much awaited subject to study the internal structures and structure & function of reproductive organs in plants • The course paper cover basic aspects of anatomy of plant tissues such as meristems, epidermis, permanent tissues, complex tissue systems and organ structure of plant
	BO-113 Practical based on BO 111 & BO 112	• To study and get knowledge about parts and working principles of compound and dissecting microscope. • Students are capable to become practical knowledge about micro-preparation and

		observation of permanent slides of genera. • Learn the microscopic technique, familiarize with the external and internal structure of lower and higher group organisms. Study of Lichens and its types. • Understand in details with practical knowledge of the morphology of different types of inflorescence. Practical understanding of the different types of fruits and their morphology. • Students able to understand the internal structure of monocot and dicot (stem, leaf and root), secondary thickening, anomalous secondary thickening (Dicot and Monocot) and nodal anatomy.
S.Y.B.Sc. Sem-lll	BO-231:Taxonomy of Angiosperms and Plant Ecology	• Understand the objective, scope and importance of angiosperms. • Understand the concept of Artificial, Natural and Phylogenetic system of classification. its merits & demerits • Understand the system of binomial nomenclature advantages and disadvantages • Aware various plant families and its economic importance • Understand the Plant ecology, concept of population, community and ecosystem as well as plant adaptation to environment
	BO-232: Plant Physiology	• Acquire knowledge on the physiological functions of plant. • To become knowledgeable in plant and its water relations. • Students will able to gain knowledge on role of micronutrients in plant growth, their development and understand the mechanism of nitrogen metabolism • Students will be able to understand the various physiological life processes in plant • Learn about the movement of sap & absorption of water in plant body • Understand the Photoperiodism concept of short day plants, long day plants and day neutral plants.

	BO 233: Practical based on BO 231 & BO 232	• Students will gain a clear understanding of the most advanced plant division i.e. Angiosperms. • Understand the floral morphology of angiosperms and different theories related to the evolution of advanced leaf like or floral parts of the plants. • Understand in detail practical knowledge on study of plant families and its economic importance • Understand the ecological adaptation in hydrophyte and xerophytes with the help of T.S. of plant material. • Practical knowledge on how to measure the abundance, frequency of a species, population or community using quadrate method. • Understand knowledge on different tools of taxonomy and ecological instruments. • Students able too understand phytochemical test for starch and protein in germinating and non - germinating seeds • To understand Isolation of Leaf Protein Concentration (LPC) from suitable plant material. • Acquire knowledge about the Determination of DPD, Determine rate of transpiration in different condition of environment. Student will gain knowledge about Arc Auxanometer, Curling exp. Imbibition in seed, • Students will gain a clear understanding of theCommercial biofertilizers b. Imbibition in seeds c. Ringing experiment d. Arc Auxanometer e. Spectrophotometer f. Nitrogen fixing bacteria / BGA (specimen/ slide) • Student will Calculate seed germination percentage and vigor index. • Knowledge on the various taxonomic techniques used in field study and various procedure of plant specimen preservation for further study.
T.Y.B.Sc. Botany **(Semister-V)**	**BO: 351 Cryptogamic Botany (Algae & Fungi)**	• Know the salient features of Cryptogams plants. •Become aware of the status of cryptogams as a group in plant kingdom. •Understand the life cycles of selected genera. •Learn about the economic and ecological

		importance of Cryptogams plants.
	BO: 352 Archegoniate	•Introduction of Archegoniate general character. •Range of thallus organization origin of bryophytes •Study of life cycle of bryophytes. •Study of life cycle of Pteridophytes. •Ecological & Economic importance of Pteridophytes.
	BO: 353 Spermatophyta and Palaeoboatny	• Understand the diversity of angiosperms. • Understand the comparative account among the families of angiosperms. • Know the economic importance of the angiosperm plants. • Understand the distinguishing features of angiosperm families • Understand Gymnosperms with respect to distinguishing characters, comparison with Angiosperms, economic importance and classification. • Understand the life cycles of Pinus and Gnetum.
	BO: 354 Plant Ecology	• Know the scope and importance of the discipline. • Understand plant communities and ecological adaptations in plants. • Learn about conservation of biodiversity, Nonconventional Energy and Pollution. • Discover botanical regions of India and vegetation types of Maharashtra. • Ecological Impact Assessment • Ecological management. •Remote sensing.

	BO: 355 Cell & Molecular Biology	• Gain knowledge about "Cell Science. Understand Cell wall Plasma membrane, Cell organelles and cell division. • Learn the scope and importance of molecular biology. • Understand the biochemical nature of nucleic acids, their role in living systems, experimental evidences to prove DNA as a genetic material. • Understand the process of synthesis of proteins and role of genetic code in polypeptide formation.
	BO: 356 Genetics	• Introduction to genetics concept application. • Mendelism,NeoMendelism (gene interaction) • Multiple alleles definition concept character. • Linkage recombination & crossing over. •Mutation concept •Numerical alteration of chromosome. •Structural alteration of chromosome. •Sex linked Inheritance:
	BO: 357 : Practical based on BO:351 and BO:352	•Study of Algae with respect to systematic position, thallus structure and reproduction . •Study of Fungi respect to systematic position, thallus structure and reproduction . •Study of *Marcantia ,Anthoceros and funaria* with respect to systematic position, morphology of thallus . •Study of sporophyte evolution in Bryophytes with help of permanent slides . •Study of Selaginella, Psilotum, Equisetum with respect to taxonomic position ,Morphology of sporophyte,anatomy reproductive structures. •Study of Stelar evolution in pteridophytes with the help of permanent slides.

	BO:358 Practical based on BO:353 and BO:354	• Study of following families with reference to systematic position, Diagnostic characters, floral formula, floral diagram . • Preparation of botanical keys: Indented and Bracketed keys by using vegetative and reproductive characters . • Study of Internal and External morphology of *Gnetum* and *Pinus*. • Study of Polluted water body with ref. To BOD. • Study of physiochemical properties of water body by using sacchidisc,PH meter and electric conductive meter. • Acquisition of ecological data of particular locality by using GPS /altimeter /geographical maps etc. • Study of suitable ecosystem by line /belt transects method.
	BO359 :Practical based on BO355 and BO356	• Cytological techniques –preparation of fixatives preparation of stains . • Isolation of nuclei and characterization. • Study of various stages of mitosis and meosis . • Induction of C metaphase in suitable plant material • Study of chromosome Morphology. • Isolation of plant genomic DNA by suitable method • Estimation of plant DNA by DPA method Extraction and estimation of RNA by orcinol method. • Preparation of salivary gland chromosomes in *chironomous*larvae . • Genetic problem on gene mapping using three point test cross data . • Study of structural heterozygotes in Rhoeo. • Problem on quantitative inheritance. • Problem on multiple alleles.
	BO3510:Medicinal Botany	• **Medicinal plants**: history scope and importance. Indigenous Medicinal Sciences Definition and Scope. • **Ayurved**:History, origin, Panchamahabhuta, Saptadhatu and tridosha concept . • **Siddha**:Origin of siddha medicinal system. • **Unani**: History concept ;Umoor-e-tabiya ,tumors treatments . • Conservation of endangered and endemic medicinal plants. • Preparation of medicinal plants. • Ethnobotany and folk medicine .
	BO3511:plant diversity and Human health	• **Plant diversity and its scope** –Genetic and species diversity, plant diversity at the ecosystem level. • Agro biodiversity and cultivated plant taxa, wild taxa .value and uses of biodiversity . • **Loss of biodiversity**: Loss of genetic diversity, projected scenario for biodiversity loss. • **Management of plant biodiversity**: organisation associated with biodiversity management. • **Conservation of biodiversity**: conservation of genetic diversity ,species diversity ,in situ ex situ conservation . • Role of plant in relation to Human Welfare importance of forestry their utilisation and commercial aspect .Avenue trees ,ornamental plants of India .Alcoholic beverages through

		ages .fruits and nuts.
Course outcome : B.Sc. (Botany) Semester II		
Class	**Course Title**	**Outcome**
F.Y.B.Sc. Sem-II	BO-121 : Plant life and utilization II	• To get knowledge about plant diversity such as Pteridophytes, Gymnosperms and Angiosperms. • To get knowledge about classification, mode of reproduction and detailed study of some important Pteridophytes. • To study Gymnosperms, classification ,reproduction ,utilization and economic importance. • To understand about Angiosperms, comparative account of monocotyledons &dicotyledons Utilization and economic importance of angiosperms.
	BO-122 : Principles of plant science	• To understand the scope of plant physiology. • To get knowledge about diffusion in plants, imbibition as a special type of plant diffusion. • To understand the osmosis three types of solution such as Hypotonic, .Isotonic and Hypertonic.to study the exo-osmosis &endo-osmosis, plasmolysismechanism& its significance. • To understand about the concept of plant growth & growth regulator & their significance. • Acquire knowledge on ultrastructure of cell. Comparative account of prokaryotic and eukaryotic cell. • Acquire knowledge on ultrastructure of cell. • Understand ultrastructure of cell wall, plasma membrane and cell organelles as well as cell cycle in plants and stages of mitosis & meiosis. • To understand the structure of DNA types of DNA & chromosomes, structure of RNA.

	BO-123 Practical based on BO-121 & BO-122	• Understand the internal structural variation of pteridophytes and gymnosperms through T.S. and L.S Study of utilization & economic importance of pteridophytes, Gymnosperms & Angiosperms. • The laboratory course gives practical knowledge to perusing students in the field of cytology, cell division-Mitosis & Meiosis • Students are capable to become practical knowledgeable in estimation of chlorophyll-a & b by using plant material. • These experiments will be helpful to student for better understanding of the scientific principles and skillful implementation of the experiments such as Plasomolysis& DNA extraction by using Banana.
S.Y.B.Sc. Sem-IV	BO 241:Plant Anatomy and Embryology	• Plant anatomy and embryology are much awaited subject to study the internal structures and structure & function of reproductive organs in plant • The course paper cover basic aspects of anatomy of plant tissues such as meristems, epidermis, permanent tissues, complex tissue systems and structure of plant organs; reproductive developmental aspects of male reproductive system - Pollen grains, female reproductive system - embryo sac. • Students will be benefitted by studying the plant anatomy enables to identify fragmentary plant materials, wood, forensic investigation, and applied aspects of meristems cultures. • Students will be able to utilize embryological studies in various aspects like analysis of evolutionary trends, circumscription and delimitation of taxa and making a decision on systematic position. • Students familiarize in secondary growth, anomalous secondary growth in monocot and dicot stems. Student able to understand the process of microsporogenesis, megasporogenesis and double fertilization. • Students able To understand endosperm and its types and know the structure and development of monocot and dicot embryos.

	BO 242: Plant Biotechnology	• Students will Acquire knowledge about Biotechnology-concept and scope Interdisciplinary nature of biotechnology Current status of biotechnology in India. • Student get knowledge on Enzyme Technology & properties of enzymes. Classification of enzymes Industrial applications of enzymes. Production of amylase, proteases and lipase enzyme Enzymes immobilization - concept and techniques of immobilization • Understand the basic principles of plant tissue culture. Able to learn the plant tissue culture techniques • Acquir knowledge on Concept of plant tissue culture and cellular totipotency Basic techniques: Types of culture, Media preparation, sterilization, inoculation, incubation, hardening. • To understand the Applications with reference to: Micropropagation, Somaclonal variation, Haploid production, Protoplast fusion & Somatic hybrids, Embryo rescue, Production of secondary metabolites. • Students get knowledge on single cell protein, Methods of phytoremediation-Rhizofilteration, phytoextraction, phytostabilization, phytovolatization, phytodegradation. • Students learned about the Basics of plant genetic engineering Gene Cloning. DNA electrophoresis ,fragments ,genetic engineering and nano - technology in gene • Students get knowledge on Definition, Concept and types of Renewable and non-renewable energy sources Definition and concept of Biogas, Bioethanol, Biobutanol, Biodiesel &Biohydrog.
	BO 243: Practical based on BO 241 & BO 242	• Students will gain a clear understanding of theStudy of epidermal tissue system – non-glandular and glandular trichomes, Multi layered epidermis, typical stomata (Dicotyledonous and Monocotyledonous). • Student will be able to apply Study of mechanical tissues and their distribution in

		root, stem and leaves. • Students able to understand the internal structure of monocot and dicot (stem, leaf and root), secondary thickening, anomalous secondary thickening (Dicot and Monocot) and nodal, anatomy. • Understand the .Study of tetrasporangiate anther and types ofovules. dicot and monocot embryo • Student will be able to identify Instruments/equipments used in plant tissue culture laboratory: Principle and working of Autoclave, oven, laminar air flow cabinet, micropipette, culture bottles/tubes with cotton plug. • Student apply knowledge about thePreparation & sterilization of MS medium Surface sterilization and Inoculation of nodal sector, leaf, anther and maize embryo.Know theLaboratory cultivation of *Spirulina.* • Student will be able to determine practical on transgenic crops viz; Bt-Cotton, Golden rice Demonstration of principle and working of agarose gel electrophoresis, centrifuge, spectrophotometer • Visit to plant tissue culture laboratory to understand the techniques of plant tissue culture.
T.Y.B.Sc. Botany **(Semister - VI)**	**BO 361: Plant Physiology and Metabolism**	• Acquire knowledge on the physiological functions of plant. • To become knowledgeable in plant growth regulators and its physiological role. • Students will able to gain knowledge on role of micronutrients, role of essential nutrients, transport of ions across cell membrane. • Students will be able to understand the various physiological life processes in plant • Learn about the Mechanism of Photosynthesis, Light reaction and dark reaction. • Understand the types of Respiration, mechanism of aerobic respiration. • Acquire knowledge on Stomatal Biology, Translocation in phloem , and composition of phloem sap.
	BO 362: Biochemistry	• Understand the Origin of cell by Miller & Urey Expt. Functional groups of bio molecule in cell .

		• They will learn about the Physical properties of Water. • Understand the Structure, classification, properties & function of Amino acids, Carbohydrate, Vitamin. • Understand lipid metabolism & commercial application. • Understand the Nature of Enzymes, Classification, & properties of enzyme.
	BO 363: Plant Pathology	• Know the terminologies in plant pathology. Understand the scope and importance of Plant Pathology. • Know the prevention and control measures of plant diseases and its effect on economy of crops. • They will learn about Macroscopic and microscopic study,koch'sposchulates and types of culture media. • Acquire knowledge on Fungal plant diseases and Bacterial plant diseases. • Understand the Mycoplasma Nematodaland plant diseaseswith reference causal organism symptoms disease management . • They can identify Viral plant diseases with reference to causal organism & symptoms. • They will learn about Non parasitic diseases. Understand the principle of plant disease control.
	BO 364: Evolution of population genetics	•Understand the Historical account of origin of life,Origin of earth Vs origin of life. prebiotic Evolution , primordial soup , Oparin's coacervative model , Early life and RNA and origin of genetic code . •Understand the concept of evolution, theories of evolution , pre Darwinean period . They will learn about Evolution through ages fossil and fossilization,Dating of fossils . •Acquire Knowledge on Population genetics and Evolution. •Understand the speciation and isolating mechanisms,Morphological criteria for species and races, allopatric and sympatric populations, Isolating mechanisms. •Understand the direct evidences and conclusion from fossil record, indirect evidences, evidences from genetics , biogeographical relations .
	BO 365: Advanced plant biotechnology	•Students will Acquire knowledge about Biotechnology-concept and impact. • Understand the basic principles of plant tissue culture. Able to learn the plant tissue culture techniques • Acquirknowledge on Concept of plant tissue culture and cellular totipotency Basic techniques: Types of

		culture, Media preparation, sterilization, inoculation, incubation, hardening. • To understand the Applications with reference to: Micropropagation, Somaclonal variation, Haploid production, Protoplast fusion & Somatic hybrids, Embryo rescue, Production of secondary metabolites. • Students get knowledge on single cell protein, Methods of phytoremediation-Rhizofilteration, phytoextraction, phytostabilization, phytovolatization, phytodegradation. • Students learned about the Basics of plant genetic engineering Gene Cloning. DNA electrophoresis ,fragments ,genetic engineering and nano -technology in gene • Students get knowledge on Definition, Concept and types of Renewable and non-renewable energy sources Definition and concept of Biogas, Bioethanol, Biobutanol, Biodiesel &Biohydrog.
	BO: 366 Plant Breeding and Seed Technology	•Student will study the plant breeding methods. • Student will get the knowledge about Hybridization & Tissue culture techniques. • This course makes the students aware about objectives and methods of plant breeding and its role in improvement of crops. • It also gives information about various crops developed through plant breeding and how the principles of plant breeding can be applied for further improvement of crops, disease resistance, stress tolerance etc. • The paper is very helpful in further research and higher studies in agriculture science. • Know about seed germination, processing , production.
	BO: 367 Practical Based on BO. 361, BO. 362.	• Study the light intensity & bicarbonate concentration on O2 evolution in photosynthesis. • Separation of amino acid by paper chromatography. • Estimation of soluble proteins by Lowery*et. al.* method. • Demonstration of Enzyme activity. Amylase/

		invertase/catalase. • Demonstration of Bolting Effect of auxins on rooting, R.Q. •Calculation of stomatal index & stomatal frequency of a mesophyte& xerophytes.
	BO: 368 Practical **Based on BO. 363, BO. 364.**	•Study of Koch's postulates. • Study of any two fungal, bacterial, &mycoplasma , viral non-parasitic diseases of plants. • Preparation of culture media for isolation of plant pathogens. • Study of Geological time scale. • Demonstration of any evidences of organic evolution. • Numerical problem based on Hardy- Weinberg equilibrium. • Numerical problem based on Allele frequency & genotype frequency.
	BO: 369 **Based on BO. 365, BO. 366.**	• Preparation of MS medium. • Problem on genetic engineering. • Preparation of plant based nano particles. • Production of secondary metabolites. • Demonstration of Hybridisation techniques. •Study of Transgenic plants. •To test seed moisture by hot air oven method. •To study germination method.
	BO: 3610 Nursery & gardening management	•Nursery definition, objectives & scope •Seed structure & types seed dormancy causes & methods of breaking dormancy. •Vegetative propagation; Air layering cutting collecting season. •Gardening: definition objectives & scope •Sowing/ rising of seeds & seedlings.
	BO:3611Biofertilisers	•Introduction Scope & importance of bio fertilisers. •Bacterial bio fertilisers ; Isolation of Rhizobium •Algal bio fertilisers; Cyanobacteria, Azolla, BGA in rice cultivation. •Fungal bio fertilisers; Introduction occurance& distribution of mycorrhizal association. •Compost & Manure.

		Inorganic chemistry	Periodic properties of the elements including the preliminary theories of bonding. To understand hybridisation and types of hybridisation.
		Organic Chemistry	Students are made aware of fundamental concepts of organic and inorganic chemistry which governs the structure, bonding, properties, structural effects, acid-base theories, preparation methods, reactivity and stereochemistry of organic molecules.
		Analytical Chemistry	1. Introduction to Analytical Chemistry i. Analytical Chemistry –branch of chemistry ii. Perspectives of analytical Chemistry iii. analytical problems 2. Calculations used in Analytical Chemistry i. Calculations of mole, molar concentrations and various units of concentrations which will be helpful for preparation of solution ii. Relation between molecular formula and empirical formula iii. Stoichiometric calculation iv. Define term mole, millimole, molar concentration, molar equilibrium concentration and Percent Concentration. v. SI units, distinction between mass and weight vi. Units such as parts per million, parts per billion, parts per thousand, solution-dilatant volume ratio, function density and specific gravity of solutions.
		Paper III Practical Chemistry	1. Inorganic Estimations using volumetric analysis 2. Synthesis of Inorganic compounds 3. Analysis of commercial products 4. Purification of organic compounds 5. Preparations and mechanism of reactions involved
2	**S.Y.B.Sc. Chemistry (semester Pattern)**	**Physical & Analytical Chemistry**	Students are made aware about kinetics of chemical reactions, photochemical laws , distribution law and extraction process. Students are introduced to analytical chemistry in which they are made aware of inorganic qualitative analysis and analysis of organic compounds (Qualitative & Quantitative). Along with it they also study error in quantitative analysis & ways to minimize them.
		Organic & Inorganic Chemistry	Students are made aware of stereochemistry of different stereoisomers & organic reaction mechanism in which they study different types of reagents, reactions and their mechanisms. Students are introduced to metallurgy to understand chemical reactions and processes occurred in metallurgy. The corrosion & passivity is also included in the syllabus.

		Physical & Analytical Chemistry	Students are made aware about concepts of Helmholtz free energy & Gibbs free energy as well as free energy of chemical reactions & physical transformation. Students also study different modes of concentration , distillation of solutions of liquid in liquid , partially immiscible liquids& distillation of immiscible liquids. Students are made to understand volumetric analysis wherein they study non-instrumental volumetric analysis which comprises of study of various titrations, indicators used in it& some theoretical aspects related with titrations.
		Organic & Inorganic Chemistry	Students are introduced to various biomolecules, their role & structural aspects. Students also study different oxidizing and reducing reagents, their selectivity to different substrates, heterocycles, their preparation & reactions. Students are introduced to organometallic chemistry & use of organometallic compounds in synthesis of organic as well as inorganic compounds. They also study chemical toxicology to know adverse effects of chemicals
	S. Y. B.Sc. Chemistry	**Practical course**	Students are trained to determine the rate constant of chemical reactions, heat of solution , heat of neutralization, critical solution temperature of partially miscible system & distribution coefficient. Students are trained for quantitative analysis of different samples such as Na2CO3 in washing soda, Aspirin in APC tablet, Aluminium in Alum, strength of H2O2, Copper in Brass & iodimetric methods. Students are trained for organic & inorganic qualitative analysis. They are also trained for preparation of organic compounds & chromatographic techniques like TLC.
3	**T. Y. B.Sc. Chemistry Semester III**	**Physical Chemistry**	Students are introduced basic concept of physical chemistry. They also learn methods to determine order of reaction, Arrhenius equation, and graphical evaluation of energy of activation. Students learn principle and applications of rotational, vibrational, raman and electronic spectroscopy. Students will get familiar with phase rule, phase diagram of one and two component systems.
		Inorganic Chemistry	Students are made aware of the principles of various theories of bonding like Sidgwick model, Werner's theory VBT,CFT, MOT. They are also made aware of the principles of isomerism, nomenclature and structures of inorganic complexes .
		Organic Chemistry	It is the basic course in organic chemistry. Students are introduced with concepts like acidity, basicity of organic molecules, electrophile, nucleophile and good and bad leaving groups. Students are

			introduced with stereochemistry of disubstituted cyclohexane. Students are able to understand mechanism of organic reaction. Arrow drawing concept which is important part of reaction mechanism is explained thoroughly in this course. Students are able to identify different types of organic reactions and also they can understand reactivity profile of organic molecules.
		Analytical Chemistry	Students are made aware of quantitative chemical analysis using the techniques like gravimetry, polarography, AAS, FES and spectrophotometry at the levels of macro, micro and trace analysis of metals and non-metals from industrial and natural samples
		Industrial Chemistry	This course enables the students to learn use of agrochemicals like pesticide, insecticides, fungicides, fertilizers and their environmental impact. Study of food industry makes them aware of food adulteration, storage and processing of food. This course also provides opportunity to study agrochemicals, food chemicals on industrial scale. Students also learn manufacturing of basic chemicals such as Ammonia, Sulphuric acid and Nitric acid. Syllabus further comprises study of petrochemicals and eco- friendly fuels, where in students study processing of petrochemical fuels, properties of fuels and applications of fuels,non conventional energy. Syllabus also includes study of cement and glass industry. Properties, manufacture and applications of different types of cement and glass
		Environmental and Green Chemistry	Students are made aware of Different techniques of waste water and effluent management, Soil and solid waste management, instrumental methods of analysis of an environmental pollution, Green House Gases and their effect on global warming, Overall studies of ultimate green solvent i.e. water, Energy formations, conversions and conservation.
	T. Y. B.Sc. Chemistry Semester IV	**Physical Chemistry**	The course aims to give fundamental understanding and applications of electrochemical Cells, Nuclear Chemistry, Crystal structure and Quantum Chemistry. Students get to know thermodynamics and EMF, Chemical cell with and without transfer, application of EMF measurement such as pH determination, determination of solubility and solubility product. Basic elements of quantum chemistry are also introduced
		Inorganic Chemistry	Students are made aware of chemistry of f block elements principles and applications of catalysis, organomettalic chemistry and the principles and

			the applications of metals, semiconductors and superconductors.
		Organic chemistry	Students are introduced with carbanions and their reactions. Retrosynthetic analysis concepts are explained to students. Rearrangement reactions are introduced with mechanistic approach. Spectroscopic techniques like PMR, U.V. and I.R. are introduced. Students learned to differentiate organic compounds with the help of these spectroscopic techniques.
		Analytical Chemistry	The students are trained in the technique of separation, identification of purification using chromatographic techniques like TLC,GC,HPLC, electrophoresis etc . This knowledge enables them to be good analytical of Quality control chemist in various fields
		Industrial Chemistry	Students are expected to learn properties, ways to manufacture or process and application of different types of polymer, paints, pigments, dyes, soaps, detergents and cosmetics. Students also learn theoretical aspects of manufacturing of sugar and fermentation industry. Syllabus further includes study of Pharmaceutical industry where students are introduced to general aspects of drug action, manufacturing of some drugs and its usage and lastly there is topic which discusses problems caused by industry such as pollution and generation of waste and what are the ways which can prevent or minimize it.
		Environmental and Green Chemistry	Students can understand basic concept of the environmental chemistry, Realise basic concept of the instrumental analysis of an environmental pollution, Make aware about the global warming, Different energy sources and their conservation,Understand the details of water.
	T. Y. B.Sc. Practical Chemistry (Annual)	**Physical Chemistry Practical**	Students are trained in the techniques such as pH metry, Conductometry, Potentiometry, Colorimetry, Spectrophotometry, Refractometry and G. M. Counter. They learn to use these techniques in order to understand various chemical reactions.
		Inorganic Chemistry Practical	Students are trained in the IQA of different mixtures of inorganic compounds, and the separation of the metal ions using chromatographic techniques and inorganic quantitative analysis using

Department of Chemistry

2022-23

Course outcomes

	Program	Program outcomes
1	B Sc. Chemistry	**PO1. CRITICALTHINKING** The curriculum is designed such way that students should acquire and ability to observe accurately and objectively. They should be able to solve the problems and also think scientifically, independently and draw rational conclusions. **PO2. EFFECTIVE COMMUNICATION** The medium of instruction for this course is English. English being the language of world students become habitual to communicate in English using language of Chemistry. **PO3 SOCIAL INTERACTIONS** In this course students are made aware of environment related issues. They are made aware of optimal use of fertilizers, water, fuels and drugs. **PO4 EFFECTIVE CITIZENSHIP** In this program students are made aware of pollution problems waste water management, water treatment etc. They are also made aware importance of energy and water, food, fuels, general hygiene and cleanliness etc. **PO5 ETHICS** In this program students are made alerts regarding misuse of food adulteration, chemical technology, poisons, fungicides, pesticides and chemical and nuclear weapons **PO6 ENVIRNMENT AND SUSTAINABILITY** Being Chemistry students they becom well conversant with various pollutants their sources and their impact on biosystem. So they become well versed with protection and conservation of environment. **PO7 SELF DIRECTED AND LIFE LONG LEARNING** Program curriculum inculcates the curiosity and problem solving approach which makes them self directed and learning becomes a continuous process throughout the life.

Courses offered – Under graduate Chemistry

Sr.No.	Class	Course	Course Outcomes
1	F.Y.B.Sc.	Paper I Physical	This course enables students to understand basic

H.O.D.
Department of Chemistry
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp, (Nasik)

			the techniques of gravimetry, volumetry, colorimetry
		Organic Chemistry Practical	Chemistry is an experimental subject; practical course is proposed to achieve the basic skills required for understanding the reactivity of organic molecules and validating the basic principles. It helps in development of practical skillsof the students & understanding the importance of chemical safety and also explains the factors affecting reaction outcomes and yields.

H.O.D.
Department of Chemistry
Smt. Vimlaben Khimji Teppkaya,
Arts, Science & Commerce College
Deolali Camp, (Nasik)

MVP Samaj's
Shrimati Vimalaben Khimaji Tejookaya Arts, Science and Commerce College
Deolali Camp, Nashik

Department of Mathematics

Aims, Objectives and Outcomes of course [Pattern 2019(Choice Based Credit System)]

Name of Course: B. Sc (Mathematics)

I :Class:FYBSc

Aims:

(i)Give the students a sufficient knowledge of fundamental principles, methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting.
(ii) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science and technology.
(iii)Enhancing students' overall development and to equip them with mathematical modeling abilities, problem solving skills , creative talent and power of communication necessary for various kinds of employment .
(iv) Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.

Objectives:

(i) A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays , state important facts resulting from their studies.
(ii) A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
(iii) A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.
(iv) A student be able to apply their skills and knowledge ,that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
(v) A student should be made aware of history of mathematics and hence of its past, present and future role as part of our culture.

Course Outcome:

Upon successful completion of this course, the student will be able to:
i) The mathematical maturity of students in their current and future courses shall develop.
ii) The student develops theoretical, applied and computational skills.
iii) The student gains confidence in proving theorems and solving problems.

Head
Department of Mathematics
S.V.K.T. College Deolali Camp.
Tal..Dist. Nashik (168)

Principal
Smt. Vimlaben Khimji Tejookaya
Arts, Science and Commerce College,
Deolali Camp, Dist.Nashik

Paper I:Algebra and Analytical Geometry

Expected Outcomes:

1. Students will be understand the basic but important concepts of mathematics namely set, realtions, functions, gcd,lcm etc.
2.Prove mathematical statements using mathematical Induction.
3. Solve various problems on properties of integers and use the basic concepts of divisibility, congruence and their applications in basic algebra.
4. Students will be understand the concept of complex number and related theory geometrically.Do the comparison between complex number and real number.
5.Solve the problems of lines in three dimension.planes, spheres and how geometry is related to algebra by using their algebraic equations.

Paper II:Calculus

Expected Outcomes:

After completing the course, students will able to-
1. Identify algebraic and order properties of real numbers.
2. Identify and apply the function properties of real number system such as the completeness property
3. Verify the values of limit of a function at a point using the definition of a limit. Students develop knowledge in the limit, continuity and Students will be familiar with the techniques of differentiation of function with real variables.
5. Identify and apply the intermediate value thm, Mean value thm and L"Hospital"s rule
6. Identify types of differential equations and solve differential equations such as Exact, homogeneous,non-homogeneous, and linear and Bernoulli differential equations etc.

Paper III: Practical

Expected Outcomes:

After completing the course, students will able to-
1.get the information about mathematical software's free as well as paid.
2.learn how to handle maxima software and other mathematical software's.
3.learn how to use mathematical software's in learning process.
4.learn the mathematical concepts geometrically using maxima software.
5.use of Mathematical Software Maxima for better understanding of all mathematical concept.
6.verify the statement of theorems, lemmas and result using counter examples.

Name of Course: BCOM
Class : FYBCOM

Semester: I
Business Mathematics & Statistics- I
Course Code – 114 (A) (No. of Credits :- 03)

Objective of the Program:

1. To introduce the basic concepts in Finance and Business Mathematics and Statistics
2. To familiar the students with applications of Statistics and Mathematics in Business
3. To acquaint students with some basic concepts in Statistics.
4. To learn some elementary statistical methods for analysis of data.
5. The main outcome of this course is that the students are able to analyze the data by using some elementary statistical methods

Expected Outcomes:

After completing the course, students will able ...
1. To understand the concept of Simple interest, compound interest, effect of compounding.
2. To understand the concept of Annuity and its applications for EMIs and Amortization Schedule.
3. To understand the concept of shares and mutual funds.
4. To understand contribution of shares and mutual funds in systematic investment plans
5. To solve problems related to shares and mutual funds.
6. To understand collection of data , analyzing and interpreting data.
7. To Know different method of sampling
8. To classify and represent data in tabular and graphical form.
9. To compute various measures of central tendency and measures of dispersion.

Class : FYBCOM

Semester: II
Business Mathematics & Statistics- II
Course Code – 124 (B) (No. of Credits :- 03)

Depth of the program – Basic Knowledge of Mathematics and Statistics

Objective :

1. To introduce the basic concepts in Finance and Business Mathematics and Statistics
2. To familiar the students with applications of Statistics and Mathematics in Business
3. To acquaint students with some basic concepts in Statistics.
4. To learn some elementary statistical methods for analysis of data.
5. The main outcome of this course is that the students are able to analyze the data by using some elementary statistical methods .

Expected Outcomes:

After completing the course, students will able …

1.To understand the concept of matrices and determinants.
2.To understand the application of determinant in solving linear equations
3.To understand applications of matrices and determinants in business and economics.
4.To understand the concept of LPP and its application in business and decision making.
5.To understand graphical method to solve business optimization problems with two variables.
6.To use correlation for knowing the relationship between two variables.
7.To use regression for prediction.
8.To know different types index numbers and problems in their construction.
9.To know the applications of various index numbers.

Name of Course: B. Sc (Mathematics)
Class : SYBSc

Aims:

• Give the students a sufficient knowledge of fundamental principles, methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting.

• Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.

• Enhancing students overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment .

• Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.

Objectives:

• A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays ,state important facts resulting from their studies.

• A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.

• A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

• A student be able to apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.

• A student should be made aware of history of mathematics and hence of its past, present and future role as part of our culture.

Outcomes of Course:

Upon completion of the course, the students will achive the following.
(i) The mathematical maturity of students in their current and future courses shall develop.
(ii) The student develops theoretical, applied and computational skills.
(iii) The student gains confidence in proving theorems and solving problems.

Paper I :MT-231: Calculus of Several Variables(Sem. I)

Expected Outcomes :

1.Students will be understand the function of several variables (at least 2 or 3 variables)and basic notions related to it like graphs, level curve/surface, limit and continuity of functions geometrically.
2.Studentds will able to find higher order partial derivatives and apply chain rule.
3.Studends will be able to solve extreme values problems and apply to real life situations.
4.Students will be able to solve the examples of the double and triple integrals.
5.Students will able to apply the concepts of mathematics in real life situations.

Paper II(A): Numerical Methods and it's Applications (Sem. I)

Expected Outcomes:

After completing the course, students will able to-
1. Identify algebraic , exponential and logarithmic Functions.
2. Identify Absolute ,relative and Percentage errorsand general error formula.
3. To find the root of equations by various metods like Bisection method, False Position and Newton methods.
4. Develop knowledge in the interpolation by using forward, backward and Lagrange's formula
5.To find first and second differentiation and integration by using Trapezoidal, Simpson's Rules from given data and
6. To develops the techniques to find more correct approximations by Euler's and Euler's modified method of first order differential equations. Also by using Runge –Kutta Second and Forth order formula.

Paper I : MT-241: Linear Algebra (Sem. II)

Expected Outcomes :

After completing the course, students will able to-
1.solve system of linear equation using row echelon and reduced row echelon form.
2.identify whether the given set is vector space or not.
3.check linear dependence and independence of the given set.
4.write basis and dimension of standard vector spaces.
5.find Row, Column and Null Space of a matrix.
6.identify whether given function is a linear Transformation or not
7.solve problems related Kernel and range of a linear Transformation , Rank-Nullity theorem Composite and Inverse Transformation.
8.find matrix of a Linear Transformation.
9. solve the examples of the Linear Isomorphism.

Paper III: Practical

Expected Outcomes:

After completing the course, students will able to-

1.get the information about mathematical software's free as well as paid.
2.learn how to handle maxima software and other mathematical software's.
3.learn how to use mathematical software's in learning process.
4.learn the mathematical concepts geometrically using maxima software.
5.use of Mathematical Software Maxima for better understanding of all mathematical concept.
6.verify the statement of theorems, lemmas and result using counter examples.

T.Y.B.Sc. (Mathematics) - CBCS: 2020-2021

PO, PSO, CO

Programme Specific Outcome (PSO)

i) Give the students a sufficient knowledge of fundamental principles, methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling,solving and interpreting.

ii) To equip the students sufficiently in both analytical and computational skills in Mathematical Sciences.

iii) To develop a competitive attitude for building a strong academic - industrial collaboration, with focus on continuous learning skills.

iv) Enhancing students overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.

v) Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.

vi) Enabling students to Gauge the hypothesis, theories, techniques and proofs provisionally.

Programme Outcome:(PO)

A graduate of this program are expected to:

i) Gain sound knowledge on fundamental principles and concepts of Mathematics and computing with their applications related to Industrial, Engineering, Biological and Ecological problems.

ii) Exhibit in depth the analytical and critical thinking to identify, formulate and solve real world problems of science and engineering.

iii) Get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.

iv) A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

v) Apply their skills and knowledge,that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.

vi) Be capable of undertaking suitable experiments/research methods while solving the real-life problem and would arrive at valid conclusions based on appropriate interpretations of data and experimental results.

vii) Develop written and oral communications skills in order to effectively communicate design, analysis and research results.

viii) Demonstrate appropriate inter-personal skills to function effectively as an individual, as a member or as a leader of a team and in a multi-disciplinary setting.

ix) Acquire competent positions in industry and academia as well.

Semester-V

DSE-1A: MT 351: Metric Spaces (2 credits)

Course Objectives: The course aims at providing the basic knowledge pertaining to metric spaces such as neighborhood, interior, closure, open and closed balls, continuity, completeness, compactness and connectedness etc.

Course Learning Outcomes: The course will enable the students to:

i) understand the introductory concepts of metric spaces;
ii) correlate these concepts to their counter parts in modern analysis by studying examples;
iii) learn to analyze mappings between spaces.
iv) attain background for advanced courses in real analysis, functional analysis, and topology.
v) appreciate the abstractness of the concepts such as open balls, closed balls, compactness, connectedness etc. beyond their geometrical imaginations.

DSE-1B: MT: 352 Real Analysis-I (2 credits)

Course Objectives: The course will provide students with a thorough understanding of real lines and distinguishing concepts in order to prove convergence and divergence of real number sequences and series. These principles have a wide variety of real-world applications.

Course Learning Outcomes: This course will enable the students to:

i) learn the basic facts in logic and set theory
ii) learn to define sequence in terms of functions from N to a subset of R and to understand several properties of the real line.
iii) recognize bounded, convergent, divergent, Cauchy and monotonic sequences and to calculate their limit superior, limit inferior, and the limit of a bounded sequence.
iv) use the ratio, root, alternating series and limit comparison tests for convergence and absolute convergence of an infinite series of real numbers.

DSE-2A: MT-353: Group Theory(2 credits)

Course Objectives: The course objective is to introduce students to the fundamental theory of groups and their homomorphisms. Symmetric groups and symmetries in groups, Lagrange's theorem are also studied in depth.

Course Learning Outcomes: The course will enable the students to:

i) recognize the mathematical objects that are groups, and classify them as abelian, cyclic and permutation groups, etc;
ii) analyze consequences of Lagrange's theorem
iii) learn about structure preserving maps between groups and their consequences.
iv) explain the significance of the notion of cosets, normal subgroups, and factor groups.

DSE-2B: MT-354- Ordinary Differential Equations (2 credits)

Course Objectives: The main objectives of this course are to introduce the students to the exciting world of differential equations, system of differential equationsand their applications.

Course Learning Outcomes: The course will enable the students to:

i) understand the genesis of ordinary differential equations.
ii) learn various techniques of getting exact solutions of solvable first order differential equations and linear differential equations of higher order.
iii) grasp the concept of a general solution of a linear differential equation of an arbitrary order and also learn a few methods to obtain the general solution of such equations.

DSE-3A: MT 355(A): Operations Research (2 credits)

Course Objectives: This course develops the ideas underlying the Simplex method for Linear programming problem, as an important branch of operations research. The course covers Linear programming with applications to Transportation and Assignment problem. Such problems arise in manufacturing resource planning and financial sectors.

Course Learning Outcomes: This course will enable the students to learn:

i) Analyze and solve linear programming models of real-life situations.
ii) The graphical solution of LPP with only two variables, and illustrate the concept of convex set and extreme points. The theory of the simplex method is developed.
iii) The relationships between the primal and dual problems and their solutions with applications to transportation, assignment and two-person zero-sum game problem.

DSE-3B: MT-356 (C): Laplace Transform and Fourier Series (2 credits)

Course Objectives: The main objective of this course is to determine properties of Laplace Transform and Fourier series which may be solved by application of special functions.

Course Learning Outcomes: This course will enable the students to learn:

i) Students will be able to know the use of Laplace transform in system modeling, digital signal processing, process control.
ii) Solve an initial value problem for an nth order ordinary differential equation using the Laplace transform.
iii) Find the Fourier series representation of a function of one variable

SEC-I: MT -3510: Programming in Python–I (2 credits)

Course Objectives:

1. To understand why **Python** is a useful scripting language for developers.
2. To learn how to use lists, tuples, and dictionaries in **Python** programs.
3. To learn and understand python looping, control statements and string manipulations.
4. To acquire programming skills in core Python.

Course Learning Outcomes: At the end of the course:

1. The student will be able to explain basic principles of Python programming language.
2. The student will implement object oriented concepts.

Course Objectives: The objective of this course is to introduce the fundamental theory of rings and their corresponding homomorphisms. The basic concepts of ring of polynomials and irreducibility tests for polynomials over ring of integers.

Course Learning Outcomes: The course will enable the students to learn about:

i) The fundamental concept of Rings, Fields, subrings, integral domains and the corresponding morphisms.
ii) Learn in detail about polynomial rings, fundamental properties of finite field extensions, and classification of finite fields.
iii) Appreciate the significance of unique factorization in rings and integral domains.

DSE-5B: MT 364: Partial Differential Equations (2 credits)

Course Objectives: The main goals of this course are to teach students how to form, solve, and apply partial differential equations to solve physical problems. Also, to introduce first and second order partial differential equations and their classifications and methods of finding solutions of these partial differential equations.

Course Learning Outcomes: The course will enable the students to:

i) formulate, classify and transform partial differential equations into canonical form.
ii) solve linear partial differential equations using various methodsand apply these methods in solving some physical problems.
iii) solve Laplace equations using various analytical methods demonstrate uniqueness of solutions of certain kinds of these equations.

DSE-6A: MT365 (A): Optimization Techniques(2 Credits)

Course Objectives: This course enables the students to get an idea about the

i) Network and basic components, Determination of critical path: Critical Path Method (CPM),Project Evaluation and Review Techniques(PERT).Time-cost optimization Algorithm.
ii) Problem of Sequencing, Processing n Jobs through Two Machines, Processing n Jobs through 3 Machines and Processing n Jobs through k Machines.

Course Learning Outcomes: The course will enable the students to:

i) understand fundamentals of Network Analysis using CPM and PERT.
ii) solve a sequencing Problem for various jobs and machines.

DSE-6B: MT- 366(B): Computational Geometry(2 credits)

Course Objectives: This course enables the students to gain detailed knowledge of the fundamental problems within computation geometry and general techniques for solving problems within computational geometry and practical experience with implementation issues involved in converting computation geometry algorithms into running programs.

Course Learning Outcomes: The course will enable the students to:

i) construct algorithms for simple geometrical problems.
ii) characterize invariance properties of Euclidean geometry by groups of transformations.
iii) describe and construct basic geometric shapes and concepts by computational means.

SEC-II: MT-3511: LaTeX for Scientific Writing (2 credits)

Course Objectives: The purpose of this course is

i) To provide an understanding of the basicmechanisms of LaTeX, using plain text as a vehicle

ii) To acquaint students with the latest typesetting skills, which shall enable them to prepare high quality typesetting.

iii)

Course Learning Outcomes: After studying this course the student will be able to:

i) Write a simple LaTeX input document based on the article class.

ii) Turn the input document into pdf with the pdflatex program.

iii) Format Words, Lines, and Paragraphs.

iv) Understand how to present data using tables.

Semester-VI

DSE-4A: MT - 361: Complex Analysis (2 Credits)

Course Objectives: This course aims to introduce the basic ideas of analysis for complex functions in complex variables with visualization through relevant Practicals. Particular emphasis has been laid on Cauchy's theorems, series expansions and calculation of residues.

Course Learning Outcomes: The completion of the course will enable the students to:

i) Understand the significance of differentiability of complex functions leading to the understanding of Cauchy-Riemann equations.

ii) Evaluate the contour integrals and understand the role of Cauchy-Goursat theorem and the Cauchy integral formula.

iii) Expand some simple functions as their Taylor and Laurent series, classify the nature of singularities, find residues and apply Cauchy Residue theorem to evaluate integrals.

iv) Represent functions as Taylor, power and Laurent series, classify singularities and poles, find residues and evaluate complex integrals using the residue theorem.

DSE-4B: MT: 362 Real Analysis-II(2 Credits)

Course Objectives: To comprehend bounded function integration on a closed and bounded interval, as well as its extension to situations where either the integration interval is infinite or the integrand has infinite limits at a finite number of points on the integration interval. The sequence and series of real-valued functions.

Course Learning Outcomes: The course will enable the students to learn about:

i) some of the families and properties of Riemann integrable functions, and the applications of the fundamental theorems of integration.

ii) beta and gamma functions and their properties.

iii) recognize the difference between pointwise and uniform convergence of a sequence of functions.

iv) illustrate the effect of uniform convergence on the limit function with respect to continuity, differentiability, and integrability.

DSE-5A: MT: 363 Ring Theory (2 Credits)

SEC-III: MT-3610: Programming in Python –II(2 Credits)

Course Objectives:

1. To acquire Object Oriented Skills in Python.
2. To develop the skill of designing Graphical user Interfaces in Python.
3. To learn and understand Python programming basics and paradigm.
4. To learn the concepts of visualization of data and database connectivity.
5. To develop the ability to write database applications in Python.

Course Learning Outcomes:

Upon successful completion of this course the student will be able to:

1. Demonstrate the use of Python in Mathematics such as operations research and computational Geometry etc.
2. Study graphics and design and implement a program to solve a real world problem.
3. The students will implement the concepts of data with python and database connectivity.

SEC-IV: MT-3611: Mathematics into LaTeX(2 Credits)

Course Objectives: The purpose of this course is to acquaint students with typesetting basic Mathematics in LaTeX.

Course Learning Outcomes: After studying this course the student will be able to:

i) typeset mathematical formulas, use nested list, tabular and array environments.

ii) import figures and pictures that are stored in external files.

----------***----------

Head
Department of Mathematics
S.V.K.T. College Deolali Camp,
Tal .Dist. Nashik (168)

Principal
Smt. Vimlaben Khimji Tejookaya
Arts, Science and Commerce College,
Deolali Camp, Dist.Nashik

M.V.P. Samaj's

S.V.K.T. Arts, Science & Commerce College Deolali Camp, Nashik
Department of Microbiology

2.6.1 Teachers and students are aware of the stated Programme and course outcomes of the Programmes offered by the institution.

Programme	**Programme outcome**
BSc Microbiology	PO-1: Illustrate the basic concepts in biological sciences and their applications in various scientific fields. PO-2: Attribute the role of microbes in food and dairy manufacturing, ecology, agriculture, drug designing and other human welfare products. PO-3: Imbibe skills in handling scientific instruments, planning and performing laboratory experiments to find solutions for regional and national health threats like emerging microbial diseases. PO-4: Articulate good laboratory practices, which provide great carrier opportunities globally. PO-5: Imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality. PO-6: Explain microbiology discipline though involvement in experiment

Programme	**Subject/Course**	**Course code**	**Course outcome**
BSc Microbiology (F.Y.BSc)	Introduction to Microbial World	MB 111	1. Describe Frontiers of Microbiology 2. Summarise contribution of different scientist in Microbiology. 3. Write developments in 20th and 21st century.

			4. Differentiate between different types of organisms. 5. Explain significance of normal flora. **6.** Describe bio fertilizer and bio control agents.
	Basic Techniques in Microbiology	MB 112	1. Describe different types of microscopy. 2. Sketch ray diagram of microscopes. 3. Illustrate principles and methods of different staining techniques. 4. Differentiate between sterilization and disinfection. 5. Compare effect of moist and dry heat on microorganisms. 6. State mode of action of different disinfectants.
	Bacterial Cell and Biochemistry	MB121	1. Explain bacterial cell cytology. 2. Describe ultra-structure of different parts of Bacterial cell. 3. illustrate functions of different parts of Bacterial cell. 4. Classify different biomolecules present in cell. 5. Sketch chemical structures of biomolecules 6. Describe functions of different biomolecules
	Microbial cultivation and growth	MB122	1. Classify bacteria based on nutritional requirement. 2. Explain design and preparation of media. 3. Write cultivation of extremophiles 4. Draw bacterial growth curve. 5. Compute number of microorganisms. 6. Illustrate factors affecting bacterial growth.
	Practical Course based on theory paper I and II	MB 113 &MB123	1. Apply safety measures and good laboratory practices and handle different instruments and glassware. 2. Prepare laboratory media and check sterilization efficiency of autoclave. 3. Demonstrate different parts of microorganism by staining. 4. Identify different microorganisms on the basis of morphology 5. Isolate bacteria and enumerate bacteria. 6. Analyse effect of different environmental factor on bacteria.
S.Y.BSc	Medical Microbiology and Immunology	MB 211	1. Introduction to common terminologies in medical microbiology. 2. Study of clinical pathogens 3. Introduction to chemotherapy and understanding the concepts of MIC and MBC

			4. Understanding human immune system 5. Introduction to immunohematology and blood grouping. 6. Importance of vaccination and its types.
	Bacterial Physiology and Fermentation Technology	MB212	1. Introduction to enzymes and its structure. 2. Understanding the factors affecting the activity of enzymes 3. Study of different models of enzyme catalysis. 4. Understanding various pathways that contributes to cell metabolism. 5. Concept of fermentation technology. 6. Industrially important microorganisms. 7. Understanding the design of typical fermenter and parameters that monitors fermentation process. 8. Media for industrial fermentations and Contamination: Sources, precautions, and consequences
	Practical based on MB211 & MB 212	MB 213	1. Determination of blood grouping. 2. Study of various biochemical test for identification of pathogens. 3. Screening of industrially important microorganism.
	Bacterial Genetics	MB 221	1. Study of evidences for nucleic acid as genetic material. 2. Understanding structure of nucleic acids. 3. DNA replication and gene expression. 4. Introduction to various types of mutations. 5. Study of plasmid and its characters.
	Air, Water and Soil Microbiology	MB 222	1. Acquire knowledge about air flora and methods of air sampling. 2. Understanding methods of air sanitation and air borne infections. 3. Study of Recommended Bacteriological standards of Water Quality. 4. Gain knowledge regarding water borne infections and fecal indicators. 5. Bacteriological analysis of water for potability. 6. Study of concepts of soil microbiology, biocontrol agent, biofertilisers and microbial interactions.
	Practical based on MB221 & MB 222	MB 223	1. Study of air sampling and study of its flora. 2. Bacteriological tests for potability of water. 3. Understanding the method for

			Enrichment, Isolation, Preparation and Application of Bioinoculant. 4. Study of mutagenic agent and method of isolation of mutant.
BSc Microbiology (T.Y.BSc)	Medical Microbiology- I Medical Microbiology II	DSEC-MB 351 DSEC-MB 361	1. Understand the human anatomy, pathogens associated with diseases. 2. Acquire knowledge of principles underlying establishment of pathogens in human body. 3. Comprehend of pathogenesis of specific pathogens causing microbial diseases. 4. Assess epidemiological patterns of microbial disease transmission as various modes, intensity at local and global level. 5. Gain Knowledge principles of chemotherapy of microbial diseases and development of drug resistance among pathogens and strategies to mitigate. 6. Develop identification systems for microbial disease diagnosis, disease treatment and prevention measures.
	Immunology- I Immunology– II	DSEC-MB-352 DSEC-MB 362	1. Understand immune system structure, composition, function and comparison of different types of immunity. 2. Acquire knowledge about antigens, Recognition of pathogens; antigen processing and presentation; Immunity to infection and pathological consequences of immunodeficiencies. 3. To learn the applications of Immunology in monoclonal antibodies, vaccines production and Immunotherapy. 4. Understand abnormal working of Immune system in hypersensitivity, auto immune diseases, immune tolerance and transplantation immunology. 5. To develop strategies for Diagnosis of diseases based on antigen and antibody reactions with emphasis on prevailing communicable diseases.
	Enzymology Metabolism	DSEC-MB 353 DSEC-MB 363	1. To understand methods of active site determination, role of enzymes and its cofactors in microbial physiology. 2. To learn to perform enzyme assay, purification and quantification of enzymes activity, enzyme kinetics in terms of initial, final velocity, mathematical expression of enzyme kinetic parameters. 3. To correlate regulation of metabolism at enzymatic levels and apply, methodology for commercial applications of enzymes. 4. To learn mechanisms of transport of solutes across the membrane.

			5. To get acquainted with mechanism of biosynthesis and degradation of bio molecules. 6. 6. To comprehend basic concept of autotrophic mode of metabolism of prokaryotes
	Genetics Molecular Biology	DSEC -MB 354 DSEC -MB-364	1. To exhibit a knowledge base in Genetics and Molecular Biology 2. To understand the central dogma of Molecular Biology 3. To construct genetic map of bacteria and fungi 4. To get introduced to concept of recombination and bacteriophage Genetics 5. To understand the concept cloning in bacteria 6. To demonstrate the knowledge of common and advanced laboratory practices in Molecular Biology
	Fermentation Technology– I Fermentation Technology – II	DSEC -MB 355 DSEC - MB 365	1. To impart technical understanding of commercial fermentations. 2. To apply classical, advanced strain improvement and isolation techniques for fermentation processes. 3. To optimize and sterilize media used in fermentation industry for commercially economical and efficient fermentations. 4. To recover the product using suitable methods and ensuring quality of the finished product by quality assurance tests. 5. To acquaint fermentation economics, process patentability, process validation. 6. To comprehend the large-scale productions of commercially significant fermentation products of classical and recent significance.
	Agricultural Microbiology	DSEC - MB 356	1. To understand plant growth improvement with respect to disease resistance, environment tolerance. 2. To correlate stages of plant disease development, epidemiology, symptom based classification, control methods. 3. To understand the importance of microorganisms in sustainable agriculture, biotechnological application of bio films, edible vaccines. 4. To correlate Soil Micro biome and Role of microorganisms in soil health 5. To determine the use of Microorganisms as tools in plant genetic engineering.
	(Skilled Base Elective) Marine	MB 3510	1. To impart the awareness of unseen and unexplored niche of marine ecosystem of microbes.

	Microbiology		2. To acquire advances in the knowledge of marine microbes and marine ecology. 3. To learn the field research on marine processes and laboratory research on microorganisms. 4. To comprehend the role of marine microbes in bioremediation and bioprospecting. 5. To avail career opportunities in marine education, industry and research.
	(Skilled Base Elective) Dairy Microbiology	MB 3511	1. To understand prospects of dairying at commercial marketing. 2. To acquire skills of processing of milk and dairy products. 3. To assess quality control in dairy industry. 4. To comprehend production of dairy products of commercial significance with emphasis to local and global market demand.
	Food Microbiology	DSEC - MB 366	1. To describe food safety problems and solutions in India and global scale. 2. Identify and classify types of microorganisms in food processing and compare their Characteristics and behaviour 3. To learn food classification based on their perishability, intrinsic and extrinsic factors affecting the growth of microbes in foods, role of microorganisms in food fermentation. 4. To acquire knowledge about food spoilage, food borne diseases, predisposition and preventive and control measures. 5. To apply principles of sanitation, heat treatment, irradiation, modified atmosphere, antimicrobial preservatives and combination of method (hurdle concept) to control microbial growth with emphasis on HACCP guidelines.
	(Skilled Base Elective) Waste Management	MB 3610	1. To understand waste management and it practicable applicability. 2. To assess the magnitude and influence of hazardous content of waste, pollution of waters and waste water treatment technologies. 3. To learn the design and working of treatment plants and methods used for liquid and solid waste treatment. 4. To impart the understanding of kinetics of biological systems used in waste treatment. 5. To learn the standards of waste management and competent authorities

			involved at National and international level.
	(Skilled Base Elective) Nano-biotechnology	MB 3611	1. To understand design, development and application of Nanomaterials and their application in Nanodevices. 2. To learn fundamentals of nanotechnology as to Synthesis and characterization techniques of nanoparticles. 3. To acquire knowledge of applications of nanomaterials in different disciplines of human life. To compare the merits of using nanotechnology with existing technologies.
	Diagnostic Microbiology and Immunology	MB – 357	1. Calculate blood cells and haematological indices estimate haemoglobin concentration. 2. Prepare epidemiological survey 3. Isolate pathogen from clinical samples. 4. Diagnose disease by agglutination test 5. Perform immuno precipitation.
	Enzymology and Genetics	MB 358	1. Estimate blood sugar, urea, cholesterol and protein. 2. Produce and purify enzyme. 3. Prepare buffer and quantitate proteins and carbohydrate. 4. Calculate phage titer. 5. Isolate genomic DNA. 6. Separate compounds by paper chromatography.
	Fermentation Technology- I and Agricultural Microbiology	MB 359	1. Isolate pesticide degrading and lactic acid producing bacteria. 2. carry out large scale production of ethanol. 3. Find out antibiotic and vitamin concentration by assay. 4. Assure quality of fermentation product. 5. Prepare bioinoculant and identify plant pathogen

2.6.1 Teachers and students are aware of the stated Programme and course outcomes of the Programmes offered by the institution.

Programme	**Programme outcome**		
MSc Microbiology	1. To enrich students' knowledge and train them in the pure microbial sciences 2. To introduce the concepts of mathematics in biology 3. To inculcate research aptitude 4. To inculcate sense of scientific responsibilities and social and environment awareness 5. To help student's build-up a progressive and successful career in Microbiology		
Programme	**Subject/Course**	**Course code**	**Course outcome**
MSc Microbiology(I)	Microbial Systematics	MBCT111	1. Annotate the importance of taxonomy and as a tool for researchers who work with new species. 2. Implement the application of molecular techniques in identifying new species. 3. Exploration of Un-culturable microbial diversity 4. Categorize the bacterial classification based on 16s rRNA sequencing. 5. Study of evolutionary development.
	Quantitative Biology	MBCT112	1. Understanding basic concepts of biostatics. 2. Study of Inferential Statistics. 3. Probability and Probability Distribution
	Biochemistry and Metabolism	MBCT113	1. In detail study of protein biochemistry. 2. Understanding various molecular techniques – chromatography, electrophoresis and sequencing methods. 3. In detail study of developmental and cell biology
	Biochemical Techniques	MBCP114	1. Method of Buffer preparations. 2. Computer applications and data analysis by various tests. 3. Various molecular biology techniques 4. Study of various developmental stages. 5. Protein and polysaccharide extraction methods. 6. Interpretation of Ramachandran Plot and study of conformations of protein molecule
	Fungal Systematics and Extremophiles	MBET 115	1. Fungal classification and their characteristics. 2. In detail study of fungal morphology.
	Practicals Based on Fungal Systematics and	MBEP 115	3. To understand and perform isolation and characterization of extremophiles.

	Extremophiles		
	Instrumentation and Molecular Biophysics	MBCT 121	1. Describe the theoretical aspects of UV-Visible, IR, NMR, XRD and massspectroscopy. 2. Articulate and differentiate working principles, instrumentation and applications of various techniques used to analyze properties and structures of biomolecules. 3. Outline the importance of different biophysical techniques in microbiology. Analyse the structure of biomolecules using XRD and NMR. 4. Review and characterize metal and magnetic nanoparticles using microorganisms. 5. Plan and propose the techniques and underlying theory of UV-Visible, IR, NMR, 6. XRD and mass spectroscopy used to study biomolecules.
	Molecular Biology	MBCT 122	1. Describe the concepts of epigenetic and the changes which affect the gene expression and the structure, organization and regulation of chromatin. 2. Compare the complexity of genomes in different species and differentiate between prokaryotic and eukaryotic transcription. 3. Illustrate different control mechanisms involved in prokaryotic transcription. 4. Explain the fine control of prokaryotic transcription in metabolism of sugars andamino acids 5. Distinguish between the controlling elements of different types of transposons 6. Justify the importance of retroviral transposons and other eukaryotic transposable elements
	Enzymology, Bioenergetics and Metabolism	MBCT 123	1. Understand about enzyme kinetics, the mechanisms of enzyme catalysis, and the 2. Mechanisms of enzyme regulation in the cell. 3. Gain knowledge of purification methods ofenzymes. 4. They will define terms related to thermodynamics. They will draw structure of hormones. 5. Conceive the concept of energy, cite examples and assess its importance to living organisms. 6. Understand the kinetics of enzyme reactions and gain knowledge of role of enzyme Inhibitors 7. Write metabolic pathways with respect to carbohydrate and lipid metabolism.

			8. They will Solve problems based on enzyme kinetics, purification and thermodynamics. 9. Collect information about types and functions of micronutrients 10. Students will summarize types of cooperativity and models of allosteric enzymes.
	Molecular biology, enzymology and instrumentation Techniques	MBCP 124	1. Identify the microorganisms which can degrade complex polysaccharides like cellulose and chitin. 2. Transform bacterial cells with recombinant DNA, determine the efficiency oftransformation and selection of recombinants 3. Examine the ability of rhizosphere flora to exhibit PGP traits. 4. Analyze different methods of isolation of anaerobic bacteria. 5. Measure the quantity of extracted plasmid DNA using analytical techniques. 6. Design an experiment for induction of lactose operon and determine the activity of β- galactosidase
	Nitrogen Metabolism, Respiration and Photosynthesis	MBET 127	1. Understand of biological nitrogen fixation and it's regulation. 2. Gain knowledge of enzymes involved in nitrogen metabolism. 3. Knowledge of anaerobic respiration with respect to chemolithotrophs 4. Differentiate between oxygenic and anoxygenic photosynthesis mechanism
	Practicals Based on Nitrogen Metabolism, Respiration and Photosynthesis	MBEP 127	1. Methods used for isolation of microbes able to produce the metabolites such as Indole acetic acid, siderophores and techniques for their detection. 2. Techniques used for isolation of microbial system that are able to fix the Atmospheric nitrogen. 3. Characterization technique for polyphenols and tannins 4. Microbial methods for isolation and characterization of microbes able to degrade 5. Biomolecules such as xylan/lignin 6. Microbial methods required for isolation of sulfur reducing microbes /Methanogens 7. Microbial methods for photosynthetic microbes such as cyanobacteria and

Maratha Vidya prasarak Samaj's

S.V.K.T. Arts, Science & Commerce College, Deolali Camp, Nashik

Departmnet of Physics

Programme Outcome - 2022-23

Programme Outcome of Physics deals with a wide variety of systems, certain theories are used by all physicists. Each of these theories were experimentally tested numerous times and found to be an adequate approximation of nature. Physics uses mathematics to organize and formulate experimental results. From those results, precise or estimated solutions, quantitative results from which new predictions can be made and experimentally confirmed or negated. The results from physics experiments are numerical measurements. Technologies based on mathematics like computation have made computational physics an active area of research.

Programme Specific Outcome

Undergraduates learning outcomes in science students will be able to……..

- Explain evaluate and effectively interpret factual clarions theories and assumptions for students' discipline (Physics).
- Find access critically evaluate and ethically use of information.
- Integrate quantitative and qualitative information to reach creative conclusions.
- Apply concepts of sustainability to analyse challenges facing humans and earth's resources.
- Familiarize with recent scientific and technological developments.
- Help students to learn various experimental and computational tools thereby developing analytical abilities to address real world problems.
- Train students in skills related to research, education, industry and market.
- Help student to build-up a progressive and successful career in physics.

S.V.K.T. COLLEGE DEOLALI CAMP IQAC INTERNAL QUALITY ASSURANCE CELL

Course Outcomes F.Y.B.Sc

Credit Pattern: **CBCS: 2019-20**

Sr.No.	Syllabus	Outcome
1.	Mechanics	CO 1.:- The first two chapters of the course will help students to understand detail basic laws used in mechanics with their applications. CO 2.:- Third and Fourth chapterswill help the students to understand properties such assurface tension, Elasticity & viscosity with their applications in our daily life.
2.	Physics Principles & Applications	CO 1.:- This course is introduced the basic principles used in atoms & molecules. CO 2.:- An important device laser is also introduces to give the depth Understanding of its mechanism & applications. CO 3.:- Students will get the knowledge of Electromagnetic radiations. CO 4.:- Such as radio waves, X-rays, visible light, infrared light, ultraviolet light etc. CO 5.:- The student will learn principle of Pyrometer, solar cell, microwave Oven, RADAR, C-T Scan etc.
3.	Heat & Thermodynamics	CO 1.:- Experiments of thermodynamics are developing the knowledge of students about history & origin of concepts. CO 2.:- This course will help the students to study & understand laws of thermodynamics different process. CO 3.:- Applications of heat engines, refrigerators air conditioning etc. CO 4.:- Student will get information of different principles, types & information of different principles types & applications of thermometry.
4.	Electromagnetism	CO 1.:- This course is important which is useful to understand the origin of electric & magnetic field & determine their intensities. CO 2.:- Student will learn electric intensity, electric potential in different materials. CO 3.:- Study of dielectric materials will be useful for different applications.

		CO 4.:- Physical significance of dielectric parameter magnetic properties will be helpful while applying these fields in different regions of application. CO 5.:- Study of current loops helps the student to study attractive or repulsive nature.
5.	Practical	CO 1.:- Use various instruments and equipment. CO 2.:- Investigate the theoretical background of an experiment. CO 3.:- Setup experimental equipment to implement an experimental approach. CO 4.:- Work in a group to plan, implement and report of experiment. CO5. - Keep a well-maintained and instructive laboratory logbook.

S.Y.B.Sc

Credit Pattern: CBCS**: 2019-20**

Sr.No.	Syllabus	Outcome
1.	Mathematical method in physics-I	CO 1.:- Student will understand the algebra of complex numbers useful in physics courses. CO 2.:- Student will understand concept of Partial differentiation. CO 3.:- Student will understand the role of partial differential equations in physics. CO 4.:- Student will understand vector Algebra useful in mathematics and Physics. CO 5.:- Student will understand the Concept of singular points of Differential equations.
2.	Electrocnics-I	CO 1.:- Student can apply different Theorems and laws to electrical Circuits. CO 2.:- Student will understand the Relations in electricity

		CO 3.:- Student will understand the Parameters, characteristics and Working of transistors. CO 4.:- Student will understand the Functions of operational Amplifiers. CO 5.:- Student can design circuits using Transistors and applications of Operational amplifiers. CO 6.:- Student will understand the Boolean Algebra & logic circuits.
3.	Waves, Oscillations & Sound	CO 1.:- Student will study underlying principles of oscillations and its scope in development. CO 2.:- Student can understand and solve the equations/graphical representations of motion for of motion for simple harmonic, damped, forced oscillators and Waves. CO 3.:- Student can explain oscillations in terms of energy exchange with various practical application. CO 4.:- Student can solve numerical Problem related to undamped, Damped, forced oscillation and Superposition of oscillations. CO 5.:- Student will study characteristics of sound, decibel scales and Applications.
4.	Optics	CO 1.:- Student will be able to acquire the basic concept of wave optics. CO 2.:- Student can describe hoe light Constructively and destructively Interfere. CO 3.:- Student can explain why a light Beam spread out after passing through an aperture. CO 4.:- Students will be able to summarize is the polarisation characterises of electrodynamics waves.

		CO 5.:-They can understand the operation of many modern optical devices that utilizes wave optics. CO 6.:-Student will be able to understand optical phenomenon such as polarization, diffraction and interference items of wave model. CO 7.:- Student can analyse simple example of interference and diffraction.
5.	Practical	CO 1.:- Use various instruments and equipment. CO 2.:- Design experiment to test a hypothesis and/or determine the value of an unknown quantity. CO 3.:- Investigate the theoretical background of an experiment. CO 4.:- Setup experimental equipment to implement an experimental approach. CO 5.:- Analyze the data, plot appropriate graphs and reach conclusion from data analysis. CO 6.:- Work in a group to plan, implement and report on a project/experiment. CO 7.:- Keep a well-maintained and instructive laboratory logbook.

T.Y.B.Sc. Physics (CBCS) 2019 Pattern

Sr.No.	Syllabus	Outcome
1.	Mathematical Method in Physics-II	CO 1.:- Student will get information about various co-ordinate systems for solving physics CO.2:- Student will able to explain different problems between Newtonian & Einstein relativity. CO 3.:- He can solve physics problems using differential equations. CO 4.:- He will know the important of Special function in physics & their solutions.
2.	Electrodynamics	CO 1.:- Student will be able to solve problems on electric intensity & potentials using law of electrostatics.

		CO 2.:- Student will explain generation of magnetic field by electric currents. CO 3.:- He will interpret the meaning of the Maxwell's equations in magnetic & dielectric media.
3.	Classical Mechanics	CO 1.:- Student will use conservation of energy & linear as well as angular momentum to solve dynamic problems. CO 2.:- Student will able to solve problems related to Newton's laws, Kepler's laws & their applications in planetary motion. CO 3.:- He can explain types of scattering & get idea of canonical Transformation for solving problems in mechanics. CO 4.:- He may apply Lagrangian & Hamiltonian equations to solve these problems.
4.	Atomic and Molecular Physics	CO 1.:- Student will explain various atomic models & their assumption as well as applications. CO 2.:- He can get idea of different types of coupling. CO 3.:- He will able to develop Zeeman effect set up. CO 4.:- He will know idea of rotational & vibrational spectra. CO 5.:- He can explain Raman spectroscopy & their applications.
5.	C-Programming & Computational Physics	CO 1:- Student will know the basic idea of algorithm, flowchart, syntax of C-programming language reserve words constant, variables, operators, arrays, pointers, functions etc. CO 2.:- Student will solve problems in Physics using different omputation methods such as Newton Rhason method, Bisection method, Trapezoidal rule, Simpson's rule etc. CO 3.:- He will know the basic graphic commands to draw different figures. CO 4.:- He can write C-program for any problem in physics.
6.	Elements of Material Science	CO 1.:- The student will explain electric, mechanical & thermal properties of materials.

		CO 2.:- Student will study defect in solid like line, surface & volume defects. CO 3.:- Student will know diffusion mechanism according to Fick's law. CO 4.:- Student studies phases of metals & explain CRSS (Critical Resolved Shear stress), Plastic deformation. CO 5.:- Student will know polymerisation process. CO 6.:- Student will know about ceramic materials by addition & condensation methods. CO 7.:- For phase diagram student will know lever rule & Gibb's phase rule & phases of substance. CO 8.:- Student will know about smart materials along with their properties & applications.
7	Energy studies	CO.1:-Students become capable of conduction energy audits and give consultancy in that field. CO2:-Students can design different types of solar heaters for small domestic as well as large scale community level applications. CO3:-Students acquire skills to implement solar P-V systems at domestic levels as well as for office premises and educational institutions. Students become able to start their own enterprise in net metering. CO.4:- Students get ideas and hence become self-employed in the field of design, production, commissioning and implementation of bio-mass energy sources, bio-gas plants, gasifiers, wind mills, hybrid systems etc. CO 5.:-Students can go for research in the fields of super-capacitors, battery technologies, fuel cells and material synthesis for implementation of these technologies. CO6:-Students become successful entrepreneurs in the energy field. Students strive to make the regions where they live and work self-sufficient in generating and fulfilling their own energy needs using different energy solutions.

8	**Physics Work shop Skill**	**Objectives:** This course is to get exposure with various aspects of instruments and their usage through hands-on mode. **Course outcomes:-** Aftercompletionofthiscoursestudentswillabletohandleandtestvariousinstruments.
9.	Solid State Physics	CO 1.:- Student will know various types of crystal structures & the properties. CO 2.:- X-ray diffractions techniques for analysis of materials. CO 3.:- Theoretical knowledge about band of metals, insulator & semiconductors. CO 4.:- Student will know different magnetic materials, their characteristics& uses.
10.	Quantum Mechanics	CO 1.:- Student will get basic knowledge of classical & quantum mechanics & comparison of two. CO 2.:- Get idea of wave function & its normalisation. CO 3.:- Student can derive Schrodinger's time dependent & time-independent equations & can apply them to solve problems in physics & get appropriatesolutions. CO 4.:- Student will get the idea of uncertainty principle &application of it. CO 5.:- Student will know operators in quantum mechanics & their properties to find expectation values. CO 6.:- Student can solve different properties of commutator operators. CO 7.:- He will get idea of parity of functions. CO 8.:- Student can obtain eigen vale & eigen functions.
11.	Thermodynamics & Statistical Physics	CO 1.:-Student will explain assumptions of Kinetic theory of gases. CO 2.:-He will explain the physical significance of Maxwell's equations and get idea of statistical concepts for solving physics problems.

		CO 3.:- He can calculate density states, probability using statistical laws. CO 4.:- Student will know different types of ensembles used in statistics. CO 5.:- Student will get idea of classical and quantum statics. CO 6.:- Student will get knowledge of skill to use statistical physics method, such as Boltzmann distribution, Gibb's distribution, Fermi Dirac and Bose Einstein distribution to solve Physics problem.
12.	Nuclear Physics	CO 1.:-Student will get idea of nuclear and their properties. CO 2.:- Student will explain radioactivity & its applications. CO 3.:- Students will know the fundamental properties of nuclear forces, particle accelerators and detectors. CO 4.:- Student will get information about energy generation using Nuclear reactions and can calculate the parameters of nuclear reaction such as packing fraction. CO 5.:- Student will able to demonstrate A knowledge and broad understanding of nuclear physics.
13.	Electronics-II	CO 1.:- Student will explain different types of diode and their applications. CO 2.:- Student will classify amplifiers and able to design different types of amplifiers. CO 3.:- Student will know applications of Op-Amp. Such as integrator, differentiator, adder, subtractions. CO 4 .:- Student will explain block diagram and applications of time 555. CO 5.:- Student can explain different types of power supply (723, 78XX, 79XX etc). CO 6.:- Design of law higher voltage power supplies. CO 7.:- Student can explain adder, subtractor, multiplexer, demultiplexer using logic gates,

		CO 8.:- Use of Flip-flops, counters and registers. CO 9.:- In all at the end student can design and analyse the electronic circuit and can understand current voltage characteristics of voltage characteristics of semiconductor devices
14.	 LASER	CO 1.:-Student will get basic ideas of laser, action and properties. CO 2.:- Student can explain pumping schemes of laser oscillators. CO 3.:- Student will get idea about different types of broadening. CO 4.:- Student will know all characteristics of lasers. CO 5.:- Student will know types of lasers & their uses in different fields. CO 6.:-Student will know applications of lasers in different fields. CO 7.:- Student can plan some project using laser and can apply their knowledge for technological purpose. CO 8.:- Different experiment can be set up to study characteristic of laser.
15.	Practical Courses	CO.:- Student will get knowledge by verifying law's of physics after performing experiment in the laboratory.
16.	Project Course	CO.:- Student will get idea of research work by completing project in the laboratory and can draw the conclusion. conclusion of the project.
17	**Solar PV System: Installation, Repairing and Maintenance**	**Objectives:** 1. In this skill oriented course, student will study basics of solar photovoltaic (PV) cells, modules, and system components. 2. Design and sizing of off-grid PV system for homes, apartments as well as commercial offices. 3. Understanding energy conversion from sunlight to electricity, and working with solar conversion equipment. 4. This Course will hands on experience needed to become self-employed.

		Outcomes: CO 1:-Learn basics of light conversion in electricity. CO2:- Hands on training will motivate to use Solar PV system. CO 3:-Become entrepreneur/self- employed. CO 4:-Analyzed of MSEB electricity bill and design and sizing of off-grid PV system CO 4:-Participants will learn about solar PV module and batteries used in solar PV plant.
18	**Instrumentation for Agriculture**	**Objectives:** After completion of this course students can 1. Get knowledge of sensors used in agriculture field 2. Learn continuous and batch process 3. Learn green house automation schemes 4. Learn Instrumentation in Irrigation **Course Outcomes:** After completion of this course student will CO 1:-Able to test soil and water parameters. CO 2:-Able to develop their own juice extract plant. CO 3:-Able to developed their own green house

S.V.K.T. COLLEGE DEOLALI CAMP IQAC QUALITY ASSURANCE CELL

Head,
Department Of Physics
S.V.K.T. College Deolali Camp,
Nashik - 422101

Department of Zoology

2.6.1 Teachers and students are aware of the stated Programme and course outcomes of the Programmes offered by the institution.			
Programme	**Subject/Course**	**Course code**	**Course outcome**
FYBSC	**Animal Diversity I & II**	11151 11251	1-The student will be able to understand classify and identify the diversity of animals 2- The student understands the importance of classification of animals and classifies them effectively using the six levels of classification 3- The student knows his role in nature as a protector, preserver and promoter of life which he has achieved by learning, observing and understanding life
	Animal Ecology	12151	The learners will be able to Identify and critically evaluate their own beliefs, values and actions in relation to professional and societal standards of ethics and its impact on ecosystem and biosphere due to the dynamics in population · 2- To understand anticipate, analyse and evaluate natural resource issues and act on a lifestyle that conserves nature · 3- The Learner understands and appreciates the diversity of ecosystems and applies beyond the syllabi to understand the local lifestyle and problems of the community · 4- The learner will be able to link the intricacies of food chains, food webs and link it with human life for its betterment and for non-exploitation of the biotic and abiotic components 5- The working in nature to save environment will help development of leadership skills to promote betterment of environment
	CELL BIOLOGY	11252	1- The learner will understand the importance of cell as a structural and functional unit of life · 2- The learner understands and compares between the prokaryotic and eukaryotic system and extrapolates the life to the aspect of development · 3- The dynamism of bio membranes

			indicates the dynamism of life. Its working mechanism and precision are responsible for our performance in life · The cellular mechanisms and its functioning depends on endo-membranes and structures. They are best studied with microscopy
SYBSC	Animal Diversity III & IV	21151 21252	1- The students will be able to understand, classify and identify the diversity of higher vertebrates · 2- The students will able to understand the complexity of higher vertebrates · 3- The students will be able to understand different life functions of higher vertebrates · 4- The students will be able to understand the linkage among different groups of higher vertebrates · 5- The student will become aware regarding his role and responsibility towards nature as a protector, to understand his role as a trustee and conservator of life which he has achieved by learning, observing and understanding life
	Applied Zoology I & II	22251 22252	1- The learner understands the basics about beekeeping tools, equipment and managing beehives · 2- The learner understands the basic information about fishery, cultural and harvesting methods of fishes and fish preservation techniques · 3- The learner understands the biology, varieties of silkworms and the basic techniques of silk production · 4- The learner understands the types of agricultural pests, Major insect pests of agricultural importance and Pest control practices

Dr. Azraj S Dahihande
Department of Zoology

S.V.K.T. ARTS, SCIENCE AND COMMERCE COLLEGE, DEOLALI CAMP

DEPARTMENT OF COMMERCE

PROGRAM OUTCOMES (POs) FOR UNDERGRADUATE COURSES

1. **Program:B.Com.**

After completing the Bachelor of Commerce degree, students are able to:

POs	Program Outcomes
PO1	Commerce education is that area of education, which develops the required knowledge, skills and attitudes for the handling of Trade, Commerce and Industry.
PO2	Commerce education is entirely different from other disciplines. Hence, it must charter Course routes to service the aspirations of the nation.
PO3	To meet the growing needs of the business society, there is greater demand for sound development of commerce education.
PO4	The relevance of commerce education has become more imperative; this means a marked change in the way commerce and management education is perceived in India.
PO5	The Commerce education is dedicated to developing tomorrow's leaders, managers, and professionals.
PO6	Commerce education is that area of education, which develops the required knowledge, skills and attitudes for the handling of Trade, Commerce and Industry.
PO7	Commerce education is entirely different from other disciplines. Hence, it must charter Course routes to service the aspirations of the nation.
PO8	To meet the growing needs of the business society, there is greater demand for sound development of commerce education.

Dr. V.G.Gaikwad
H.O.D.
(Commerce Dept.)
Smt. Vimlaben Khimji Tejokaya
Arts, Science & Commerce College,
Deolali Camp, Tal. & Dist. Nashik

S.V.K.T. Arts, Science & Commerce College Deolali Camp
PHONE
2491820

Dr. S.S.Kale
PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp (Nasik)

S.V.K.T. Arts, Science and Commerce College, Deolali Camp, Nashik

DEPARTMENT OF COMMERCE

COURSE OUTCOMES (POs) FOR UNDERGRADUATE COURSES- (2022-23)

F.Y. B.Com. Course Outcomes (COs) of Bachelor of Commerce (B.Com.)		
Semester I	Financial Accounting-I (Course Code 112)	CO1: Students will be able to acquire in-depth knowledge in Financial Accounting.
		CO2: Students will be able to understand the process and importance of conversion of single entry into double entry system.
		CO3: Students will gain knowledge about GST and its implications.
Semester II	Financial Accounting-II (Course Code 122)	CO1: Students will be able to impart knowledge of various software used in accounting.
		CO2: Helps to impart the knowledge about final accounts of charitable trusts.
		CO3: To impart knowledge about valuation of intangible assets.
		CO4: Helps to impart the knowledge about accounting for leases.
		CO5: Students will be able to acquire in-depth knowledge.
Semester I	Consumer Protection and Business Ethics-I (Course Code 116D)	CO1. Students will be acquainting with knowledge and maturity to understand the consumer's interest
		CO2. Students will get training to face emerging issues..
		CO3. Students will be acquainting with knowledge and application of laws.
		CO4. Student can understand the defend and safety in e-commerce.
		CO5. Helps to understand the issues relating to e-commerce, e-Banking emerging issues and internet regulations.
Semester II	Consumer Protection and Business Ethics-II (Course Code 126D)	CO1: Student will be able to acquaint with the knowledge and maturity to understand the Business Ethics.
		CO2: It helps for the application of CSR in various sectors.
		CO3: Students will analyse the corporate governance in India.
		CO4: It helps to understand and achieve sustainable development.

Semester I	Organisational Skills Development-I (Course Code 115A)	CO1. Students will be able to understand the conceptual clarity on meaning of Modern Office, internal and external factors of an office environment.
		CO2. Students will be able to understand the conceptual clarity on the meaning of Scientific office management and understanding various techniques for scientific management.
		CO3. Students will be able to understand the technical skills and Critical analysis skills.
		CO4. Students will be able for the development of Technical and Analytical abilities.
Semester II	Organisational Skills Development-I (Course Code 125A)	CO1: Students will be able to understand the conceptual Clarity Goal Setting and Goal Measurement, Enhancing the Time Management Skills.
		CO2: It enables for Enhancing Communication Skills, Usability of latest communication media.
		CO3: It enables for development Technical and analytical skills.

Dr. V.G.Gaikwad
H.O.D.
(Commerce Dept.)
Smt. Vimlaben Khimji Tejokaya
Arts, Science & Commerce College
Deolali Camp, Tal. & Dist. Nasik

S.V.K.T. Arts, Science & Commerce College Deolali Camp
PHONE
2491820

Dr. S.S.Kale
PRINCIPAL
Smt. Vimlaben Khimji Tejookaya.
Arts, Science & Commerce College
Deolali-Camp (Nasik)

S.Y. B.Com Course Outcomes (COs) of Bachelor of Commerce (B.Com)

Semester III	**Business Communication-I** Course Code -: 231	CO 1: Understanding of basic knowledge of Business Communication.
		CO 2: Understanding the importance and Essentials Qualities of business letters.
		CO 3: Understanding the knowledge about soft skills.
		CO 4: To create awareness about soft skill among the students
		CO 5: To create ability among the students for writing resume and Job application letter.
		CO 6: To create ability among the students for Business Correspondence
Semester IV	**Business Communication-II** Course Code -: 241	CO 1: Understanding of basic knowledge of Report Writing and Internal Correspondence and Import-Export Correspondence.
		CO 2: Learning the Recent Trends in Business Communication.
		CO 3: To create ability among the students for Drafting of Business Letters.
		CO 4: To create ability among the students about Writing Formal Mails and Blog writing.
Semester III	**Corporate Accounting -I** **Course Code: 232**	CO 1: Developing understanding on applicability of various Accounting Standards.
		CO 2: Knowledge about types of profit and their apportionment
		CO 3: Conceptual Clarity and Practical understanding.
		CO 4: Analytical skills enhancement and decision-making skills of students will be developed.
Semester IV	**Corporate Accounting-II** **Course Code: 242**	CO 1: Developing understanding on accounting procedure for Holding companies.
		CO 2: Conceptual understanding, Practical application skills in the process of accounting for Absorption.
		CO 3: Practical understanding on Process of Liquidation on companies.
		CO 4: Updating knowledge on recent advances in the field of Accountancy.

Semester III	**Business Management -I** **Course Code: 234**	CO 1: Students will get an idea about the basic managerial process.
		CO 2: Students will get an idea about how planning works in real life.

		CO 3: Students will understand the process of implementation of both the concepts.
		CO 4: Students will understand importance of proper direction and team work.
Semester IV	**Business Management-II Course Code: 244**	CO 1: Students will get an idea about the basic motivational tools used in the field of management.
		CO 2: Students will get an idea about how leadership influences organizational success.
		CO 3: Students will understand the significance of coordination and control in modern business management.
		CO 4: Students will come across various emerging trends in management.

Semester III	**Elements Of Company Law - I Course Code: 235**	CO 1: Acquaint with knowledge and maturity to understand Company law 2013.
		CO 2: To Acquaint knowledge and application of formation and incorporation of Company.
		CO 3: To understand the knowledge about the principal documents of the company.
		CO 4: To inculcate skills and knowledge about the shar capital of the company.
Semester IV	**Elements Of Company Law - II Course Code: 245**	CO1: To Acquaint knowledge and maturity to understand Company management.
		CO2: To Acquaint with knowledge and role of key managerial person of the Companies and Rules about CSR.
		CO3: To get training in to various types of meeting and procedure.
		CO4: To enhance skills and knowledge about the E- governance of the company and winding-up of the company.

Semester III	**Cost and Works Accounting -I (Basics Of Cost Accounting) Course Code: 236(E)**	CO1: To remember and understand basic concept of cost accounting. Development of an overall outlook of Cost Accounting
		CO2: Ability to prepare a cost sheet.
		CO3: 1) Ability to understand which procedures are used for purchasing the material 2) Understand the documentation for purchase procedures.
		CO4: Understanding methods used for controlling the inventory.
Semester IV	**Cost& Works Accounting-II Course Code: 246(E)**	CO1: Understanding various methods used in the pricing of the issue of materials.
		CO2: Enabling to calculate wage payment and incentives.
		CO3: Understanding the process of job analysis, job evaluation and merit rating.
		CO4: Insight into recent processes used for cost reduction.

Semester III	**Marketing Management - I** **Course Code: 236(H)**	CO1: To give the students the basic knowledge of Marketing Management.
		CO2: To develop the awareness amongst the students about how marketing strategy plays a vital role in making today's customers want to buy the products and services.
		CO3: To enable the students to plan and make the best possible utilization of all the human and physical resources so that predetermined marketing objectives of the firm can be achieved.
		CO4: To make the students able to explain value of Market Research and its impact in decision making.
Semester IV	**Marketing Management -II** **Course Code: 246(H)**	CO1: Students will understand how Green Marketing is necessary for marketers to use resources efficiently, so that organizational objectives are achieved without waste of resources.
		CO2: It will help the student to apply the various techniques and methods of E- Marketing practically.
		CO3: It will help them to implement the knowledge of Digital Marketing in practical by enhancing their skills in the field of Marketing.
		CO4: It will help them to gain a solid understanding of the theoretical and conceptual knowledge of International marketing.

Dr. V.G.Gaikwad
H.O.D.
(Commerce Dept.)
Smt. Vimlaben Khimji Tejokaya
Arts, Science & Commerce College,
Deolali Camp, Tal. & Dist. Nasik

S.V.K.T. Arts, Science & Commerce College Deolali Camp
PHONE
2491820

Dr. S.S.Kale
PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp (Nasik)

T:Y.B.Com.. (CBCS-2019 Pattern) Course Outcomes)		
		Course Outcomes (COs) of Bachelor of Commerce (B.Com.)
Semester V	Business Regulatory Framework (351)	CO1. To provide conceptual knowledge about the framework of business Law in India. CO2. To orient the students about the legal aspect of business. CO3 To create awareness among the students about legal environment relating to the Contract Law, Partnership Act, Sale of Goods Act in India CO4. To understand the emerging issues relating to e-commerce, e-transaction issues and E Contracts
Semester VI	Business Regulatory Framework (361)	CO1. To develop general awareness of Business Law among the students. CO2. To have a understanding about the landmark cases/decisions having impact on business laws CO3 To acquaint the students on relevant developments in business laws to keep them updated. CO4. To enhance capacity of learners to seek the career opportunity in corporate sector and as a business person.
Semester V	Advance Accounting – I (352)	CO1. To acquaint the student with knowledge about various concepts, objectives, and applicability of some important accounting standards. CO2. To develop the knowledge among the students about reorganization of business regarding restructuring the capital. CO3. To empower to students with skills to prepare the investment account in summarize manner.
Semester VI	Advance Accounting – II (362)	CO1. To empower to students about the branch accounting in simple. CO2. To understand the procedure and methods of analysis of financial statements.
Semester V	Auditing (354)	CO1. To get knowledge about concept of Checking, Vouching, Verification and Valuation, Types of Audit Report and Auditing Assurance Standard. CO2.To know the various new concepts in computerized system and Forensic Audit.
Semester VI	Taxation – II (364)	CO1.To understand the basic concepts of Income Tax Act, 1961 and create awareness of direct taxation among the students. CO2. To understand the income tax rules and regulations and its provisions. CO3. To have a comprehensive knowledge of calculation various types of income. CO4. To know the recent changes made by the finance bill (Act) every year and its impact on taxation of person.
Semester V	Marketing Management-II (355H)	CO1. The objective of this course is to facilitate understanding of the conceptual framework of marketing and its applications in decision making under various environmental constraints. CO2. The course will make learners understand how to make effective marketing decisions, including assessing marketing opportunities and developing marketing strategies and implementation plans.
Semester VI	Marketing Management-II (365H)	CO1. The primary purpose of this course is to brief students about agricultural marketing, various marketing regulations, importance of global marketing and various measures used by cyber security marketers in today's digital world.

Semester V	Marketing Management-III (356H)	CO1.To introduce the concept of advertising and advertising media. CO2. To provide the students the knowledge about appeals and approaches in advertisement. CO3. To acquaint the students to the economic ,social and regulatory aspects of advertising. CO4. To make the student understand the role of Brand Management in marketing.
Semester VI	Marketing Management-III (366H)	CO1.To introduce the concept of Marketing of Service. CO2. To provide the students the knowledge of Creative Advertisements. CO3. To acquaint the students to various social media marketing. CO4. To make the student understand the technique and process of Marketing Control and Audit.
Semester V	Cost & Works Accounting-II (355E)	CO1.To provide the knowledge about the concept and principals of overheads. CO2. To introduced the cost accounting standards and the cost accounting standard board. CO3. To understand stages involved in accounting of overheads. CO4. To build and ability towards stragic overhead accounting under activity based costing.
Semester VI	Cost & Works Accounting-II (365E)	CO1.To provide knowledge about various methods of costing. CO2. To understand the applications of costing methods in manufacturing and service industry. CO3. To enable students to prepare cost statemenets accoriding to types of manufacturing and service industry. CO4. To build the applicability of cost accounting standard in the methods of costing
Semester V	Cost & Works Accounting-III (356E)	CO1.To prepare learners to understand the basic techniques in cost accounting. CO2. To understand the learner, application of cost accounting techniques in cost control & decision making. CO3. To enable the learners to prepare various types of budgets.. CO4. To learn the basic concept of uniform costing and interfirm comparison.
Semester VI	Cost & Works Accounting-III (366E)	CO1.To impart knowledge about standard costing and variance analysis. CO2. To learn about pricing policy and its implementation. CO3. To know the related cost accounting standard and cost management practices in specipic sectors. CO4. To provide a conceptual understanding of procedures and provisions of cost audit. .

Dr. V.G.Gaikwad
H.O.D.
(Commerce Dept.)
Smt. Vimlaben Khimji Tejokaya
Arts, Science & Commerce College,
Deolali Camp, Tal. & Dist. Nasik

S.V.K.T. Arts, Science & Commerce College Deolali Camp
PHONE
2491820

Dr. S.S.Kale
PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp (Nasik)

M.V.P. Samaj's
S.V.K.T., Arts, Science and Commerce College, Deolali Camp
Department of Economics
Academic Year 2022-23

Programme Specific Outcomes : B.A.

Program Specific Outcomes	
At the end of the programme, student will be able to	
1	Understand the basic terms, concepts and theories in economics.
2	Demonstrate the ability to explain charts, diagrams and graphs.
3	Identify the socio-economic issues and find solutions for the problems.
4	Apply professional ethics in day-to-day economic activities.
5	Understand research technique, methods to collect primary and secondary data and analyse it.
6	Acquires writing skills and ability develops of economic way of thinking

H.O.D.
Department of Economics
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts,Science & Commerce College,
Deolali-Camp (Nasik)

M.V.P. Samaj's
S.V.K.T., Arts, Science and Commerce College, Deolali Camp
Department of Economics
Academic Year 2022-23

Course Outcomes B.A.

Class : F.Y.B.A.		
Semester-I		
Paper	**Course code & course title**	**At the end of the course, student will be able to**
I	(CC-1A-11151) Indian Economic Environment	Identify recent developments in the Indian and world economy.
		Interpret the contemporary issues in economic environment.
		Analyse current scenario in various sectors in the economy.
		Gain knowledge about various concepts of cropping pattern and technology.
		Understand the Industrial policies its effect on sustainable agricultural development.
		Acquire knowledge about agricultural marketing, rural Entrepreneurship.
Semester-II		
I	(CC-1B-12151) Indian Economic Environment	Discuss and debate on the various issues and challenges facing the Indian Economic Environment.
		Describe the developments such as MSMEs, Digital Economy, E-Banking, BPO & KPO.
		Develops the students for varied competitive examinations.
		Making awareness about self-employability through banking environment.
		Understand challenges of Indian economy and the factors affecting economic environment.
		Acquire comparative knowledge about Indian and world economy

Class : S.Y.B.A.		
Semester-III		
Paper	**Course code& course title**	**At the end of the course, student will be able to**
I	(DSE-1A 23151) Micro Economics	Define and understand the Microeconomics, scope and nature
		Comment upon the concepts of micro economics
		Demonstrate the knowledge of ordinal and cardinal utility approach
		Able to discuss various aspects of demand theory
		Able to analyse supply and production process
		Analyse and interpret charts, graphs and figures
II	(DSE-2A 23152) Macro Economics	Differentiate between macroeconomics and micro economics.
		Apply the theories in macroeconomics in day-to-day context.
		Comment upon the concept of macroeconomics
		Able to discuss various concept of national income.
		Analyse the structure and functions of circular flow of income
		Understand various type of investment
III	(CC-1C 23153) Financial System	Analyse the structure and functions of the Indian financial system.
		Comment upon commercial banks
		Discuss the role of co-operative bank in rural area
		Able to define and differentiate Indian money market and capital market
		Enlist the importance of foreign exchange market
		Comment upon the financial institutions like UTI, LIC, GIC
IV	(SEC-2A 23154) Basic Concepts of Research Methodology	Describe the basic concepts of research
		Summarize the various types of research
		Discuss the various types of research design
		Form and test Hypothesis
		Define the process of Data Collection
		Undertake research related surveys

Semester-IV		
I	(DSE-1B24151) Micro Economics	Comprehend the concept of costs such as Fixed Costs, Variable Costs, Total Cost, Average Cost, Marginal Cost
		Able to define various revenue concepts like Total Revenue, Average Revenue & Marginal Revenue
		Comment upon the various types of markets
		Identify the process of equilibrium of the firm and industry under perfect competition market, monopoly market and imperfect competition market
		Describe the principles behind factor pricing.
		Analyse the concept of welfare economics
II	(DSE-2B 24152) Macro Economics	Evaluate an understanding of monetary policy and fiscal policy
		Identify the functioning of business cycles
		Examine the role of money in modern economy
		Understand the value of money
		Comment upon RBI
		Enlist the reasons and effect of inflation and deflation on economy.
III	(CC1D-24153) Financial System	Define and understand the role of the Reserve Bank of India in financial system.
		Identify the role of other financial regulators like SEBI & IRDA
		Comment upon the International Financial Institution such as IMF, IBRD, ADB
		Describe the recent developments in Indian Financial Sector
		Identify the objectives and outcomes of changing landscape of banking sector in India
		Comprehend the concepts of Insolvency and Bankruptcy, Alternate source of finance, risk management in banking sector.
IV	(SEC-2B 24154) Basic Concepts of Research Methodology	Define data analysis and state its importance
		Classify and present collected data in graph bar diagram
		Describe the importance of research design
		State characteristics research report:
		Summarize the concepts like bibliography, appendices, review of literature, hypothesis testing
		Conduct research in Economics

Class : T.Y.B.A.		
Semester-V		
Paper	**Course code & course title**	**At the end of the course, student will be able to**
I	DSE-1C-(35151) S-3 International Economics-I	Define the concept of International Economics, enlist its importance in economic perspective
		Highlight the advantage and disadvantages of International Trade
		Summarize the idea of Trade
		State characteristics of trade in the view of developing Country
		Discuss the term Balance of Payment
II	(DSE-2C-35152) S4- Public Finance-I	Understand the role of public finance in economic development
		Differentiate between direct tax and indirect tax
		Explain the types of public debt
		Differentiate between public finance and private finance
		Discuss the burden of public debt
		Evaluate the effects of taxation
III	(CC-1E 35153) UAECO-G3- Indian Economic Development -I	Differentiate between economic growth and economic development.
		Identify the characteristics of a developing country and developed country.
		Comment upon India as an emerging economy
		Debate and discuss various facets of constraints in development process
		Elaborate role of human resources in economic development
		Analyse various Development Index like Human Development Index, Physical Quality of Life Index, Gender Development Index, Gender Inequality Index, Multidimensional Poverty Index
IV	(SEC-2C-35154) Business Management-I	Understand the process of Management of Business.
		Analyse Business planning and decision-making process
		Ability develops to work in teams
		Ability develops leadership qualities
		Analyse collected data
		Analyse and interpret the collected data

Semester-VI		
Paper	**Course code & course title**	**At the end of the course, student will be able to**
I	DSE-1D-36151-S3- International Economics-II	Comment upon India's Foreign Trade
		Highlight India's Foreign Trade Policy
		Summarize the concept of Foreign Capital and Investment
		Describe Foreign Exchange Market
		Discuss regional economic forums like SAARC, BRICS, EEC and WTO
		Independently analyse India's foreign trade and investment
II	(DSE-2D-36152) S4- Public Finance-II	An understanding role of deficit financing in developing countries.
		Understand the centre state financial relationship
		Discuss and debate on budget
		An understanding of the mechanics of government budget
		To critically analyse fiscal policy and its implication in economy
		Develops the students for varies competitive examinations.
III	(CC-1F 36153) G3- Indian Economic Development -II	Discuss the features, needs and objectives of economic planning
		Elaborate the role of NITI Aayog
		Analyse the importance of sustainable development
		Comment upon sustainable development goals and current scenario of SDG in India
		Understand the relation between environment and economic development
		Discuss the environment policies in India and global warming concept
IV	(SEC-2D-36154) Business Management-II	Ability develops to case study
		Elaborate the study of business enterprise
		Analyse presentation of business ideas
		Ability to show leadership skills with business ideas
		Develop the skill of writing project report
		Apply PPT presentation skill

H.O.D.
Department of Economics
Smt. Vimlaben Khimji Tejookaya
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts,Science & Commerce College,
Deolali-Camp (Nasik)

M.V.P. Samaj's
S.V.K.T., Arts, Science and Commerce College, Deolali Camp
Department of Economics
Academic Year 2022-23

Programme Specific Outcomes : M.A.

Program Specific Outcomes	
After completing the Master of Arts Economics, students are able to	
1	Academic Competence: To inculcate the ability to explain Microeconomics, Macroeconomics, Financial Markets and Institutions, Economic growth & Development, Agriculture Economics, International Economics, Monetary Economics, Demography, Public Economics, EnvironmentalEconomics
2	Research Competence: Acquire the research technique, applied economic research and prepares the students for a sound preparation for progression to doctoral study
3	Social Competence: Ability develops to understand the socio-economic issues and find solutionsfor the problems.
4	Professional Competence: Acquires various skills such as communication skill, presentation skillsthat helps to getting jobs across a broad spectrum of industries and other sectors.
5	Acquire the skills like writing, analyzing the data
6	Ability develops of economic way of thinking

H.O.D.
Department of Economics
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts,Science & Commerce College,
Deolali-Camp (Nasik)

M.V.P. Samaj's
S.V.K.T., Arts, Science and Commerce College, Deolali Camp
Department of Economics Academic Year 2022-23

Course Outcomes: M.A.

Class : M.A. -I - Economics		
Semester-I		
Paper	**Course code & course title**	**At the end of the course, student will be able to**
I	(EC-1001) Micro Economic Analysis-I	Perform supply and demand analysis to analyses the impact of economic events on Markets
		Analyse the behavior of consumers in terms of the demand for products
		Analyse the performance of firms under different market structures
		Recognize market failure and the role of government in dealing with those failures
		Evaluate the factors affecting firm behavior, such as production and costs.
		Understand the different market condition
II	(EC-1002) Public Economics-I	Understand the financial resources of the government
		Understand the role of modern governments in development of the economy
		Identify the changing role of the government.
		analyse the importance of resource allocation in the economy.
		Comment upon fiscal policy, taxation policy and expenditure policy of the government.
		Discuss the tax, debt & budget policy of the government.

S.V.K.T. Arts Science & Commerce College Deolali Camp Dist. Nasik

III	(EC-1003) International Trade	Understand the theory of International trade
		Discuss the growth in world trade.
		Analyse the economic effects of tariffs, quotas, and subsidies.
		Differentiate between free trade policy and controlled trade.
		Comment upon the International trade agreements, Dunkel Proposal and WTO.
		Analyse the developments since 1995 in trade agreements and trade composition.

IV	(EC-1004) Agricultural Economics	Identify the role of agriculture sector in Indian economy and rural development.
		Discuss various trends of agriculture.
		Understand the contemporary situation of agriculture in India.
		Comment upon agricultural policies and its effect on sustainable agricultural development.
		Analyse the globalization and its impact on agricultural development.
		Evaluate policies for pricing and marketing of agricultural products.
Semester-II		
I	(EC-2001) Micro Economic Analysis-II	Identify and differentiate various market structures.
		Describe the market structure
		Analyse the price and output determination under various types of markets
		Design and develop an appropriate wage structure for a firm.
		Compute cost and revenue of a firm.
		Evaluate the merits of various market structures.
		Comment upon tax policy and reforms in the tax policy.
		Analyse the public debt policy of India, burden of public debt, deficit financing and debt recovery management.

II	(EC-2002) Public Economics-II	Identify the fiscal policy and monetary policy of India
		Describe the financial relations between centre and states in India.
		Understand the mechanism of Government Budget
		Evaluate the effects of taxation
III	(EC-2003) International Finance	Identify the concepts such as balance of trade, balance of payments, devaluation of currency.
		Describe the components of foreign exchange market.
		Understand the role of international capital in economic development.
		Comment upon banking laws, banking agreements.
		Identify the changing role of IMF, IBRD, BRICKS.
		Analyse global economic crisis phenomena.
IV	(EC-2004) Labour Economics	Discuss on various issues in Indian labour market,
		Identify the problem of unemployment and policies for employment generation in India.
		Understand the issues of collective bargaining, social security in India.
		Comment upon the problems of labour migration and absenteeism.
		Analyse the labour market reforms in India.
		Evaluate government policies affecting work on Job

Class : M.A. -II - Economics		
Semester-III		
Paper	**Course code & course title**	**At the end of the course, student will be able to**
I	(EC-3001) Macro Economic Analysis- I	Explains national income, calculation methods of national income, and concepts related to national income.
		Defines concepts related to national income.
		Compares calculation methods of national income.
		Relates factors determine national income such as consumption, saving and investment.
		Interprets macroeconomic issues such as money, foreign exchange, inflation, unemployment, economic growth and foreign trade.
		Expresses definition of money, and functions and types of money.
II	(EC-3002) Growth and Development-I	Familiar with the difference between economic growth and economic development.
		Well informed about the indicators of economic growth and economic development.
		Acquainted with the characteristics of a developing economy.
		Identify the constraints on development process.
		Identify the objectives of economic planning.
		Analyse the growth models and its applicability to developing countries.
III	(EC-3003) Research Methodology	Describe the different types of educational research and the needs of educational research
		Discuss the concept of variables and hypotheses, their nature, importance and types.
		Identify the important conditions conducive to the formulation of hypotheses
		Define the term population, sample and describe the steps involved in the process of sampling
		Evaluate the different tools of data collection
		Apply writing of report for an educational project

IV	(EC-3004) Demography	
		Examine the difference between demography and population studies
		Understand the various concepts of Demography
		Analyse the relationship between Population growth and economic development
		Describe the Theories of Population
		Evaluate the Population Policies
		Compare population data across different countries
Semester-IV		
I	(EC-4001) Macro Economic Analysis-II	Describe the equilibrium in the goods market and money market.
		Examine the impact of aggregate demand and aggregate supply on determining income output and employment
		Understand the concept and determinates of inflation.
		Describe the meaning and types of unemployment
		Analyse the relationship between inflation and unemployment.
		Evaluate the role of fiscal and monetary policies is bringing about economic stability.
II	(EC-4002) Growth and Development-II	Introduce the concepts of growth and development
		Understand the models of growth
		Comment upon growth rate
		Compare the development status of different countries,
		Differentiate between growth and development
		Identify the limits to growth
III	(EC-4003) Research Project	Analyse research-based project
		Demonstrate capacity to improve student achievement, engagement, and retention
		Demonstrate capacity to lead and manage change through collaboration with others
		Analyse data and synthesize research findings
		Describe research findings in written and verbal forms
		Apply research findings to advance education theory and practice.

IV	(EC-4004) Economics of Environment	Understand the interrelationships between economic development and the environment, converging on to notions of sustainable development
		Understand and analyse the issue of common pool environmental resources in global, regional, and local eco-system contexts.
		Apply theories, concepts, and techniques of economics for evaluation of environmental Projects
		Understand the role of economic theory in solving environmental and resource problems.
		Discuss an impact of environmental policies
		Understand the issues like economic productivity and national security, global warming, the depletion of ozone layer and loss of biodiversity.

H.O.D.
Department of Economics
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts,Science & Commerce College,
Deolali-Camp (Nasik)

MARATHA VIDYA PRASARAK SAMAJ'S
SHRIMATI VIMLABEN KHIMJI TEJOOKAYA
ARTS, SCIENCE AND COMMERCE COLLEGE (S.V.K.T. COLLEGE)
LAM ROAD, DEOLALI CAMP, NAKA NO. 6, NASHIK- 422 401. (M.S.) INDIA
NAAC Re-Accredited "A" Grade with CGPA-3.11

Department of Geography

Programme Outcome

Geography: Graduates of the program should be able to:

- Make aware about Planet Earth and thereby to enrich Knowledge.
- Provide an understanding of spatial and structural dimensions of Geography.
- Understand the recent trends in regional studies.
- Explain and introduce the latest concepts in Geography.
- To introduce the students to the fundamental's concepts of Environmental Geography.
- Acquaint the nature of man-environment relationship and human capability to adopt and modify the environment under its varied conditions from primitive lifestyle to modern living.
- The utility and application of Geography in different regions and Environment.
- Sensitize with the development issues, policies and programmes designed for regional development.
- To acquaint the students with environmental protection laws, acts, planning and management.
- To appraise the students with salient features of the Maharashtra State.
- Acquire the knowledge of Geographical Instruments.
- Train in elementary statistics as an essential part of Geography.
- Comprehend the Contemporary issues facing the global community.
- Acquaint the utility & application, management, Protection of hazards in different areas.
- Understand the interrelationship between Geography & Tourism.
- To acquaint the students with the principles of surveying, its importance, and its utility in the Geographical study.

Course Outcome

BA Geography: Students Will

Gg- 110 (A) Physical Geography (G-1) Geography DSE – 1 (Sem-1)

Gg- 110 (B) Human Geography (G-1) Geography DSE – 2 (Sem-2)

i) The geographical maturity of students in their current and future courses shall develop.

ii) The student develops theoretical, applied and computational skills.

I. Students get knowledge the basic concepts in Physical geography.

II. The students understands latest concept in Physical geography

III. The students acquaints with the utility and application of Physical geography in different regions and environment.

IV. The students aware about Earth system (Lithosphere, Atmosphere, Biosphere and Hydrosphere)

Gg-201 A Economic Geography -I G-2 (Sem-3)

Gg-201 B Economic Geography -I G-2 (Sem-4)

- The students get the the basic principles and concepts of economic geography.
- The students acquaint the applications to economic geography for development in different areas.
- The students able to integrate various factors of economic development and dynamic aspect of economic geography

Gg-310 (A) Geography of Tourism- I (Sem-5)

Gg: 310 (B) Geography of Tourism- II (Sem-6)

1) Students Understand The History Of Tourism

2) The Students Introduce With The Basic Concepts In Tourism Geography.

3) The Students Understand The Types Of Tourism

4) The Students Gain Knowledge Different Aspects Of Tourism Geography.

B. Sc. Geography

Programme Outcomes

1. To understand the scope and evolution of the diverse discipline of Geography.
2. Recognize, synthesize and evaluate diverse sources of knowledge, arguments and approaches pertinent to exploring human-environment problems. Explain societal relevance of geographical knowledge and apply it to real world human- environment issues.
3. Appreciate and reflect critically on the importance of holistic and interpretative human-environment perspectives.
4. An understanding and acknowledgment of the threats that endanger the earth's natural systems. This helps in further realization of the significance of anthropogenic causes of many of the disasters and threats that puts life on this planet on the edge.
5. Development of knowledge, skills and holistic understanding of the discipline among students. Encouragement of scientific mode of thinking and scientific method of enquiry in students. This goal is achieved through the regular field excursions conducted by the Department to various parts of India extensively and the writing of a report/thesis on it.

Course Outcome (BSc Geography)

Gg-111 Introduction to Physical Geography-I (Geomorphology)

Students will

- Know the basic & latest concepts in Geomorphology.
- Understand utility & application of Geomorphology in different regions and environment.
- Aware of the need of protection and conservation of different types of landforms.
- able to know earth size, shape, radius, parallels of latitudes & meridians of longitudes.
- Acquaint the knowledge about origin of continents & ocean basins.
- know origin and types of rocks.
- Understand crustal movements- slow and rapid.
- Introduce weathering and its types.
- know erosional and depositional work of rivers, sea waves, wind and glaciers.
- Understand soil creep, debris flow, Avalanches.

Gg- 112 Introduction to Physical Geography -II (Geography of Atmosphere and Hydrosphere)

- Know the basic principals in Climatology & Geomorphology
- Understand the composition and structure of atmosphere
- Aware about heat budget of the earth
- Acquaint with atmospheric pressure and wind system
- Know importance of oceanography in modern times
- Introduce different types of coast
- Understand properties of ocean water
- Know characteristics of sea waves
- Know ocean currents of Atlantic, Pacific and Indian ocean

Gg-113 Practicals in Physical Geography

- Introduce about maps, elements of maps and types of maps.
- Gain knowledge of map scales, conversion of map scales.
- Study of map projection, classification of map projection, choice of map projection.
- Get the knowledge of various methods of data representation.
- Study field excursion for orientation of Toposheet, observation & identification of geographical features
- Get experience of field excursion, village/ urban survey

Gg-121 Introduction to Human Geography

- Know the about human geography contemporary relevance of human geography.
- Gain knowledge of human evolution and races.
- Acquaint the knowledge about tribes in India and Maharashtra.
- To know about human life in Cold and Hot regions
- Understand human culture.
- Gain knowledge about economic activities of man.

Gg- 122 Population and Settlement Geography

- Introduce about population geography and sources of population data
- Understand the determinants and distribution of population.
- Aware about trend about population growth.
- Acquaint with demographic transition and demographic composition.

- Know settlement types and patterns.
- Understand the concept, trend and pattern of urbanization.

Gg-123 Practicals in Human Geography

- Introduce about population indices, Data analysis and presentation using computer.
- Understand the methods for calculation urban data.
- Study of crop combination and agricultural efficiency methods.
- Get the knowledge of various methods of data representation.
- Get experience of field excursion, village/ urban survey and report writing.

Gg-231 Environment Geography-I (Paper-I)

- To create environmental awareness amongst the students.
- To familiarize the students with fundamentals concepts of Environmental Geography.
- To acquaint the students to past, present, and future utility and potentials of resources at regional, national and global levels.
- To enable the students to understand dynamics of man–environment relationship in various region of the world.

Gg- 232 Geography of Maharashtra (Physical-I) (Paper-II)

- To appraise the students with salient features of the Maharashtra State.
- To familiarize the students with the climatic characteristics of the State.
- To familiarize the Soils and Natural Vegetation in Maharashtra
- To make the students aware of the geographic problems of Maharashtra in the view of sustainable development.

Gg-233 Surveying –I (Paper III)

- To acquaint the students with the principles of surveying, its importance, and its utility in the Geographical study.
- To familiarize the students with the basic aspects of linear, vertical and angular measurements of surveying.
- To understand the importance, basic principles and uses of GPS in surveying.
- To identify sources and types of errors occurs during surveys.

Gg-241 Environmental Geography- II (Paper-I)

- To introduce the methods and assessments of the impact on the environment amongst the students.
- To acquaint the students with environmental protection laws, acts, planning, and management.
- To appraise the students with various indigenous environmental conservation measures.
- To make aware the students about various programs and policies carried out in the regional and global scale.

Gg- 242 Geography of Maharashtra (Human)-II (Paper-II)

- To acquaint the students with the relationship between man and environment in Maharashtra State.
- To familiarize the students with the agricultural pattern, problems and prospects in the state.
- To study and understand the industrial sector, spatial distribution, development and problems faced within the state.
- To know the status of transport and communication in Maharashtra state.

Gg-243 Surveying – II (Paper-III)

- To acquaint the students with the principles of surveying, its importance and utility in the Geographical study.
- To familiarize the students with the basic aspects of linear, vertical, and angular measurements of surveying.
- To introduce the importance, basic principles, and uses of GPS in surveying.
- To identify sources and types of errors occurs during surveys.

Dr. P. C. Gangurde
H.O.D.
Department of Geography
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

म.वि.प्र.समाजाचे

मराठा विद्या प्रसारक समाजाचे एस्.व्ही.के.टी. महाविद्यालय, देवळाली कॅम्प,नाशिक.

--- हिंदी विभाग ---

Course Outcomes

प्रथम वर्ष कला (FYBA)

प्रथम अयन

- छात्र हिंदी कहानी एवं काव्य से परिचित हुए |
- मौलिक लेखन की ओर रुझान बढ़ा |
- विज्ञापन लेखन कौशल विकसित हुआ|

द्वितीय अयन

- छात्र हिंदी कहानी एवं काव्य साहित्य से परिचित हुए |
- निबंध लेखन कौशल को विकसित हुआ |
- छात्र विज्ञापन लेखन कौशल में निपुण हुए |

प्रथम वर्ष वाणिज्य (FYBCOM)

प्रथम अयन

- छात्र हिंदी कहानी एवं काव्य साहित्य से परिचित हुए |
- हिंदी भाषा द्वारा संवाद कौशल विकसित हुआ |
- मौलिक लेखन की ओर रुझान बढा |
- विज्ञापन लेखन कौशल विकसित हुआ|

द्वितीय अयन

- छात्र हिंदी कहानी एवं काव्य साहित्य से परिचित हुए
- विज्ञापन लेखन के प्रकारों से परिचित हुए |
- अनुवाद का स्वरुप पता चला |
- पारिभाषिक शब्दावली से अवगत हुए |

द्वितीय वर्ष कला (SYBA)

तृतीय अयन

- छात्र हिंदी कहानी एवं काव्य साहित्य से परिचित हुए |
- हिंदी कारक-व्यवस्था से परिचित हुए |
- संक्षेपण लेखन का प्रत्यक्ष बोध हुआ|

चतुर्थ अयन

- व्यंग विधा साहित्य से अवगत हुए |
- साक्षात्कार कला में निपुण हुए|
- भाषा का मोबाइल तंत्र समझा |
- पल्लवन कला से परिचित हुए |

द्वितीय वर्ष विज्ञान (SYBSC)
तृतीय अयन

- छात्र हिंदी कहानी एवं काव्य से परिचित हुए |
- काव्य लेखन एवं कहानी लेखन कला का परिचय हुआ |
- छात्रों में साहित्यालोचन दृष्टि विकसित हुई|

द्वितीय वर्ष विज्ञान (SYBSC)
चतुर्थ अयन

- छात्र हिंदी कहानी एवं काव्य से परिचित हुए |
- काव्य लेखन एवं कहानी लेखन कला का परिचय हुआ |
- छात्रों में साहित्यालोचन दृष्टि विकसित हुई |

तृतीय वर्ष कला TYBA
(कथेत्तर विधाएँ) पंचम अयन

- छात्रों को संस्मरण साहित्य से अवगत किया|
- छात्रों को रेखा चित्र साहित्य से अवगत किया|
- छात्रों में मूल्यांकन दृष्टि का विकास हुआ|
- सभा इतिवृत्त लेखन कौशल वृद्धि का विकास हुआ
- वार्ता लेखन कौशल दृष्टि निर्माण हुई|

षष्टम अयन

- छात्रों को गजल साहित्य से अवगत किया|
- छात्रों को गजल साहित्यकार के व्यक्तित्व से परिचित किया|
- छात्रों में मूल्यांकन दृष्टि विकसित हुई|
- छात्रों को सरकारी पत्र लेखन से परिचित किया |

PRINCIPAL
Smt.Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp, (Nasik)

Smt.Vimalaben Khimji Tejookaya Arts Commerce and Science Colllege Deolali Camp,Nashik.

Subject-History

Programme Specific Outcomes

- ✓ Students understood strengths and weaknesses of a historical argument
- ✓ Students learnt the historical contexts of different historical interpretations
- ✓ Good results have been produced in each of the courses
- ✓ Good ratio is maintained in students progression towards higher education
- ✓ Students could describe how historical actors are differently affected by their ethnicity, race, class, gender, sexual orientation, and language
- ✓ Students can demonstrate how political, economic, and social structures affect historical change.

H.O.D.
Department of History
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

MVP Samaj's

Smt.Vimalaben Khimji Tejookaya Arts Commerce and Science Colllege

Deolali Camp,Nashik.

Subject-History

Programm Outcomes – 2019 Pattern

F.Y.B.A. HISTORY

Semester-I

Early India: From Prehistory to the Age of the Mauryas

Outcome:

The history of Early India is a crucial part of Indian history. It is a base for Understanding the entire Indian history.

The course is aimed at helping the student to understand the history of early India from the prehistoric times to the age of the Mauryas.

It also attempts to highlight the factors and forces behind the rise, growth and spread of Civilization.

Cculture of India along with the dynastic history. It also attempts to help the students to understand the contribution of Early Indians to polity, art, literature, philosophy, religion and science and technology.

It also aims to foster the spirit of enquiry among the students by studying the major developments in early Indian history.

Semester-II

Early India: Post Mauryan Age to the Rashtrakutas

Outcome:

The history of India after the Mauryas is very important to understand the developments in early India after the Mauryas, which finally led to the transition to medieval India.

The course is aimed at introducing the students to the developments in different parts of India through a brief study of regional kingdoms up to the tenth century C.E. It attempts to highlight the consequences of the foreign invasions, particularly on the polity, economy, society and art and architecture. The attempt is also to in still the spirit of enquiry among the students.

SYBA HISTORY

Core Course-I (CC- 1C)
Semester –III
History of the Marathas: (1630-1707)

Learning Objectives:

1. To introduce the students to the regional history of medieval Maharashtra and India.
2. To study political, social and conceptual history of the Marathas in an analytical way with the help of primary sources.
3. To evaluate contribution of Chhatrapati Shivaji Maharaj to the establishment of Swarajya, contribution of successors and later development of the Maratha kingdom.
4. To study administrative Institutions of the Maratha.

Learning Outcome:

1. Student will develop the ability to analyse sources for Maratha History.
2. Student will learn significance of regional history and political foundation of the region.
3. It will enhance their perception of 17th century Maharashtra and India in context of Maratha history.
4. Appreciate the skills of leadership and the administrative system of the Marathas.

Core Course-I (CC- 2C)
Semester –IV
History of the Marathas: (1707-1818)

Learning Objectives:

1. To understand changed nature of Maratha Polity during the Peshwa Period.
2. To examine the dynamics of Maratha Confederacy and reciprocity.
3. To examine role of Marathas and regionality in National politics of 18th Century India.
4. To study administrative system, society and economy of the Peshawa period

Learning Outcome:

1. Students will be able to analyze the Marathas policy of expansionism and its consequences.
2. They will understand the role played by the Marathas in the 18th century India.
3. They will be acquainted with the art of diplomacy in the Deccan region.
4. It will help to enrich the knowledge of the administrative skills and profundity of diplomacy.

Discipline Specific Elective Course (DSE-1A)
Semester –III
Medieval India - Sultanate Period
Course objectives:
1. Demonstrate thinking skills by analyzing, synthesizing, and evaluating historical information from multiple sources.
2. Develop the ability to distinguish between fact and fiction while understanding that there is no one historical truth.
3. To Learn foundation of Delhi Sultanate and Sultanate Administration.
4. To understand the socio, economic condition of Delhi Sultanate

Course Outcome:
1. Provides examples of sources used to study various periods in history.
2. Relates key historical developments during medieval period occurring in one place with another.
3. Analyses socio - political and economic changes during medieval period
4. Estimate the foreign invasion and the achievement of rulers

Semester –IV
Medieval India: Mughal Period
Course objectives:
1. Produce well researched written work that engages with both primary sources and the secondary literature.
2. To learn the Mughal ruler and incidents regarding Deccan policies.
3. To understand the analytical studies of Medieval South India
4. Maps- important centres in Mughal Empire under Akbar and Aurangzeb

Course Outcome:
1. Draws comparisons between policies of different rulers.
2. Understanding Role of Akbar in the consolidation of Mughal rule in India.
3. Understand Aurangzeb's conflict with Rajputas, Maratha and weakening Mughals age.
4. Analyses factors which led to the emergence of new religious ideas and movements (bhakti and Sufi)

Discipline Specific Elective Course (DSE-2A)
Semester –III
Glimpses of the Modern World - Part I
Learning Objectives:
1. This paper is designed to introduce the students to the history of the Modern World with its socio-religious, political and economic developments.
2. It will enable students to study interesting historical developments in the countries other than India, which had a significant impact on almost all over the Modern World.
3. It will enable students to understand the significant impact of the modern concepts such as Renaissance, Nationalism, Communism, Imperialism, etc.
4. It will get students acquainted with the major revolutions, and political developments which led to the World War I and its consequences.

Course Outcome:

1. It will enable students to develop the overall understanding of the Modern World.
2. The students will get acquainted with the Renaissance, major political, socio-religious and economic developments during the Modern World.
3. It will enhance their perception of the history of the Modern World.
4. It will enable students to understand the significance of the intellectual, economic, political developments in the Modern World.

Discipline Specific Elective Course (DSE-2 B)
Semester –IV
Glimpses of the Modern World - Part II

Learning Objectives:

1. This paper is designed to introduce the students to the political history of the Modern World.
2. It will enable students to study remarkable historical developments in the various countries including India, which had a significant impact on almost all over the Modern World.
3. It will enable students to understand the significant impact of the modern concepts such as Dictatorship, Cold War, Nationalism, Communism, Imperialism, Polarization, etc.
4. It will get students acquainted with the major nationalist movements, the World War II and its consequences, the Cold War and its Consequences.

Course Outcome:

1. It will enable students to develop the overall understanding of the Modern World.
2. The students will get acquainted with the major nationalist movements, the World War II and its consequences, the Cold War and its Consequences.
3. It will enhance their overall perception of the history of the Modern World.
4. It will enable students to understand the significance of the strategic political developments in the Modern World.

Skill Enhancement Courses (SEC 1A)
Semester III
Art and Architecture of Early India (From 3000 B.C. to 12th Century A.D.)
Course Objectives:

1. This paper is designed to introduce the students to the emergence and development of art and architecture in early India.
2. It will enable students to understand the process of development of art and architecture in the early Indian history on the socio-religious and economic background.
3. It will get students acquainted with the emergence and changes in the styles of the art and architecture during the early India up to the 6th century B.C.E.

Course Outcome:

1. Students will get an overall understanding of the emergence and development of the art and architecture in Early India.
2. They will understand the emergence of the Pottery, Terracotta figures, Ornaments, Town Planning, preparation of seals and coins.
3. They will have an understanding of the art and architecture in early India.

Semester IV

Medieval Indian Arts and Architecture (1206 To 1857)

Course Objectives:

Course Objectives:

1. This paper is designed to introduce the students to the Art and Architecture during the Medieval India.
2. It will enable students to understand the impact of the Persia on the Mughal Art and Architecture.
3. It will get students acquainted with the development of Indo-Persian style of Painting.

Course Outcome:

1. Students will get an overall understanding of the development of the Medieval Art and Architecture.
2. They will understand the changing patterns of the Art and Architecture during the Medieval India.
3. They will have an understanding of the impact of Persian Art on Islamic Art and Architecture in Medieval India.

TYBA – History

Semester V: Course Title: – Indian National Movement (1885 to1947)

Course Outcome:

1. It will enable students to develop an overall understanding of Modern India.
2. It will increase the spirit of healthy Nationalism, Democratic Values and Secularism among the students.

.Students will understand various aspects of the Indian Independence Movement and the creation of modern India.

Semester VI: India after Independence– (1947-1991)

Course Outcome:

1. It will enable students to develop an overall understanding of the Contemporary India.
2. To increase the spirit of healthy Nationalism, Democratic Values and Secularism among the students.
3. Students will understand various aspects of India's domestic and foreign policies that shaped Post-Independence India.

Semester –V: Course Title: Introduction to Historiography and
Course Outcomes:
1. Students will be introduced to the information and importance of Historiography.
2. Students will be introduced to the different Methods and Tools of data collection.
3. Students can study the interdisciplinary approach of History.
4. Students will learn about the usefulness of History in the 21st century, its changing perspectives, the new ideas that have been invented, and the importance of History in a competitive World.

Semester –VI: Applied History
Course Outcomes:
1. Students will be introduced to the information and importance of applied history.
2. Student will learn about the Historical significance of Archaeology and Archives and opportunities in the field of Archaeology and Archives.
3. Through this course, students will be informed about the opportunities in the field of Media, Museums.
4.the about learn will Students usefulness of history in the 21st Century, its changing Perspectives, the new ideas that have been invented, and the importance of History in a Competitive World.

Semester –V: Course Title: Maharashtra in the 19th Century
Course Outcomes:
1. Student will develop the ability to analyse sources for 19th century Maharashtra History.
2. Student will learn significance of Regional History and Socio- religious reformism foundation of the region.
3. It will enhance their perception of 19th Century Maharashtra.
4. Appreciate the skills of leadership and the Socio-religious System of the Maharashtra.

Semester –VI: Course Title: Maharashtra in the 20th Century
Course Outcomes:
1. Student will develop the ability to analyses sources for 20th Century Maharashtra History.
2. Student will learn significance of regional history and Socio- Religious Reformism foundation of the region.
3. It will enhance their Perception of 20th Century Maharashtra.
4. Appreciate the skills of leadership and the Socio-Religious System of the Maharashtra.

Semester –V: Course Title: Introduction to Historiography and
Course Outcomes:

1. Students will be introduced to the information and importance of Historiography.
2. Students will be introduced to the different Methods and Tools of data collection.
3. Students can study the interdisciplinary approach of History.
4. Students will learn about the usefulness of History in the 21st century, its changing perspectives, the new ideas that have been invented, and the importance of History in a competitive World.

Semester –VI: Applied History
Course Outcomes:

1. Students will be introduced to the information and importance of applied history.
2. Student will learn about the Historical significance of Archaeology and Archives and opportunities in the field of Archaeology and Archives.
3. Through this course, students will be informed about the opportunities in the field of Media, Museums.
4. the about learn will Students usefulness of history in the 21st Century, its changing Perspectives, the new ideas that have been invented, and the importance of History in a Competitive World.

Semester –V: Course Title: Maharashtra in the 19th Century
Course Outcomes:

1. Student will develop the ability to analyse sources for 19th century Maharashtra History.
2. Student will learn significance of Regional History and Socio- religious reformism foundation of the region.
3. It will enhance their perception of 19th Century Maharashtra.
4. Appreciate the skills of leadership and the Socio-religious System of the Maharashtra.

Semester –VI: Course Title: Maharashtra in the 20th Century
Course Outcomes:

1. Student will develop the ability to analyses sources for 20th Century Maharashtra History.
2. Student will learn significance of regional history and Socio- Religious Reformism foundation of the region.
3. It will enhance their Perception of 20th Century Maharashtra.
4. Appreciate the skills of leadership and the Socio-Religious System of the Maharashtra.

Semester V: -SEC: Course Title: South Indian Art and Architecture (From 4thCentury A.D. to12th Century A.D.)

Course Outcomes:

1. Students will get an overall understanding of the development of the Art and Architecture in South India.
2. They will understand the changing patterns of the Art and Architecture in South India.
3. They will understand the impact of Persian Art on Islamic Art and Architecture in South India

Semester VI: -SEC: Heritage Management

Course Outcomes:

1. Student will understand over all process of Heritage Management
2. Student will get the knowledge about scope and the fact of Heritage Management.
3. The students will enable to understand about legal and commercial framework of Heritage

---

H.O.D.
Department of History
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

Maratha Vidya Prasarak Samaj ,

Smt. Vimalaben Khimaji Tejookaya Arts, Science and Commerce College,

Deolali Camp, Nashik

Dept.Marathi-2022-23

(Choice Based Credit System)

CL ASS & SEM	TITLE OF PAPER& SUB CODE	OUTCOMES
FYBA- SEM-I MARATHI-	मराठी साहित्य :कथा भाषिक कौशल्य विकास [११०२१-A]	१. कथा या साहित्यप्रकाराची ओळख झाली २. कथा या साहित्यप्रकाराचे स्वरूप , घटक आणि प्रकार यांची ओळख झाली. ३. समकालीन कथा या साहित्यप्रकारातील निवडक कथांचे अध्ययन झाले. ४. विविध भाषिक कौश्बल्ये परिचित व विकीत झाली.
FYBA- SEM-II MARATHI-	मराठी साहित्य : एकांकिका आणि भाषिक कौशल्य विकास [११०२२A].	1. एकांकिका या साहित्यप्रकाराचे स्वरूप, घटक आणि प्रकार यांची ओळख झाली . 2.मराठी साहित्यातील एकाकीकांचे अध्ययन केले . 3. भाषिक कौशल्य विकास झाला .

Mr. D.T.Jadhav

(Hod)

H.O.D.

Department of Marathi

Smt. Vimlaben Khimji Tejookaya,

Arts, Science & Commerce College,

Deolali-Camp, (Nasik)

Dr.S.S.Kale

(Principal)

PRINCIPAL

Smt. Vimlaben Khimji Tejookaya,

Arts, Science & Commerce College

Deolali-Camp (Nasik)

Maratha Vidya Prasarak Samaj ,
Smt. Vimalaben Khimaji Tejookaya Arts, Science and Commerce College,
Deolali Camp, Nashik

Dept.Marathi-2022-23

(Choice Based Credit System

CL ASS & SEM	TITLE OF PAPER& SUB CODE	OUTCOMES
SYBA-SEM-III MARATHI -G2	भाषिक कौशल्य विकास आणि आधुनिक मराठी साहित्यप्रकार : कादबंरी (२३०२3)	१.कादबांरी या साहित्य प्रकाराचेस्वरूप, घटक, प्रकारआणि वाटचाल समजनू घेतली . २. नेमेलेल्या कादंबरीचे आकलन, आस्वाद आणि विश्लेषण कसे करावे ते समजले . ३. भाषिक कौशल्य विकास करण्यास चालना मिळाली.
SYBA -SEM-IV MARATHI-G2	भाषिक कौशल्य विकास आणि आधुनिक मराठी साहित्य प्रकार : ललितगद्य-साहित्यरंग (२४०२३)	१. ललित गद्य या साहित्य प्रकाराचे स्वरूप , घटक, प्रकार आणि वाटचाल समजल . २. नेमलेल्या अभ्यासपुस्तकातील ललित गद्याचे आकलन, आस्वाद आणि आणि विश्लेषण करणे. ३. भाषिक कौशल्य विकास झाला .
SYBA -SEM-III SPL-I MARATHI-	आधुनिक मराठी साहित्य : प्रकाशवाटा (२३०२१)	१. आत्मचरित्र या साहित्य प्रकाराचे स्वरूप, संकल्पना समजली . २. आत्मचरित्र या प्रकाराच्या प्रेरणा आणि वाटचाल याची ओळख झाली . ३. गद्यातील अन्य साहित्यप्रकार तूलनेत आत्मचरित्राचे वेगळेपण समजले .
SYBA- SEM-IV MARATHI-	मध्ययुगीन मराठी साहित्य : निवडक मध्ययुगीन गद्य व पद्य (२४०२१)	१. मध्ययुगीन गद्य – पद्य साहित्य प्रकाराची ओळख करून झाली . २. मध्ययुगीन गद्य - पद्याचे आकलन, आस्वाद आणि विश्लेषण कसे करावे ते समजले. 3 नेमलेल्या आत्मचररत्राचे आकलन,आस्वाद आणि विश्लेषण करण्यास चालना मिळाली.

SYBA -SEM-III SPL-I MARATHI	साहित्य विचार (२३०२२)	१)भारतीय आणि पाश्चात्य साहित्यविचाराच्या साहित्याची संकल्पना ,स्वरूप आणि प्रयोजन विचार समजला. २)साहित्य निर्मिती प्रक्रिया समजली. ३)साहित्यची भाषा आणि शैलीविषयक विचार आकलन झाले.
SYBA- SEM-IV MARATHI	साहित्य समीक्षा (२४०२२)	१)साहित्य समीक्षेची संकल्पना आणिस्वरूप यांचा परिचय झाला. २) साहित्य आणि समीक्षा यांचे परस्पर संबंध समजण्यासाठी मदत झाली. ३)ग्रंथ परिचय परीक्षण आणि समीक्षण यातील भेद आकलनास चालना मिळाली.
SYBA- SEM-III sec MARATHI-	प्रकाशन व्यवहार आणि संपादन (२३०२५)	१. प्रकाशन व्यवहार आणि संपादन या साठी आवश्यक कौशल्ये प्राप्त झाली . २. प्रकाशन व्यवहार आणि संपादन यासाठी आवश्यक प्रशिक्षण दिले. ३. प्रकाशन व्यवहार आणि संपादन यासाठी प्रात्यक्षिकातून उपयोजनाची कौशल्ये प्राप्त झाली . ४. प्रकाशन संस्था, व्यवहरात संस्था, छापखाने,वृत्तपत्र कार्यालाय , वितरण संस्था, ग्रंथ विक्रीदकुाने, फ्लेक्स केंद्र,यांना प्रत्येक्ष भेट देवून माहिती मिळाली.
SYBA- SEM-IV [SEC]MARATHI-	उपयोजीत लेखन कौशल्ये (२४०२५)	१. जाहिरात, मुलाखत लेखन आणि संपादन यासाठी आवश्यक कौशल्ये प्राप्त झाली . २. जाहिरात, मुलाखत लेखन आणि संपादन यासाठी आव्श्यक बाबी प्रशिक्षण मिळाले . ३ जाहिरात, मुलाखत लेखन आणि संपादन यासाठी प्रात्यक्षिक उपयोजनाची कौशल्ये प्राप्त झाली

Mr.D.T.jadhav
(Hod)
H.O.D.
Department of Marathi
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik).

Dr.S.S.Kale
(Principal)
PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp (Nasik)

Maratha Vidya Prasarak Samaj ,
Smt. Vimalaben Khimaji Tejookaya Arts, Science and Commerce College,
Deolali Camp, Nashik

Dept.Marathi-2022-23 (Choice Based Credit System)

CL ASS & SEM	TITLE OF PAPER& SUB CODE	OUTCOMES
TYBA -SEM-V	भाषिक कौशल्यविकास आणी आधुनिक मराठी साहित्यप्रकार:प्रवासवर्णन (35023)	१ माध्यमांसाठी लेखन कौशल्ये आत्मसात करण्यास प्रेरणा मिळाली. २ प्रवासवर्णन या साहित्य प्रकाराचे स्वरूप, प्रेरणा, प्रयोजने ,वैशिष्ट्ये आणि वाटचालीचा परिचय झाला. ३ नेमलेल्या साहित्य प्रकारचे आकलन, आणि विश्लेषण कारण्यास चालना मिळाली.
TYBA- SEM-VI	कौशल्यविकास आणि आधुनिक मराठी साहित्य प्रकार: कविता (36023)	१. मराठी साहित्य , भाषिक कौशल्यविकास आणि शासनव्यवहार यांची माहिती मिळाली. २.कविता या साहित्य प्रकाराचे स्वरूप,वाटचाल, प्रेरणा, आणि वैशिष्ट्ये यांचा परिचय झाला , ३. नेमलेल्या अभ्यासकपुस्तक निवडक कविताचे आकलन, आस्वाद आणि विश्लेषण करण्याची क्षमता विकसीत झाली. ४ कविता या साहित्य प्रकारची ओळख झाली.

Mr. D.T.jadhav
(Hod).
Department of Marathi
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

Dr.S.S.Kale
(Principal)
PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp (Nasik)

Maratha Vidya Prasarak Samaj ,

Smt. Vimalaben Khimaji Tejookaya Arts, Science and Commerce College,

Deolali Camp, Nashik

Dept.Marathi-2022-23

(Choice Based Credit System)

CL ASS & SEM	TITLE OF PAPER& SUB CODE	OUTCOMES
F.Y.BCOM SEM-I	(117-B)उत्कर्ष वाटा	कर्तृत्ववान व्यक्तींच्या कार्याचा परिचय झाला.
F.Y.BCOM-II	(127-B)भाषा आणि साहित्य	अर्ज लेखन कौश्य्ल्याचा परिचय झाला .

Mr D.T.jadhav

(Hod)

Department of Marathi
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

Dr.S.S.Kale

(Principal)

PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp (Nasik)

Arts Science & Commerce College
Deolali Camp Dist Nasik

Maratha Vidya Prasarak Samaj ,

Smt, Vimalaben Khimaji Tejookaya Arts, Science and Commerce College,

Deolali Camp, Nashik

Dept.Marathi-2022-23

(Choice Based Credit System)

CL ASS & SEM	TITLE OF PAPER& SUB CODE	OUTCOMES
SEM-III S.Y.BSC	उपयोजित मराठी (23133)	१. साहित्य विषयक अभिरुची विकसित झाली . २. मराठी भाषा, साहित्य यांच्या परस्पर संबधांची जाणीव झाली. ३. साहित्य विषयक अभ्यासातून जीवनविषयक समज विकसित झाली. ४. विज्ञान साहित्यविषयक आकलन क्षमता वाढाली.
S.Y.BSC SEM-IV	पाठ्यपुस्तक - मराठी कथादर्शन - (24331)	१., मराठी साहित्य आणि मराठी सांस्कृती यांचे चे अध्ययन झाले . २.साहित्यहिविषयक आकलन, आस्वाद आणि मूल्यमापन क्षमता विकसित झाली. ३.साहित्याभ्यासातनू साहित्य लेखन कैशल्ये परिचित झाली . ४.मराठी भाषेची च उपयोनात्मक कौशल्ये विकसित करण्यास चालना मिळाली .

Mr.D.T.Jadhav

(Hod)

Department of Marathi
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

Dr.S.S.Kale

(Principal)

PRINCIPAL
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College
Deolali-Camp (Nasik)

SVKT College,Deolali Camp,Nashik

Department of Political Science- Academic Year 2022-23

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

Course Outcomes:BA (Political Science)

Class	Semester	Course Title	Outcome
FYBA	I	11161 CC-1 A Introduction to Indian Constitution I	• Students will be able to understand the making of Indian Constitution. • Students will understand their Fundamental Rights, Fundamental Duties and Directive Principles of State. • Students can understand the Salient features of Indian Constitution. • Students will be able to understand the Basic Structure of Indian Constitution.
FYBA	II	12161 CC-1B Introduction to Indian ConstitutionII	• Students will be able to understand the structure, powers and functions of three organs of government and their mutual relationship and engagements. • Students will be able to explain Electoral System & Reforms of India.
FYBA/B.Com/ B.sc/ B.Voc /B.B.A/ B.C.SSemesterII	II	12999 Democracy, Election & Governance	• To get students introduced to the meaning of democracy and the role of governance.

SYBA	III	23161 DSE-1A Western Political Thought (S-1)	• The students will know the key ideas of the Political philosophers given in the course. • The students will be able to make a distinction among Locke and Rousseau on the state of nature, law of nature, forms of contract and the emergence of state from contract. • The students will be able to know how and why Machiavelli gave an overriding priority to pragmatism above ethics and values in operation of statecraft. • The students will be able to discern the meaning of utilitarianism and how Bentham and Mill differed from each other.
SYBA	III	23162 DSE-2A Political Journalism (S-2)	• Students will learn to establish the complex relationship between the communication, media and power politics. • Students will be able to make a Critical appraisal of practices adopted in political image management, campaigns, propaganda and censorship.. • The Students will be aware of Political Journalism their Definitions and Meaning. • The Students will understand about Political journalism Nature Scope. • The Students will understand about Pre-Independence, Post-Independence and World History. • The Students will be able to understand about Methods of Political Journalism, Reporting of Political Events, Political Interview, Commentary of Legislation

SYBA	III	23164 CC-1C An Introduction To Political Ideologies (G-2)	• Students are enabled to understand the nature and scope of Political Ideologies. • Students are acquainted with the theories and approachesto Political Ideologies. • Students will understand Nationalism and the difference between Progressive and Reactionary nationalism. • Students are enabled to understand Internationalism.
SYBA	III	23165 SEC- 2A Basics Of Indian Constitution	• To familiarize students with the working of the Constitution of India. • To acquaint students with the important features of the Constitution of India and with the basic framework of Indian Government. • Explaining the Concept and Nature of Fundamental Duties. .
SYBA	IV	24161 DSE-1B Western Political Thought (S-1)	• The Students will be able to understand Bentham's Utilitarianism; and John Stuart Mill's views on liberty and representative government. • The students will be able to understand Hegel idealism & theory of State. • The students will be able to discern the meaning of Utilitarianism and how Bentham and Mill differed from each other.
SYBA	IV	24162 DSE-2B Political Journalism (S-2)	• The Students will aware about Indian Political Process & Journalism like Role of Social Media in Political Process. • The Students will understand about Role of Election and Media: Loksabha and Maharashtra Vidhansabha 2014 and 2019 General Elections, Political Parties and Social Media.. • The Students will Understand Challenges before Political Journalism like Increase

			of paid News. • The Students will Aware Party Spirited News Papers & Commercialization, Media Saturation
SYBA	IV	24164 CC-1D An Introduction To Political Ideologies (G-2)	• Students will be able to understand Marxism and its significance in the study of Political Ideologies. • Students will know about various Marxian theories like Historical Materialism and Marxian State. • Students are enabled to understand Feminism along with liberal feminism and feminism in India with Caste system and patriarchy as its major challenges.
SYBA	IV	24165 SEC- 2B Basics Of Indian Constitution	• The Students will able to know basic knowledge of Constitution. • The Students will understand the features of fundamentals Duties. • The Students will able to know the Relations between Directive Principles and Fundamental Duties.
TYBA	V	35161 DSE-1C Public Administration (S3)	• The Students will able to know about Meaning, Nature, Scope and Significance of Public administration. • The Students will understand about Evolution of New Public Administration. • The Students will aware about Salient Features & Goals of New Public Administration. • The Students will understand Concept of Governance, Idea of Good Governance, E- Governance, Public-Private Partnership.
TYBA	V	35162 DSE-2C International Relations(S4)	• Familiarization with the key concept of the Discipline of IR • The Students will able to understand & Explain Approaches to International

			Relations (Idealism. Realism – Neo realism, System approach, Marxism) • The Students will able to understand & explain World War II and the Cold War.
TYBA	V	35164 CC-2E Local Self Government of Maharashtra	• The students will know the background of Panchayati Raj and its evolution and working till date. • The students will be enabled to understand 73rd Amendment and rural bodies. • The students will be able to explain the working of Panchayat samiti and Zilla Parishad. • Students will learn about the 9th Schedule of Indian Constitution in this regard.
TYBA	V	35165 SEC- 2C Samyukta Maharashtra Movement	• It's helps to know what the Regional aspiration in India and concept of Regionalism. • Student Will Able to understand & explain Samyukta Maharashtra Movement.
TYBA	VI	36161 DSE-1D Public Administration (S3)	• The Students will come to know Bureaucracy & their Meaning and Definitions, Administrative Reform. • The Students will aware about Personnel Administration & their Recruitment, Training, Promotion. • The Students will understand Budgetary Process in India, Gender Budgeting.
TYBA	VI	36162 DSE-2D International Relations(S4)	• The Students will able to understand The theory of Non- Alignment & meaning and basic principles of Non- Alignment. • The Students will able to understand Emergence of Non- Alignment, Non-Alignment as a Movement, Relevance of NAM In Post Cold War period. • Students will be aware about Limits of Globalization & Role of the Nation State.

			• Students will be aware about Neo-Colonialism, New International Economic Order, North – South Divination, South – South Co-operation.
TYBA	VI	36164 CC-2F Local Self Government of Maharashtra	• The students will be enabled to understand 74rd Constitutional Amendment and Urban bodies before the amendment. • The students will learn about the working of Nagar Panchayat, Municipal Council, Municipal Corporation. • Students will learn about the 12th Schedule of Indian Constitution in this regard. • Students will be able to explain State election commission, State Finance Commission and challenges before them. • Students will be enabled to understand the Limitations and Challenges before Local Self Government in Maharashtra.
TYBA	VI	36165 SEC- 2D Samyukta Maharashtra Movement	• Students will able to know the basic Concept of Sub – Regionalism. • Student will able to understand & analyse the Emergence & Development of Regional Consciousness in Maharshtra. • Explaining the Role of Indian National Congress in Samyukta Maharashtra Movement.

H.O.D.
Department of Political Science
Smt. Vimlaben Khimji Tejookaya,
Arts, Science & Commerce College,
Deolali-Camp, (Nasik)

MVP Samaj's Maratha Vidya Prasarak Samaj's

Shrimati Vimalaben Khimaji Tejookaya Arts, Science and Commerce College, Deolali Camp

Department of Psychology

Program Outcomes

Program- B. A. Psychology

- The knowledge of the basic principles of Psychology
- Understanding of the social behaviour
- Understanding of the field of health Psychology and its contribution in health behaviour
- Knowledge of various psychological disorders and understanding of the symptoms, causes and treatment of the same
- Understanding of the various theories of human development
- Understanding of how to promote health as well as the acquisition of basic life skills
- Knowledge of the field of Industrial Psychology
- Understanding of the application of psychological tests
- Knowledge of the application of Psychology in various domains of life
- Understanding of the field of Experimental Psychology
- Ability to conduct experiments
- Knowledge of the various ways to develop a sound personality

Course Outcomes

Program- B. A. Psychology

Semester I

Foundations of Psychology

- The knowledge of the basic concepts and modern trends in psychology.
- An interest in the subject of psychology and to create a foundation for further studies in psychology.
- The awareness of the application of psychological concepts in various fields
- Understanding of the basic psychological processes and their applications in day-to-day life.
- The ability to evaluate cognitive processes, learning and memory of an individual.
- Understanding of the importance of motivation and emotion of the individual.
- The development of the personality and intelligence of the individuals by developing their psychological processes and abstract potentials.

Semester II

Introduction to Social Psychology

- Understanding of the social behaviour
- Understanding of the nature of self, concept of attitude and prejudice of the individual.
- The thoughtful assessment of the interactional processes, love and aggression in day-to-day life.
- Understanding of the group dynamics and individual in the social world.

- Consideration for the behaviour of people in social settings.
- Knowledge of the social psychology theories and experimental evidences.

Semester III

Health Psychology (General)

- Understanding the health psychology and arriving at the introduction to the role of psychology in health.
- Understanding of the nature of stress and coping
- Understanding of the various factors related to health and diseases.
- Understanding of the quality of life and ways to promote the good health.

Psychology of Abnormal Behaviour-1 (Special 1)

- Acquisition of the knowledge of the symptoms, diagnostic criteria, and causes of various psychological disorders
- Ability to consider multiple probable causes and correlates of behaviour.
- Understanding of the critiques, limitations, and implications of diagnosis and e
- Awareness of the mental health problems in society.

Developmental Psychology (Special 2)

- Understanding of the importance, characteristics and concern in lifespan development
- Understanding of the biological, cognitive, and socio-emotional processes.
- Understanding of the periods of development, the significance of age, and discuss developmental issues.
- Understanding of the Psychoanalytic, Cognitive, Behavioural and Social Cognitive, Ethological, Ecological and Eclectic theories of development
- Understanding of the methods of data collection and research designs used in Life-span development research

Health Promotion Life Skills (SEC)

- Ability to deal with rapid changes brought about by modernization.
- Enhancement in psycho-social abilities and consequently they provide psycho physical health.
- Motivation to comply to healthy behaviour and increased self-confidence.

Semester IV

Positive Psychology (General)

- Understanding of the positive psychology as the science of happiness, human strengths, positive aspects of human behaviour and ‘psychology of well-being.’
- Understanding of how we lead our lives, find happiness and satisfaction, and face life’s challenges.
- The ability to understand how positive psychology has become an evolving mosaic of research and theory from many different areas of psychology.

Psychology of Abnormal Behavior-II (Special 1)

- Learning of the descriptions, and theories underlying diagnostic of psychiatric disorders.
- Learning and understanding of benefits, critiques, limitations, and implications of diagnosis and classification.
- Acquisition of the knowledge about the symptoms, diagnostic criteria, and causes of various psychological disorders.
- Ability to examine multiple probable causes and correlates of behaviour.
- Awareness of mental health issues in society.

Theories of Personality (Special -2)

- Understanding of the the concept of personality with various theories of personality on the basis of personality psychology.
- Understanding of the different framework and theoretical aspects of personality.
- Ability to understand and observe, interpret individual differences in behaviour in the light of sound theoretical systems of personality.
- Understanding of the comprehensive overview of the major theories personality.

Basic Counselling Skills (SEC)

- Understanding of Counselling Process and Helping Relationship
- Understanding of Counselling Skills
- Understanding of the ethical and other issues in Counselling

Semester V

Industrial and Organizational Psychology (General)

- Ability to describe the concept of industrial and organizational psychology, selection and training,
- Ability to recognize how to create motivation at workplace.
- Explain job profile, job analysis, recruitment techniques and employee training.
- Ability to identify and classify the appraisal rating system.
- Ability to compare different theories of motivation.
- Ability to evaluate the training programme and job performance.

Psychological Testing- Theory and Project (Special 3)

- Ability to Describe the concept of psychological test, reliability, validity and norms.
- Ability to Classify and categorize psychological tests, reliability- validity-norms types.
- Ability to Identify the reliability and validity of psychological tests,
- Ability to Evaluate the types of norms.
- Ability to Conduct testing project for behaviour analysis.

Psychological Tests and Statistics (Special 4)

- Ability to describe mapping of human behaviour.
- Ability to explain general ability testing, personality, adjustment and attitude.
- Ability to identify and classify the intellectual ability and personality patterns.
- Ability to conduct testing and evaluate intellectual ability, personality traits, adjustment and attitudes of participant.

- Ability to analyse statistical methods employed in behaviour analysis.

Personality Development-1 (SEC)

- Ability to describe the concept of personality.
- Ability to identify and classify various personality traits.
- Ability to correlate real life behavioural patterns with theoretical assumptions.
- Ability to apply psychological skills in daily life situations

Semester VI

Applied Psychology (General)

- Ability to describe the concept of applied psychology, educational psychology, family structure and developmental patterns.
- Knowledge of the clinical psychology related mechanisms, social issues, and criminal behaviour.
- Ability to classify the intellectual ability, abnormality, criminal behavior
- Ability to identify the problems and solutions in the field of education
- Ability to evaluate the interpersonal relations.
- Ability to apply psychological remedies to assess abnormal behaviour, to tackle the social issues and to rectify the problematic behaviour.

Experimental Psychology and Project - Theory (Special 3)

- Ability to describe the process of experiment in psychology, concept of psychophysics.
- Ability to explain problem, hypothesis, variables, sampling in experiment.
- Ability to identify and classify the learning system, methods of psychophysics.
- Ability to compare laws of psychophysics, types of hypotheses.
- Ability to conduct research-based project

Psychological Experiments and Statistics (Special 4)

- Ability to explain psychophysics, various cognitive processes of human being.
- Ability to classify and compare psychological experiments.
- Ability to conduct laboratory experiments.
- Ability to analyse statistical base of human behavior

Personality Development-2

- Ability to describe the concept of self-esteem and personality development.
- Ability to identify and classify behavioural assessment techniques.
- Ability to evaluate personality of individuals.
- Ability to apply psychological skills to develop owns personality.

Program Outcomes

Program- M. A. Psychology

- Knowledge of the field of Cognitive Psychology and its applications
- Understanding of quantitative and Qualitative Methods
- Understanding of the science of psychological assessment
- Ability to conduct psychological assessment
- Ability to conduct the experiment
- Ability to conduct the research
- Understanding of the field of Psychopathology
- Understanding of the field of Psychodiagnostics
- Understanding of the process of counselling skills and of the areas of counselling

Course Outcomes

Program- M. A. Psychology

Semester I

Cognitive Psychology: Understanding

- Understanding of the origin of cognitive psychology
- Ability to explore the knowledge of cognitive psychology
- Awareness of the recent trends in cognitive psychology
- Ability to relate subject matter of cognitive psychology to daily life

Psychometrics: The Science of Psychological Assessment

- Understanding of the measurement issues and techniques in psychological inquiry.
- Skills and competencies in test construction and standardization.
- Understanding of the various biases in psychological testing and assessment.

Research Methodology-I

- Knowledge of the basics of scientific research in applied psychology.
- Learning of the statistical rigours in designing research and processing data.

Psychology Practical: Testing

- Ability to administer of the standardized psychological tests, rapport establishment, interpretation of scores and report writing.
- Knowledge of the criteria's of evaluating psychological tests

Semester-II

Cognitive Psychology: Advances And Application

- Knowledge of the advances in cognitive psychology
- Knowledge of the application of cognitive psychology in different fields

Psychometrics: Applications

- Understanding of how psychological tests are used for the purpose of assessment, guidance and enhancing the effectiveness of teaching-learning process.

- Understanding of the use and interpretation of various psychological tests used in
- educational field.
- Understanding of the use of psychological tests for better health, adjustment and related counselling.
- Understanding of the use of psychological tests in clinical and organizational settings

Research Methodology - II (Qualitative Methods and Multivariate Analysis)

- Learning of the philosophical foundations, goals and scope of qualitative
- methodology.
- Understanding of the relationship between paradigms of science and methods of qualitative inquiry.
- Understanding of the basic procedures of using qualitative methodology.
- Knowledge of the scientific rigour in the use of qualitative methodology

Psychology Practical: Experiments

- Knowledge of the various areas of experimentation in psychology
- Knowledge of the skills required in conducting experiments in psychology
- Knowledge of the applications of experimental design and report writing style