



# **J.S.M. COLLEGE, ALIBAG- RAIGAD**

Department of Geography

**Programme outcome (POS)  
Programme Specific Outcomes  
(PSO)and Course Outcomes  
(COS)**

## **DEPARTMENT OF BOTANY**

**Programme Outcome:** On completion of B.Sc. Botany, students will learn:

PO1 Specific core discipline knowledge: Students can recall details and information about the evolution, anatomy, morphology, systematics, genetics, physiology, ecology, and conservation of plants and all other forms of life. Students can recall details of the unique ecological and evolutionary features of the local and Indian flora.

PO2 Communication skills: Students can communicate effectively using oral and written communication skills

PO3: Problem solving and research skills: Students can generate and test hypotheses, make observations, collect data, analyze and interpret results, derive conclusions, and evaluate their significance within a broad scientific context

### **PROGRAMME SPECIFIC OUTCOMES FOR B.Sc. BOTANY**

- To recognize and identify major groups of non-vascular and vascular plants and their phylogenetic relationships.
- To understand the phylogeny of plants and study various systems of classification.
- To explore the morphological, anatomical, embryological details as well as economic importance of algae, fungi, bryophytes, pteridophytes, gymnosperms and angiosperms.
- To understand physiological processes and adaptations of plants.
- To provide knowledge about environmental factors and natural resources and their importance in sustainable development.
- To be able to carry out phytochemical analysis of plant extracts and application of the isolated compounds for treatment of diseases.
- To be able to deal with all microbes and the technologies for their effective uses in industry and mitigation of environmental concerns.
- To explain how current medicinal practices are often based on indigenous plant knowledge and to get introduced to different perspectives on treating ailments according to ethnomedicinal principles.
- To understand patterns of heredity and variation among individuals, species and populations and apply principles for improvement of quality and yield.
- To be able to apply statistical tools to gain insights into significantly different data from different sources.

- To acquire recently published knowledge in molecular biology, such as rDNA technology; PTC and bioinformatics and their applications.
- Students acquire knowledge about Basic horticultural science terminology.
- Students will gain knowledge on post harvesting techniques which will explore the possibility of entrepreneurship in this field.
- Focus of the Horticulture program is the development of a well-rounded Horticulturist.
- Demonstrate knowledge and understanding in Current applications of horticultural principles and practices: propagation, pest management, production, maintenance, and business practices.

### **PROGRAMME SPECIFIC OUTCOMES FOR M.Sc. BOTANY**

- Students will be able to identify the major groups of organisms amongst plants and be able to classify them within a phylogenetic framework. Students will be able to compare and contrast the characteristics of Cryptogams and Phanerogams that differentiate them from each other and from other forms of life.
- Students will be able to explain how organisms function at the level of the gene, genome, cell, tissue, organ and organ-system. Drawing upon this knowledge, they will be able to give specific examples of the physiological adaptations, development, reproduction and behaviour of different forms of life.
- Students will be able to explicate the ecological interconnectedness of life on earth by studying ecological principles and nutrient flow through the environment. They will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.
- Students will be able to use the evidence of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth. They will be able to use specific examples to explicate how descent with modification has shaped plant morphology, physiology, and life history.
- Students will be able to carry out a thorough study of the active constituents of medicinal plants with an emphasis on the use of plant based food as medicine.
- Students will be able to demonstrate proficiency in the experimental techniques and methods of analysis appropriate for understanding the above.

### **Course Outcomes:**

<b>F.Y.B.Sc. Sem I &amp; II</b>		
<b>Paper I Plant Diversity I</b>	CO1	The students will learn about the diversity, identification, classification and economic importance of some specific algae, fungi, bryophytes and gymnosperm.
	CO2	Students will also become familiar with various taxonomic aspects like how to identify the plants on the basis of morphological characters like root, stem, leaves and flowers.
	CO3	Students will also become familiar with specific plant families with study of economic important plants.

<b>Paper II Form and Function I</b>	CO1	The students will acquire knowledge about some important cell organelles like chloroplast and endoplasmic reticulum and their function under broad topic of cell biology.
	CO2	Students will also learn about basic concepts of ecology like energy pyramids, how energy flows in an ecosystem and various types of biotic and abiotic factors in different ecosystems.
	CO3	Students will also learn about basic concepts of Mendelism and how genes interact under topic genetics.
	CO4	Students will also solve basic biostatistics problems based on mean mode and median, standard deviation and frequency distribution.
	CO5	Students will go through basic plant physiological processes like photosynthesis and its importance.
	CO6	Students will learn about grandma's pouch containing various medicinally important plants and their uses.
<b>S.Y.B.Sc. SEM III &amp; IV</b>		
<b>Paper I Plant Diversity II</b>	CO1	The syllabus is designed to train the students in all areas of the plant sciences with some applied areas of the subject.
	CO2	The students will learn about the diversity, identification, classification and economic importance of lower plants like algae, fungi, bryophytes and gymnosperm.
	CO3	Students will also become familiar with various taxonomic aspects like how to identify the plants on the basis of morphological characters and will also become familiar with various plant families with study of economic important plants.
	CO4	The students will learn about some important instrumentation techniques. • The students will also acquire knowledge about palaeobotany and various plants fossils.
<b>Paper II Form and Function II</b>	CO1	Students will also learn about basic concepts of cytogenetics like how sex is determined in different organisms, variation in chromosome number and concept of extra nuclear genetics.
	CO2	Students will be able to learn about the central dogma of life basis of molecular biology. • Students will go through basic plant physiological processes like respiration, Photoperiodism, photorespiration and its importance.
	CO3	Students will acquire knowledge about various biogeochemical cycles of nature and how soil formation occurs.
	CO4	The students will acquire knowledge about some important cell organelles and their function under broad topic of cytology.
<b>Paper III Current Trends</b>	CO1	Students will also get exposed to various hands on practical of various tissue culture techniques and biotechnology based techniques and horticulture based practices like bonsai, dish

<b>in Plant Sciences I</b>		garden, terrarium making.
	CO2	The students will also gain knowledge about the latest molecular biology techniques for isolation and characterization of genes.
	CO3	Students will learn about important bioinformatics-based practicals.
<b>T.Y.B.Sc. SEM V &amp; VI</b>		
<b>Paper I Plant Diversity III</b>	CO1	The syllabus is designed to train the students in all areas of the plant sciences with some applied areas of the subject.
	CO2	The students will learn about the diversity, identification, classification and economic importance of lower organisms and plants like viruses, bacteria, algae, bryophytes, fungi and gymnosperms.
	CO3	The students will also develop understanding in different diseases caused by viruses, bacteria and fungi.
<b>Paper II Plant Diversity IV</b>	CO1	The students will also acquire knowledge about palaeobotany and various plants fossils.
	CO2	Students will also become familiar with various taxonomic aspects like how to identify the plants on the basis of morphological characters and will also become familiar with various plant families with study of economic important plants.
	CO3	Students will also develop understanding in plant anatomy.
	CO4	Students will also learn how biodiversity is important, what threats are there to biodiversity and how to conserve biodiversity.
	CO5	The students will understand the growth, development and reproduction in plants
<b>Paper III Form and Function III</b>	CO1	The students will acquire knowledge about few cell organelles and their function under broad topic of cytology.
	CO2	They will be understand some important physiological processes like osmosis, imbibition etc.
	CO3	Students will also get exposed to various hands on practical of various tissue culture techniques and biotechnology based techniques.
	CO4	The students would be able learn the technique of mushroom cultivation and explore the possibility of entrepreneurship in the same.
	CO5	Students will able to understand how nitrogen cycle occurs in nature and why nitrogen is so important for plants and how it is assimilated in nature.
	CO6	The students will be able to draw genetic chromosome maps on the basis of three point test cross and will also learn about mutations, its sources.
	CO7	Students will be able to solve biostatistics-based problems based on students t test, regression analysis and ANOVA.
<b>Paper IV Current</b>	CO1	Students will gain knowledge on post harvesting techniques which will explore the possibility of entrepreneurship in this

<b>Trends in Plant Sciences II</b>		field.
	CO2	The students will also gain knowledge about the latest molecular biology techniques for isolation and characterization of genes.
	CO3	Students will learn about important bioinformatics-based practicals.
<b>M.Sc. SEM I, II, III &amp; IV</b>		
<b>Plant Diversity- Cryptogams I (Algae and Fungi)</b>	CO1	Classify algae into various groups, understand the importance in various fields and will be able to collect and identify them
	CO2	Classify fungi into various groups, understand the role of fungi in various fields and will be able to collect and identify fungi, fungal pathogens and culture them.
<b>Plant Diversity- Cryptogams I (Algae and Fungi)</b>	CO1	The students will be able to differentiate between gymnosperms and angiosperms , study their origin and nomenclature, understand evolutionary theories for origin of Angiosperms, understand characteristics of selected Angiosperm families and learn the rules governing the code of botanical nomenclature, also learn the recent developments as in molecular systematics.
<b>Plant Physiology</b>	CO1	Students should be able to understand how to apply the basic concepts of Plant Physiology in other fields and also to know and discuss the concept of physiological processes of plants.
<b>Cytogenetics, Molecular Biology and Biotechnology</b>	CO1	Students will be able to understand the control points in a cell cycle, Study and apply principles of microbial genetics, understand recombinant DNA technology and study applications of the same for the improvement of crops.
<b>Plant Diversity- Cryptogams II (Bryophyta and Pteridophyta)</b>	CO1	Classify Bryophytes into various groups, study their importance
	CO2	Classify Pteridophytes into various groups, study their importance and multiplication of important ferns
<b>Plant Diversity: Spermatophyta II</b>	CO1	Students will be able to understand the development of pollen, spore, fertilization and to apply palynological information to plant systematics
<b>Plant Physiology and Environmental Botany</b>	CO1	<p>Distinguish key physiological processes underlying the seed germination</p> <ul style="list-style-type: none"> <li>• Identify the physiological factors that regulate growth and developmental processes of plants</li> <li>• Demonstrate clear understanding of crop-environment interaction and its implication on crop growth and yield</li> <li>• Integrate and apply their knowledge of crop physiology for analytical thinking and solving practical problems experienced in agricultural systems</li> </ul>

	CO2	To understand and apply ecological principles and understand legislation and measures to solve environmental problems.
<b>Medical Botany And Dietetics</b>	CO1	Students will be able to identify medicinal plants and understand the effects of plant chemical constituents on humans and the use of plants in Dietetics and as nutraceuticals.

## **DEPARTMENT OF CHEMISTRY**

**Programme Outcome:** On completion of B.Sc. Chemistry, students will acquire:

PO1: Core competency: Students will acquire core competency in the subject Chemistry, and in allied subject areas.

PO2: A systematic and coherent understanding of the fundamental concepts in Physical, Organic, inorganic and Analytical Chemistry and all other related allied chemistry subjects.

PO3: Students will be able to characterize, identify and separate components of organic or inorganic origin and will also be able to analyze them by making use of the modern instrumental methods learned.

PO4: Students will be able to use the evidence-based comparative chemistry approach to explain chemical synthesis and analysis.

PO5: Students will be able to understand the basic principle of equipment and instruments used in the chemistry laboratory.

PO6: Students will be able to demonstrate the experimental techniques and methods of their area of specialization in Chemistry.

PO7: The course curriculum also includes components that can be helpful to graduate students to develop critical thinking ability by way of solving problems/numerical using basic chemistry knowledge and concepts.

PO8: Appreciate the central role of chemistry in our society and use this as a basis for ethical behaviour in issues facing chemists including an understanding of safe handling of chemicals, environmental issues, and key issues facing our society in terms of energy, health and medicine.

PO9: Lifelong Learner: The course curriculum is designed to inculcate a habit of learning continuously through use of advanced ICT techniques and other available techniques/books/journals for personal academic growth as well as for increasing employability opportunity.

### **PROGRAMME SPECIFIC OUTCOMES**

- Students acquire knowledge about Basics of Drugs and Dyes
- Students will gain knowledge of synthesis of many drugs.
- They understand therapeutic actions of many drugs and their use in day to day life.
- Demonstrate knowledge and understanding in Current applications of different Dyes.
- Practically students will prepare Dyes and its use for colouring cloth through projects.
- They also understand the analysis of many drugs through practicals.

**Course Outcomes:**

<b>F.Y.B.Sc. Sem I &amp; II</b>		
<b>Paper I</b>	CO1	To understand reaction kinetics, rate constant, order of reaction.
	CO2	To identify stereochemistry of various chemicals. To provide best practices of semi-micro qualitative analysis
	CO3	To define specific terms of states of matter, oxidation and reduction.
<b>Paper II</b>	CO1	To understand purification method for solid compounds
	CO2	To solve numericals on Molarity, Normality and Molality
	CO3	To understand basics of Inorganic chemistry
	CO4	To identify unknown organic compound
<b>S.Y.B.Sc. SEM III &amp; IV</b>		
<b>Paper I</b>	CO1	To become proficient in analysing the various observations and chemical phenomena presented to student during the course.
	CO2	To understand & solve problems related to thermodynamics and kinetics.
	CO3	To understand the preparation and reactions of alcohol, phenols
	CO4	To understand the preparation and reactions of carboxylic acid, diazonium compounds, sulphonic acids, amines and carbonyl compounds.
<b>Paper II</b>	CO1	To know specific principles of Inorganic chemistry.
	CO2	To know specific facts about instrumental methods of analysis
	CO3	To know specific trends of transition metals, catalysis and electrochemistry
	CO4	To understand the concepts of Gravimetry and Volumetry
<b>Paper III</b>	CO1	To find basics calculations of mean, mode, median
	CO2	To understand basic analytical chemistry
	CO3	To solve numericals based on analytical methods for understanding concepts in detail.
<b>T.Y.B.Sc. SEM V &amp; VI</b>		
<b>Paper I</b>	CO1	To understand details about spectroscopic techniques, stereochemistry.
	CO2	To know specific terms involved in organic and inorganic reaction mechanisms.



	CO3	To understand concepts of molecular spectroscopy
<b>Paper II</b>	CO1	To know specific terms of symmetry, molecular orbital theory, solid state chemistry, inner transition metals.
	CO2	To know the various types of methods for analysis of compounds.
	CO3	To know various methods of preparation of Inorganic compounds
	CO4	To solve numericals
<b>Paper III</b>	CO1	To know about various chemotherapeutic agents, dyes and dye-stuff intermediates.
	CO2	To understand concept of stereochemistry
	CO3	To solve numericals on spectroscopy
	CO4	To know about natural products, heterocycles, photochemistry, pericyclic reactions.
	CO5	To identify unknown organic compound
<b>Paper IV</b>	CO1	To understand concepts of Atomic absorption and emission spectroscopy
	CO2	To find details of various types of titrations
	CO3	To solve numericals based on various topics of analytical chemistry
<b>M.Sc. SEM I, II, III &amp; IV</b>		
<b>Paper I</b>	CO1	To know specific techniques: disconnection of molecules, synthesis of target molecules..
	CO2	To know new name reactions, reagents and rearrangements.
	CO3	To know in detail about natural products, group theory and solid state chemistry.
<b>Paper II</b>	CO1	To know more specific terms involved in asymmetric synthesis, pericyclic reactions and photochemistry.
	CO2	To solve critical problems spectroscopy and two-dimensional spectroscopy
	CO3	To know new name reactions, reagents and rearrangements.
<b>Paper III</b>	CO1	To know about drug discovery, green chemistry, biomolecules.
	CO2	To study the behaviour of inorganic solids, their bonding, preparation and reactions including mechanisms.
	CO3	To understand thermal and magnetic properties of inorganic materials.
<b>Paper IV</b>	CO1	To understand ternary mixture separation and identification
	CO2	To perform organic synthesis

## DEPARTMENT OF MATHEMATICS

**Programme Outcome:** On completion of B.Sc. Mathematics, students will learn:

PO1 The knowledge with facts and figures related to Mathematics, Physics and Chemistry, Computer Science.

PO2 To understand the basic concepts, fundamental principles and scientific theories related to various scientific phenomena and their relevance in the day-to-day life.

PO 3 To understand application mathematics in different fields like Mechanics ,Astronomy, Astrology , Information technology etc

PO 4 To analyze given data and draw the conclusion.

PO 5 To think creatively to propose novel ideas in explaining facts and figures or providing new solutions to the problems

PO 6 To pursue higher studies in Mathematics and Computer Application

PO 7 To work in different Scientific Institution

### PROGRAMME SPECIFIC OUTCOMES

- Understand the limit of functions, use to prove properties of continuous functions and derivative of functions
- Understand the concept of Riemann integrability , improper integrals , application of integration like area Volume, Surface area
- Demonstrate when a binary algebraic structure forms Group and Group properties
- Treat special types of Rings such as Euclidean domain and Principal ideal domain
- Solve System linear and nonlinear equations and their application in Chemistry and physics to balance chemical reactions and circuits respectively
- Calculate definite integral using an appropriate numerical method
- Derive methods for various mathematical operations and tasks such as interpolation, differentiation and integration.
- Solution of first order differential equations system by using Numerical methods.
- Be able to use the facility with mathematical and computational modeling of real decision making Use the methods to design experiments, analysis and interpretation of data and synthesize the information to provide valid conclusion.

### Course Outcomes:

F.Y.B.Sc. Sem I & II		
<b>Paper I CALCULUS I</b>	CO1	To understand Real Number System and properties of real numbers
	CO2	To understand Sequences in $\mathbb{R}$ and convergence ,divergence of sequences
	CO3	To understand how to solve first order first degree differential equations and different types
<b>CALCULUS II</b>	CO 4	To Understand the concept of limits and continuity of functions
	CO 5	To understand differentiability of functions
	CO 6	To Understand application of derivatives

<b>Paper II ALGEBRA I</b>	CO1	To understand integers ,divisibility, congruence relation, equivalence relation and its application
	CO2	To understand functions, bijective functions, binary relations, properties of binary relation
	CO3	To get the knowledge of polynomials , their algebraic structure , divisibility , gcd of polynomials
<b>Discrete Mathematics</b>	CO 1	To Understand the concept of Preliminary counting
	CO 2	To Understand Advanced Counting
	CO 3	To get the knowledge of Permutations and recurrence Relations of order n
<b>S.Y.B.Sc. Sem III &amp; IV</b>		
<b>Paper I CALCULUS II</b>	CO1	To Understand the Concept of Infinite Series, Their Convergence and divergence
	CO2	To Understand Riemann Integration , properties of R Integration
	CO3	To Understand Improper Integration , beta Gamma Functions and examples
<b>Paper II Linear Algebra I</b>	CO1	To Understand system of linear equations and applications in various fields
	CO2	To Understand vector spaces over $\mathbb{R}$ , sub spaces, linear independence and linear dependence of vectors
	CO3	To Understand determinants and their properties
<b>Paper III Ordinary differential equations</b>	CO1	To Study higher order differential equations
	CO2	To Study system of linear differential equations
	CO3	Solution of differential equations by numerical methods
<b>Paper I Multivariable Calculus I</b>	CO1	To Study Functions of several variables
	CO2	To Study Differentiation of Scalar Fields
	CO3	To Understand Applications of Differentiation of Scalar Fields and Differentiation of vector fields
<b>Paper II Linear algebra II</b>	CO1	To Study Linear transformation, Isomorphism, Matrix associated with L.T.
	CO2	To Study Inner product spaces
	CO3	To study Eigen values, eigen vectors, diagonalizable matrix
<b>Paper III Numerical Methods elective A</b>	CO1	To Study Solutions of algebraic and transcendental equations
	CO2	To Study Interpolation, Curve fitting, Numerical integration
	CO3	To Study Solutions of linear system of Equations and eigen value problems

## **DEPARTMENT OF COMMERCE**

On completion of B.Com., students will learn:

PO1: This program could provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Warehousing etc., well trained professionals to meet the requirements.

PO2: After completing graduation, students can get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.

PO3: Capability of the students to make decisions at personal & professional level will increase after completion of this course.

PO4: Students can independently start up their own Business.

PO5: Students can get thorough knowledge of finance and commerce.

PO6: The knowledge of different specializations in Accounting, costing, banking and finance with the practical exposure helps the students to stand in organization.

### **PROGRAMME SPECIFIC OUTCOMES FOR COMMERCE**

- The students can get the knowledge, skills and attitudes during the end of the B.com degree course.
- By goodness of the preparation they can turn into a Manager, Accountant , Management Accountant, cost Accountant, Bank Manager, Auditor, Company Secretary, Teacher, Professor, Stock Agents, Government employments and so on.,
- Students will prove themselves in different professional exams like C.A. , C S, CMA, MPSC, UPSC. As well as other coerces.
- The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities.

- Students will gain thorough systematic and subject skills within various disciplines of finance, auditing and taxation, accounting, management, communication, computer.
- Students can also get the practical skills to work as accountant, audit assistant, tax consultant, and computer operator. As well as other financial supporting services.
- Students will learn relevant Advanced accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.
- Students will be able to do their higher education and can make research in the field of finance and commerce.

**Course Outcomes:**

<b>F.Y.B.COM. Sem I &amp; II</b>		
<b>Accountancy and Financial Management</b>	CO1	The curriculum enriches the students' knowledge on passing journal entries and preparing respective ledger accounts
	CO2	Identify and interpret accounting information to inform users and make decisions.
	CO3	Apply critical thinking skills by identifying and analysing accounting issues using relevant accounting frameworks.
	CO4	Analyse financial and contextual information to make decisions, estimate costs and determine tax implications, audit risk, and engagement procedures.
	CO5	Identify and interpret accounting information to inform users and make decisions. Apply critical thinking skills by identifying and analysing accounting issues using relevant accounting frameworks
	CO6	Identify and interpret accounting information to inform users and make decisions. Apply critical thinking skills by identifying and analysing accounting issues using relevant accounting frameworks
<b>Commerce</b>	CO1	It is expected that the learners become fully

		conversant with the aspects of business, elements of business environment, entrepreneurship and setting up of business unit.
	CO2	Learners appreciate the importance of business in a developing economy.
	CO3	Learners consider entrepreneurship as a career option.
	CO4	It is expected that the learners acquaint themselves with the opportunities and challenges in the services sector.
	CO5	The learners are expected to develop skills relating to marketing of services.
<b>Business Economics</b>	CO1	Students would know about the market economy and its composition.
	CO2	Students would know about the basic tools and principles used in the market economy with respect to production analysis and economies of scale.
	CO3	Students would learn about various cost concepts and its behavior in the short and long run.
	CO4	Students would be aware of rational decision making.
	CO5	Students would understand the functioning of the ideal market structures of perfect competition and monopoly.
	CO6	Students would learn the working of Monopolistic Competition and Oligopoly markets.
<b>Business Communication</b>	CO1	Various types of oral, written and digital communication modes
	CO2	Effective business writing & Effective presentations
	CO3	Effective interpersonal communication & Communication that maximizes team effectiveness
	CO4	Soft skills and employability skills & Communication that makes effective personality.
<b>Environmental Studies</b>	CO1	The successful completion of the course will create an environmental awareness among Commerce students.
	CO2	It will make students aware about various environmental factors and their relation to the field of Commerce.

	CO3	The course will highlight functional and spatial links between environment, economy and society.
	CO4	The course will create an insight into various environmental issues
<b>Foundation Course</b>	CO1	The successful completion of course will enable the learner to understand factual aspects of Indian society.
	CO2	It will help create awareness and empathy among learners about various issues faced by youth.
	CO3	It will help ingrain sense of social responsibility and participatory approval towards society.
<b>Mathematical and Statistical Techniques</b>	CO1	The students would get to know about the usage of permutations and combinations in different arrangements and selections
	CO2	The students would be able to understand the concepts of Linear Programming, technique to formulate LPP and geometrical concepts to solve LPP
	CO3	The students would be able to understand different measures of Central Tendencies, their merits, demerits and acquire the skill of calculating different measures of Central Tendencies and Dispersion
	CO4	The students would be able to understand the concepts of Probability, Events, Algebra of Events, Theorems on Probability and calculation of Probability, Calculation of Expectation and Variance of a random variable.
<b>S.Y.B.COM. Sem III &amp; IV</b>		
	CO1	Learners are acquainted with theoretical as well as practical aspects of accounting of the Partnership Firms with respect to admission, retirement, death of Partner/s.
	CO2	Learners are acquainted with the process of payment of liabilities of the Partnership Firm upon its dissolution.

<b>Accountancy and Financial Management III</b>	CO3	Learners are acquainted with the accounting of conversion of Partnership Firm into a Limited Liability Partnership.
	CO4	Learners are acquainted with the accounting of conversion of Partnership Firm into a Limited Company.
<b>Business Economics</b>	CO1	Demonstrate an understanding of the nature of key macroeconomic variables.
	CO2	Understand the tenets of Keynesian Economics and apply the tenets through the aggregate demand and supply model
	CO3	Understand the key elements of, and problems created by, macroeconomic shocks.
	CO4	Define and Analyse the determinants of business cycles, long run economic growth, unemployment, inflation.
<b>Business Law</b>	CO1	Learner will understand the Indian contract act and importance of Contract act.
	CO2	Learners should able to file RTI forms and E-Contract Forms.
	CO3	This can help students to learn banking regulation and IRDA.
	CO4	Students will have a complete understanding of The Negotiable Instruments Act
<b>Commerce</b>	CO1	Learners are expected to know the meaning of management, evolution of management thoughts and be able to compare ancient and modern management approach.
	CO2	Learners are expected to apply the process of Planning in day-to-day activities. They should be able to use Decision Making Techniques while



		making decisions.
	CO3	Learners are expected to understand the bases of departmentation in various companies.
	CO4	They should also understand the importance of motivation and leadership with proper controls.
<b>Foundation Course</b>	CO1	The successful completion of course will enable the learner to understand the remedial measures taken to address human right issues.
	CO2	It will help create awareness and empathy among learners about various issues faced by marginalized sections of society.
	CO3	It will help ingrain social responsibility and participatory approval towards society.
<b>Financial Accounting and Auditing- Introduction to Management Accounting I</b>	CO1	Learners are acquainted with the various methods and their importance in analyzing the financial statements of an entity
	CO2	Learners are acquainted with the various ratios used in financial statements analysis by a stakeholder in a decision making process about an entity.
	CO3	Learners are acquainted with the knowledge and ability to use various capital budgeting techniques in a decision making process.
	CO4	Learners are acquainted with the knowledge and ability to understand and estimate the working capital requirements of different types of entities.
<b>Advertising</b>	CO1	Students are expected to know the meaning of advertising and its importance to brand building.
	CO2	They are also expected to get empowered as consumers and learn how to bring accountability to

		advertising.
	CO3	Students learn about the emergence of media as well as study about the technological advancements/ growth of media industry in India.
	CO4	To explain the different forms of advertising and stimulate interest among students on the new trends in advertising.
<b>Company Secretarial Practice</b>	CO1	The learners need to know the growing need for Governance professionals in India
	CO2	The learners discuss and form opinion about corporate governance practices in India.
	CO3	The learners emerge as able service providers by recognizing the requirements of various stakeholder.
	CO4	The learners become conversant with the process of liaising, arbitration and conciliation.
<b>Co-Operation</b>	CO1	Students are expected to know the meaning of Cooperation and its importance, Role of Cooperation in Economic Development
	CO2	Students are expected to know structure and organization of cooperation
	CO3	The learners should have a complete understanding about problems of co-operative banking in India.
	CO4	Student should be able to understand challenges of co-operative sector.
<b>T.Y.B.COM. Sem V &amp; VI</b>		
<b>Business Economics</b>	CO1	<ul style="list-style-type: none"> <li>· Students would understand the impact of the New Economic Policy and the different policy measures for Sustainable Development and Foreign Investment.</li> </ul>

	CO2	Students would understand the role of agriculture and the problems associated with the sector.
	CO3	Students would be aware of the recent trends, role and growth of the Secondary and Tertiary sector.
	CO4	Students would learn about the Structure, Growth and Reforms in Financial Markets.
<b>Commerce-Marketing</b>	CO1	Students would get knowledge about marketing concepts and latest marketing strategies.
	CO2	Students would get knowledge of CRM, consumer behavior and bases of market segmentation.
	CO3	Students would get knowledge about how to develop and launch a product.
	CO4	Students would get knowledge about green marketing, rural marketing, social marketing and other trends in marketing.
<b>Financial Accounting and Auditing - Financial Accounting</b>	CO1	The students will be able to prepare financial statements of a corporate entity.
	CO2	The students will be able to account for internal restructuring of a corporate entity.
	CO3	The students will be able to prepare Investment account for an investor.
	CO4	The students will be able to account for buy back of shares by a corporate entity.
<b>Financial Accounting and Auditing - Cost Accounting</b>	CO1	Students would be able to understand objectives and scope of Cost Accounting.
	CO2	Students should be able to prepare stock ledger and understand various aspects of inventory control.
	CO3	Students should be able to prepare labour cost statement, remuneration and incentive systems.
	CO4	Students should be able to account for overheads apportionment, absorption and computation of overhead rates.
	CO5	Students should be able to classify costs and prepare cost sheet & reconcile cost and financial statements.

<b>Export Marketing</b>	CO1	The students would understand the basics of exports and its contribution to economic development.
	CO2	The students would be acquainted with the various Trading Blocks in operation.
	CO3	The students would be able to explore the various incentives offered for promoting exports
<b>Purchasing and Store Keeping</b>	CO1	Students would get knowledge about Material Management, Material Requirement Planning, scientific purchasing methods.
	CO2	The students would be able to explore developing areas.
	CO3	Students would get knowledge about various inventory stock level, Economic Order Quantity, Store accounting

## DEPARTMENT OF BMS

**Program Outcome:** On completion of B.M.S Botany, students will learn:

PSO1: Acquire knowledge about management practices that facilitate them to become effective professionals.

PSO2: Be capable to pursue higher studies in diverse fields of Management such as Business Administration, Human Resource Management, Marketing and Finance.

PSO3: Be adequately trained to be entrepreneurs and communicate effectively.

PSO4: Develop a positive attitude towards lifelong learning and research.

PSO5: Acquire the required skills to develop business models and be responsible global citizens with cross-cultural competent behaviour and ethical values.

### PROGRAMME-SPECIFIC OUTCOMES FOR:

- Ability to gain and apply knowledge of management principles, concepts, and theories.
- Ability to analyze problems and provide effective and meaningful solutions. To increase awareness of the factors influencing decisions & the risks involved.
- . To encourage enterprise culture through innovative & creative thinking & develop an attitude to provide solutions to the problems in the business world as well as address the needs of the society.
- To apply managerial skills by working effectively as an individual, as a member of a team or as a leader on multidisciplinary management projects.
- to understand and commit to personal and professional ethics, responsibilities and norms and code of conduct of management practices.
- To understand and be sensitive to the impact of management decisions from a sustainability and environmental context and take suitable measures to mitigate the emerging risks.
- An ability to recognize the need for and engage in independent and life-long learning
- To acquaint learners with practical approaches to motivation and leadership & its application in the Indian context

### Course Outcomes:

<b>F.Y.B.M.S (SEMESTER-I)</b>		
<b>Introduction To Financial Accounts</b>	CO1	Understand & interpret the preparation of basic financial data such as trading Profit & loss accounts & balance sheet
	CO2	Have a basic knowledge of Indian accounting standards.
<b>Business Law</b>	CO1	Identify the fundamental legal principles behind contractual agreements.
	CO2	Understand the legal and economic structure of

		different forms of business organizations and their responsibilities as an employer.
<b>Business Statistics</b>	CO1	To familiarize the students with fundamental statistical tools which can help them in analyzing the business data.
	CO2	To Analyse and contrast techniques and biases of quantitative methods within the context they are to be applied
<b>Business Communication I</b>	CO1	Understand the theory of communication, its concepts, channels and objectives
	CO2	Master in language and writing skills
	CO3	Draft business correspondence like mails, letters
<b>Foundation Of Human Skills</b>	CO1	Understand the basic behaviour pattern of human, which is the most important resource of a business, and deal with them in an apt manner.
	CO2	Deal & negotiate with different kinds of human nature with greater awareness of human behaviour.
<b>Business Economics I</b>	CO1	Evaluate the effects of government interventions in individual markets and in the macroeconomy.
	CO2	Exhibit competency in demonstrating both reasoning and analytical skills in determining optimal outcomes in contemporary economic situations.
<b>Foundation Course I</b>	CO1	To make students capable of understanding and studying the vibrant Indian culture classify the general characteristic of Indians
	CO2	To understand the general characteristics on the Indian constitution and local self-government and its implication on every Indian citizen.
<b>Semester-Ii</b>		
<b>Principles Of Marketing</b>	CO1	Critically Analyse the marketing theories & concepts and understand the relevance in perspective to the current business scenario in India
	CO2	To develop basic marketing skills among students in order to cater to the marketing industries.
<b>Industrial Law</b>	CO1	Understand the laws related to working conditions in different settings.
	CO2	Learn the laws relating to Industrial Relations, Social Security and Working conditions.
<b>Business Mathematics</b>	CO1	Demonstrate understanding of basic mathematics concepts.
	CO2	Apply graphs, equations, ratio and proportion, percentage, and measurement systems to solve typical business problems viz calculation of budget, cash discounts, taxes etc.
<b>Business Environment</b>	CO1	Critically assess the business environment of an organization using selected strategic tools.
	CO2	Construct and present scenarios that synthesize business environment information.
<b>Principles Of</b>	CO1	Analyze the business decisions made by

<b>Management</b>		organisations using various tools and techniques to remain competitive.
	CO2	Offer diverse learning opportunities to develop analytical and soft skills.
<b>Business Communication Ii</b>	CO1	Have clear understanding of effective principles of effective presentation tools
	CO2	Get exposure to Group discussions and various types of mock interviews.
<b>Foundation Course - Value Education And Soft Skill Ii</b>	CO1	Aware about the Indian society, human rights & the environment
	CO2	Understand the meaning of stress & conflict, its effects on humans & how can we manage & overcome them
<b>S.Y.Bms (Semester-Iii)</b>		
<b>Introduction To Cost Accounting(Finance Elective)</b>	CO1	This course exposes the students to the basic concepts and the tools used in Cost Accounting
	CO2	To enable the students to understand the principles and procedure of cost accounting and to apply them to different practical situations
<b>Corporate Finance (Finance Elective)</b>	CO1	The objectives of develop a conceptual frame work of finance function and to acquaint the participants with the tools techniques and process of financial management in the realm of financial decision making
	CO2	The course aims at explaining the core concepts of corporate finance and its importance in managing a busines
<b>Consumer Behaviour (Marketing Elective)</b>	CO1	To develop an understanding about the consumer decision making process and its applications in marketing function of firms
	CO2	To equip undergraduate students with basic knowledge about issues and dimensions of Consumer Behaviour.
<b>Advertising (Marketing Elective)</b>	CO1	To understand and examine the growing importance of advertisin
	CO2	To understand the future and career in advertising
<b>Recruitment &amp; Selection (Human Resource Management)</b>	CO1	To familiarize the students with concepts and principles, procedure of Recruitment and Selection in an organization.
	CO2	To give an in depth insight into various aspects of Human Resource management and make them acquainted with practical aspect of the subject
<b>Employees Relations &amp; Welfare (Human Resource Management)</b>	CO1	To understand the nature and importance of employee relations in an organization
	CO2	To understand the causes and effects of employee grievances as well as the procedure to solve the same
<b>Business Planning &amp; Entrepreneurship</b>	CO1	To introduces Entrepreneurship to budding managers.
	CO2	To develop entrepreneurs &to prepare students to

		take the responsibility of full line of management function of a company with special reference to SME sector.
<b>Information Technology In Business Management I</b>	CO1	To learn basic concepts of Information Technology, its support and role in Management, for managers
	CO2	To recognize security aspects of IT in business, highlighting electronic transactions, advanced security features
<b>Accounting For Managerial Decisions</b>	CO1	To acquaint management learners with basic accounting fundamentals.
	CO2	To develop financial analysis skills among learners.
<b>Strategic Management</b>	CO1	Know, understand, and apply the strategic management process to analyze and improve organizational performance
	CO2	Critically examine the management of the entire enterprise from the top management viewpoints.
<b>Foundation Course Iii- Environmental Management</b>	CO1	Develop an activity using various strategies to control, reduce and monitor all environmental problems that might arise as a result.
	CO2	Be conversant with basic environmental legislation.
<b>Semester-Iv</b>		
<b>Auditing (Finance Elective)</b>	CO1	To examine the system of internal check
	CO2	To confirm the existence of assets & liability.
<b>Strategic Cost Management (Finance Elective)</b>	CO1	Learners should develop skills of analysis, evaluation and synthesis in cost and management accounting
	CO2	The subject covers the complex modern industrial organizations within which the various facets of decision-making and controlling operations take place.
<b>Integrated Marketing Communication (Marketing)</b>	CO1	To equip the students with knowledge about the nature, purpose and complex construction in the planning and execution of an effective Integrated Marketing Communication (IMC) program.
	CO2	To understand the various tools of IMC and the importance of co-ordinating them for an effective marketing communication program.
<b>Rural Marketing (Marketing)</b>	CO1	To explore the students to the Agriculture and Rural Marketing environment so that they can understand consumer's and marketing characteristics of the same for understanding and contributing to the emerging challenges in the upcoming global economic scenario.
<b>Human Resource Planning &amp; Information System (Human Resource Management)</b>	CO1	To Understand the Concept and Process of HRP
	CO2	To Understand Ways of matching Job Requirements and Human Resource Availability
<b>Training &amp; Development</b>	CO1	To make the students acquainted with working of the two powerful media; i.e. radio and television



<b>In HRM (Human Resource Management)</b>	CO2	The content is useful for both advertising and journalism students in order to further their careers in their respective fields
<b>Information Technology In Business Management-II</b>	CO1	To understand managerial decision-making and to develop perceptiveness of major functional area of MIS
	CO2	To learn outsourcing concepts. BPO/KPO industries, their structures, Cloud computing
<b>Business Economics II</b>	CO1	Understanding, through application of microeconomics, of the interaction of individuals and organizations in markets; and of the role of public policy in shaping those interactions
<b>Business Research Methods</b>	CO1	The course is designed to inculcate the analytical abilities and research skills among the students
	CO2	The course intends to give hands on experience and learning in Business Research
<b>Foundation Course IV - Ethics &amp; Governance</b>	CO1	To understand the emerging need and growing importance of good governance and CSR by organisations
	CO2	To study the ethical business practices, CSR and Corporate Governance practiced by various organisations
<b>Production &amp; Total Quality Management</b>	CO1	Implement the basic principles of TQM in manufacturing and service-based organization.
	CO2	To enable the learners to apply what they have learned theoretically.
<b>T.Y.BMS (SEMESTER-V)</b>		
<b>Investment Analysis &amp; Portfolio Management (Finance)</b>	CO1	To acquaint the learners with various concepts of finance
	CO2	To understand various models and techniques of security and portfolio analysis
<b>Wealth Management (Finance)</b>	CO1	To study the relevance and importance of Insurance in wealth management
	CO2	To acquaint the learners with issues related to taxation in wealth management
<b>Risk Management (Finance)</b>	CO1	To familiarize the student with the fundamental aspects of risk management and control
	CO2	To give a comprehensive overview of risk governance and assurance with special reference to the insurance sector
<b>Financial Accounting (Finance)</b>	CO1	To acquaint the learners in preparation of final accounts of companies
	CO2	To study the accounting of foreign currency and investment
<b>Services Marketing (Marketing)</b>	CO1	To understand distinctive features of services and key elements in services marketing
	CO2	To provide insight into ways to improve service quality and productivity
<b>E-Commerce &amp; Digital</b>	CO1	To understand the increasing significance of E-Commerce and its applications in Business and

<b>Marketing (Marketing)</b>		Various Sectors
	CO2	to understand Latest Trends and Practices in E-Commerce and Digital Marketing, along with its Challenges and Opportunities for an Organisation
<b>Sales &amp; Distribution Management (Marketing)</b>	CO1	To develop understanding of the sales & distribution processes in organizations
	CO2	To get familiarized with concepts, approaches and the practical aspects of the key decision making variables in sales management and distribution channel management
<b>Customer Relationship Mgmt. (Marketing)</b>	CO1	To understand concept of Customer Relationship Management (CRM) and implementation of Customer Relationship Management
	CO2	To understand new trends in CRM, challenges and opportunities for organizations
<b>Finance For Hr Professionals &amp; Compensation Management (Human Resource Management)</b>	CO1	To orient HR professionals with financial concepts to enable them to make prudent HR decisions
	CO2	To understand the various compensation plans
<b>Strategic Human Resource Management &amp; Hr Policies (Human Resource Management)</b>	CO1	To understand the various compensation plans
	CO2	To understand the relationship between strategic human resource management and organizational performance
<b>Performance Management &amp; Career Planning (Human Resource Management)</b>	CO1	To understand the concept of performance management in organizations
	CO2	To review performance appraisal systems
<b>Stress Management(Human Resource Management)</b>	CO1	To understand the nature and causes of stress in organizations
	CO2	To enable learners to adopt effective strategies, plans, and techniques to deal with stress
<b>Logistics And Supply Chain Management</b>	CO1	To provide students with basic understanding of concepts of logistics and supply chain management
	CO2	To provide an insight in to the nature of supply chain, its functions and supply chain systems
<b>Corporate Communication &amp; Public Relations</b>	CO1	To provide the students with basic understanding of the concepts of corporate communication and public relations
	CO2	To introduce the various elements of corporate communication and consider their roles in managing organizations
<b>SEMESTER-VI</b>		
<b>International Finance(Elective Finance)</b>	CO1	The objective of this course is to familiarize the student with the fundamental aspects of various issues associated with International Finance
	CO2	The course aims to give a comprehensive overview

		of International Finance as a separate area in International Business
<b>Innovative Financial Services(Elective Finance)</b>	CO1	To familiarize the learners with the fundamental aspects of various issues associated with various Financial Services
	CO2	To introduce the basic concepts, functions, process, techniques and create an awareness of the role, functions and functioning of financial services
<b>Project Management (Elective Finance)</b>	CO1	The objective of this course is to familiarize the learners with the fundamental aspects of various issues associated with Project Management
	CO2	To give a comprehensive overview of Project Management as a separate area of Management
<b>Strategic Financial Management (Elective Finance)</b>	CO1	To match the needs of current market scenario and upgrade the learner's skills and knowledge for long term sustainability
	CO2	Changing scenario in Banking Sector and the inclination of learners towards choosing banking as a career option has made study of financial management in banking sector inevitable
<b>Brand Management (Elective Marketing)</b>	CO1	To understand the meaning and significance of Brand Management
	CO2	To Know how to build, sustain and grow brands
<b>Retail Management (Elective Marketing)</b>	CO1	To provide understanding of retail management and types of retailers
	CO2	To develop an understanding of retail management terminology including merchandize management, store management and retail strategy.
<b>International Marketing (Elective Marketing)</b>	CO1	To understand International Marketing, its Advantages and Challenges.
	CO2	To understand the relevance of International Marketing Mix decisions and recent developments in the Global Market
<b>Media Planning And Management</b>	CO1	To understand Media Planning, Strategy, and Management with reference to the current business scenario.
	CO2	To know the basic characteristics of all media to ensure the most effective use of the advertising budget.
<b>HRM In Global Perspective (ELECTIVE HUMAN RESOURCE)</b>	CO1	To understand the concepts, theoretical framework, and issues of HRM from a Global Perspective
	CO2	To get insights of the concepts of Expatriates and Repatriates
<b>Organisational Development (Elective Human Resource)</b>	CO1	To understand the concept of Organisational Development and its Relevance in the organisation
	CO2	To Study the Issues and Challenges of OD while undergoing Changes
<b>HRM In Service Sector</b>	CO1	To understand how to manage human resources in service sector

<b>Management (Elective Human Resource)</b>	CO2	To understand the significance of human element in creating customer satisfaction through service quality
<b>Human Resource Accounting &amp; Audit (Elective Human Resource)</b>	CO1	To familiarize with the Human Resource Accounting Practices in India
	CO2	To familiarize the learners with the process and approaches of Human Resources Accounting and Audit
<b>Operation Research</b>	CO1	To help students to understand operations research methodologies
		To help students to solve various problems practically
<b>Project Work</b>	CO1	to inculcate the element of research analyse and scientific temperament challenging the potential of learner as regards to his/ her eager to enquire and ability to interpret a particular aspects of the study.

## **Department of Computer Science**

### **Programme Learning Outcomes**

At the end of three year Bachelor of Computer Science the students will be able:

- To formulate, to model, to design solutions, procedure and to use software tools to solve real world problems.
- To design and develop computer programs/computer -based systems in the areas such as networking, web design, security, cloud computing, IoT, data science and other emerging technologies.
- To familiarize with the modern-day trends in industry and research based settings and thereby innovate novel solutions to existing problems.
- To apply concepts, principles, and theories relating to computer science to new situations.
- To use current techniques, skills, and tools necessary for computing practice
- To apply standard Software Engineering practices and strategies in real-time software project development
- To pursue higher studies of specialization and to take up technical employment.
- To work independently or collaboratively as an effective team member on a substantial software project.

- To communicate and present their work effectively and coherently.
- To display ethical code of conduct in usage of Internet and Cyber systems.
- To engage in independent and life-long learning in the background of rapid changing IT industry.

### Course Outcomes

<b>F.Y.B.Sc. C.S. Semester I</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>Course Outcomes</b>
USCS101	Digital Systems & Architecture	<ul style="list-style-type: none"> <li>• To learn about how computer systems work and underlying principles</li> <li>• To understand the basics of digital electronics needed for computers</li> <li>• To understand the basics of instruction set architecture for reduced and complex instruction sets</li> <li>• To understand the basics of processor structure and operation</li> <li>• To understand how data is transferred between the processor and I/O devices</li> </ul>
USCS102	Introduction to Programming with Python	<ul style="list-style-type: none"> <li>• Ability to store, manipulate and access data in Python</li> <li>• Ability to implement basic Input / Output operations in Python</li> <li>• Ability to define the structure and components of a Python program.</li> <li>• Ability to learn how to write loops and decision statements in Python.</li> <li>• Ability to learn how to write functions and pass arguments in Python.</li> <li>• Ability to create and use Compound data types in Python</li> </ul>

USCS103	LINUX Operating System	<ul style="list-style-type: none"> <li>• Work with Linux file system structure, Linux Environment</li> <li>• Handle shell commands for scripting, with features of regular expressions, redirections</li> <li>• Implement file security permissions</li> <li>• Work with vi, sed and awk editors for shell scripting using various control structures</li> <li>• Install softwares like compilers and develop programs in C and Python programming languages on Linux Platform</li> </ul>
USCS104	Open Source Technologies	<ul style="list-style-type: none"> <li>• Differentiate between Open Source and Proprietary software and Licensing.</li> <li>• Recognize the applications, benefits and features of Open-Source Technologies</li> <li>• Gain knowledge to start, manage open-source projects.</li> </ul>
USCS105	Discrete Mathematics	<ul style="list-style-type: none"> <li>• Define mathematical structures (relations, functions, graphs) and use them to model real life situations.</li> <li>• Understand, construct and solve simple mathematical problems.</li> <li>• Solve puzzles based on counting principles.</li> <li>• Provide basic knowledge about models of automata theory and the corresponding formal languages.</li> <li>• Develop an attitude to solve problems based on graphs and trees, which are widely used in software.</li> </ul>

USCS106	Descriptive Statistics	<ol style="list-style-type: none"> <li>1. Organize, manage and present data.</li> <li>2. Analyze Statistical data using measures of central tendency and dispersion.</li> <li>3. Analyze Statistical data using basics techniques of R.</li> <li>4. Study the relationship between variables using techniques of correlation and regression.</li> </ol>
USCS107	Soft Skills	<ul style="list-style-type: none"> <li>• Learners will be able to understand the importance and types soft skills</li> <li>• Learners will develop skills for Academic and Professional Presentations.</li> <li>• Learners will able to understand Leadership Qualities and Ethics.</li> <li>• Ability to understand the importance of stress management in their academic &amp; professional life.</li> </ul>
<b>F.Y.B.Sc. C.S. Semester II</b>		
USCS201	Design & Analysis of Algorithms	<ul style="list-style-type: none"> <li>• Students should be able to understand and evaluate efficiency of the programs that they write based on performance of the algorithms used.</li> <li>• Students should be able to appreciate the use of various data structures as per need</li> <li>• To select, decide and apply appropriate design principle by understanding the requirements of any real life problems</li> </ul>

USCS202	Advanced Python Programming	<ul style="list-style-type: none"> <li>• Ability to implement OOP concepts in Python including Inheritance and Polymorphism</li> <li>• Ability to work with files and perform operations on it using Python.</li> <li>• Ability to implement regular expression and concept of threads for developing efficient program</li> <li>• Ability to implement exception handling in Python applications for error handling.</li> <li>• Knowledge of working with databases, designing GUI in Python and implement networking in Python</li> </ul>
USCS203	Introduction to OOPs using C++	<ul style="list-style-type: none"> <li>• Work with numeric, character and textual data and arrays.</li> <li>• Understand the importance of OOP approach over procedural language.</li> <li>• Understand how to model classes and relationships using UML.</li> <li>• Apply the concepts of OOPS like encapsulation, inheritance and polymorphism.</li> <li>• Handle basic file operations.</li> </ul>



USCS204	Database Systems	<ul style="list-style-type: none"> <li>• To appreciate the importance of database design.</li> <li>• Analyze database requirements and determine the entities involved in the system and their relationship to one another.</li> <li>• Write simple queries to MySQL related to String, Maths and Date Functions.</li> <li>• Create tables and insert/update/delete data, and query data in a relational DBMS using MySQL commands.</li> <li>• Understand the normalization and its role in the database design process.</li> <li>• Handle data permissions.</li> <li>• Create indexes and understands the role of Indexes in optimization search.</li> </ul>
USCS205	Calculus	<ul style="list-style-type: none"> <li>• Develop mathematical skills and enhance thinking power of learners.</li> <li>• Understand mathematical concepts like limit, continuity, derivative, integration of functions, partial derivatives.</li> <li>• Appreciate real world applications which uses the learned concepts.</li> <li>• Skill to formulate a problem through Mathematical modelling and simulation.</li> </ul>

USCS206	Statistical Methods	<ul style="list-style-type: none"> <li>• Calculate probability, conditional probability and independence.</li> <li>• Apply the given discrete and continuous distributions whenever necessary.</li> <li>• Define null hypothesis, alternative hypothesis, level of significance, test statistic and p value.</li> <li>• Perform Test of Hypothesis as well as calculate confidence interval for a population parameter for single sample and two sample cases.</li> <li>• Apply non-parametric test whenever necessary.</li> <li>• Conduct and interpret one-way and two-way ANOVA.</li> </ul>
USCS207	E-Commerce & Digital Marketing	<ul style="list-style-type: none"> <li>• Understand the core concepts of E-Commerce.</li> <li>• Understand the various online payment techniques</li> <li>• Understand the core concepts of digital marketing and the role of digital marketing in business.</li> <li>• Apply digital marketing strategies to increase sales and growth of business</li> <li>• Apply digital marketing through different channels and platforms</li> <li>• Understand the significance of Web Analytics and Google Analytics and apply the same.</li> </ul>
<b>S.Y.B.Sc. C.S. Semester III</b>		

USCS301	Theory of Computation	<ol style="list-style-type: none"> <li>1. Understand Grammar and Languages</li> <li>2. Learn about Automata theory and its application in Language Design</li> <li>3. Learn about Turing Machines and Pushdown Automata</li> <li>4. Understand Linear Bound Automata and its applications</li> </ol>
USCS302	Core Java	<ol style="list-style-type: none"> <li>1. Object oriented programming concepts using Java.</li> <li>2. Knowledge of input, its processing and getting suitable output.</li> <li>3. Understand, design, implement and evaluate classes and applets.</li> <li>4. Knowledge and implementation of AWT package.</li> </ol>
USCS303	Operating System	<ol style="list-style-type: none"> <li>1. To provide a understanding of operating system, its structures and functioning</li> <li>2. Develop and master understanding of algorithms used by operating systems for various purposes.</li> </ol>
USCS304	Database Management Systems	<ol style="list-style-type: none"> <li>1. Master concepts of stored procedure and triggers and its use.</li> <li>2. Learn about using PL/SQL for data management</li> <li>3. Understand concepts and implementations of transaction management and crash recovery</li> </ol>

USCS305	Combinatorics and Graph Theory	<ol style="list-style-type: none"> <li>1. Appreciate beauty of combinatorics and how combinatorial problems naturally arise in many settings.</li> <li>2. Understand the combinatorial features in real world situations and Computer Science applications.</li> <li>3. Apply combinatorial and graph theoretical concepts to understand Computer Science concepts and apply them to solve problems</li> </ol>
USCS306	Physical Computing and IoT Programming	<ol style="list-style-type: none"> <li>1. Enable learners to understand System On Chip Architectures.</li> <li>2. Introduction and preparing Raspberry Pi with hardware and installation.</li> <li>3. Learn physical interfaces and electronics of Raspberry Pi and program them using practical's</li> <li>4. Learn how to make consumer grade IoT safe and secure with proper use of protocols.</li> </ol>
USCS307	Web Programming	<ol style="list-style-type: none"> <li>1. To design valid, well-formed, scalable, and meaningful pages using emerging technologies.</li> <li>2. Understand the various platforms, devices, display resolutions, viewports, and browsers that render websites</li> <li>3. To develop and implement client-side and server-side scripting language programs.</li> <li>4. To develop and implement Database Driven Websites.</li> <li>5. Design and apply XML to create a markup language for data and document centric applications.</li> </ol>
<p><b>S.Y.B.Sc. C.S. Semester IV</b></p>		

USCS401	Fundamentals of Algorithms	<ol style="list-style-type: none"> <li>1. Understand the concepts of algorithms for designing good program</li> <li>2. Implement algorithms using Python</li> </ol>
USCS402	Advanced Java	<ol style="list-style-type: none"> <li>1) Understand the concepts related to Java Technology</li> <li>2) Explore and understand use of Java Server Programming</li> </ol>
USCS403	Computer Networks	<ol style="list-style-type: none"> <li>1. Learner will be able to understand the concepts of networking, which are important for them to be known as a 'networking professionals'.</li> <li>2. Useful to proceed with industrial requirements and International vendor certifications.</li> </ol>
USCS404	Software Engineering	<p>Plan a software engineering process life cycle, including the specification, design, implementation, and testing of software systems that meet specification, performance, maintenance and quality requirements</p> <p>Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology.</p> <p>Know how to develop the code from the design and effectively apply relevant standards and perform testing, and quality management and practice</p> <p>Able to use modern engineering tools necessary for software project management, time management and software reuse.</p>

USCS405	Linear Algebra using Python	<ol style="list-style-type: none"> <li>1. Appreciate the relevance of linear algebra in the field of computer science.</li> <li>2. Understand the concepts through program implementation</li> <li>3. Instill a computational thinking while learning linear algebra.</li> </ol>
USCS406	.Net Technologies	<ol style="list-style-type: none"> <li>1. Understand the .NET framework</li> <li>2. Develop a proficiency in the C# programming language</li> <li>3. Proficiently develop ASP.NET web applications using C#</li> <li>4. Use ADO.NET for data persistence in a web application</li> </ol>
USCS407	Android Developer Fundamentals	<ol style="list-style-type: none"> <li>1) Understand the requirements of Mobile programming environment.</li> <li>2) Learn about basic methods, tools and techniques for developing Apps</li> <li>3) Explore and practice App development on Android Platform</li> <li>4) Develop working prototypes of working systems for various uses in daily lives.</li> </ol>
<b>T.Y.B.Sc. C.S. Semester V</b>		
USCS501	Artificial Intelligence	<ol style="list-style-type: none"> <li>1) After completion of this course, learner should get a clear understanding of AI and different search algorithms used for solving problems.</li> <li>2) The learner should also get acquainted with different learning algorithms and models used in machine learning.</li> </ol>

USCS502	Linux Server Administration	<p>1) Learner will be able to develop Linux based systems and maintain. Learner will be able to install appropriate service on Linux server as per requirement.</p> <p>2) Learner will have proficiency in Linux server administration.</p>
USCS503	Software Testing and Quality Assurance	<p>1) Understand various software testing methods and strategies. Understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software.</p> <p>2) Design SQA activities, SQA strategy, formal technical review report for software quality control and assurance.</p>
USCS504	Information and Network Security	<p>1) Understand the principles and practices of cryptographic techniques.</p> <p>2) Understand a variety of generic security threats and vulnerabilities, and identify &amp; analyze particular security problems for a given application.</p> <p>3) Understand various protocols for network security to protect against the threats in a network</p>
USCS505	Architecting of IoT	<p>1) Learners are able to design &amp; develop IoT Devices.</p> <p>2) They should also be aware of the evolving world of M2M Communications and IoT analytics.</p>

USCS506	Web Services	<p>1) Emphasis on SOAP based web services and associated standards such as WSDL.</p> <p>2) Design SOAP based / RESTful / WCF services Deal with Security and QoS issues of Web Services</p>
USCS507	Game Programming	<p>1) Learner should study Graphics and gaming concepts with present working style of developers where everything remains on internet and they need to review it, understand it, be a part of community and learn.</p>
<b>T.Y.B.Sc. C.S. Semester VI</b>		
USCS601	Wireless Sensor Networks and Mobile Communication	<p>After completion of this course, learner should be able to list various applications of wireless sensor networks, describe the concepts, protocols, design, implementation and use of wireless sensor networks. Also implement and evaluate new ideas for solving wireless sensor network design issues.</p>
USCS602	Cloud Computing	<p>After successfully completion of this course, learner should be able to articulate the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing using open source technology. Learner should be able to identify the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, hybrid cloud, etc. They should explain the core issues of cloud computing such as security, privacy, and interoperability.</p>



USCS603	Cyber Forensics	The student will be able to plan and prepare for all stages of an investigation - detection, initial response and management interaction, investigate various media to collect evidence, report them in a way that would be acceptable in the court of law.
USCS604	Information Retrieval	After completion of this course, learner should get an understanding of the field of information retrieval and its relationship to search engines. It will give the learner an understanding to apply information retrieval models.
USCS605	Digital Image Processing	Learner should review the fundamental concepts of a digital image processing system. Analyze the images in the frequency domain using various transforms. Evaluate the techniques for image enhancement and image segmentation. Apply various compression techniques. They will be familiar with basic image processing techniques for solving real problems.
USCS606	Data Science	After completion of this course, the students should be able to understand & comprehend the problem; and should be able to define suitable statistical method to be adopted.
USCS607	Ethical Hacking	Learner will know to identify security vulnerabilities and weaknesses in the target applications. They will also know to test and exploit systems using various tools and understand the impact of hacking in real time machines.

**DEPARTMENT OF ZOOLOGY**

On completion of B.Sc. Zoology, students will learn:

PO1 - After completion of the program students will be able to understand basic and modern concepts of Zoology.

PO2 - Knowledge about different communicable and noncommunicable diseases, importance of personal hygiene, research ethics, genetics and biotechnology advancements will generate the awareness about human values in the learners mind.

PO3 - Problem solving and research skills of the students will be enhanced by study of biostatistics, scientific problems, research methodologies etc.

PO4 - Syllabus will inculcate good laboratory practices in students and train them about scientific handling of important instruments.

PO5 - Syllabus will also provide an insight to the basic nutritional and health aspects of human life.

**Course Outcomes:**

<b>F.Y.B.Sc. Sem I</b>		
<b>USZO101</b> Wonders of Animal World, Biodiversity and its Conservation	CO1	Curiosity will be ignited in the minds of learners, to know more about the fascinating world of animals which would enhance their interest and love for the subject of Zoology.
	CO2	Learners would appreciate the treasure of Biodiversity, its importance and hence would contribute their best for its conservation.
	CO3	Minds of learners would be impulsed to think differently and would be encouraged ipso facto to their original crude ideas from the field of biological sciences.
<b>USZO102</b> Instrumentation And Animal Biotechnology	CO1	Learners would work safely in the laboratory and avoid occurrence of accidents (mishaps) which will boost their scholastic performance and economy in use of materials / chemicals during practical sessions.
	CO2	Learners would understand recent advances in the subject and their applications for the betterment of mankind; and that the young minds would be tuned to think out of the box.
	CO3	Students will be skilled to select and operate suitable instruments for the studies of different components of Zoology of this course and also of higher classes including research.
<b>F.Y.B.Sc. Sem II</b>		
<b>USZO201</b> Ecology and Wildlife Management	CO1	It would allow learners to study about the nature of the animal population, specific factors affecting its growth and its impact on the population of other life forms.
	CO2	Learners will grasp the concept of interdependence and interaction of physical, chemical and biological factors in the environment and will lead to better understanding about implications of loss of fauna specifically on human beings, erupting a spur of desire for conservation of all flora and

		fauna.
	CO3	Learners would be inspired to choose career options in the field of wildlife conservation, research, photography and ecotourism.
<b>USZO202</b> Nutrition, Public Health And Hygiene	CO1	Healthy dietary habits would be inculcated in the lifestyle of learners in order to prevent risk of developing health hazards in the younger generation due to faulty eating habits.
	CO2	Promoting optimum conservation of water, encouragement for maintaining adequate personal hygiene, optimum use of electronic gadgets, avoiding addiction, thus facilitating achievement of the goal of healthy young India in true sense.
	CO3	Learners will be able to promptly recognize stress related problems at initial stages and would be able to adopt relevant solutions which would lead to a psychologically strong mind set promoting positive attitude important for academics and would be able to acquire knowledge of cause, symptoms and precautions of infectious diseases.
<b>S.Y.B.Sc. Sem III</b>		
<b>USZO301</b> Fundamentals of Genetics, Chromosomes and Heredity, Nucleic acids	CO1	Learner would comprehend and apply the principles of inheritance to study heredity.
	CO2	Learners will understand the concept of multiple alleles, linkage and crossing over.
	CO3	Learner will comprehend the structure of chromosomes and its types.
	CO4	Learner will understand the mechanisms of sex determination.
	CO5	Learner would be able to correlate the disorders linked to a particular sex chromosome.
	CO6	Learner will understand the importance of nucleic acids as genetic material.
	CO7	Learner would comprehend and appreciate the regulation of gene expressions.
<b>USZO302</b> Nutrition and Excretion, Respiration and Circulation, Control and Coordination of Life Processes, Locomotion and Reproduction.	CO1	Learner would understand the increasing complexity of nutritional, excretory and osmoregulatory physiology in evolutionary hierarchy.
	CO2	Learner would be able to correlate the habit and habitat with nutritional, excretory and osmoregulatory structures.
	CO3	Learner would understand the increasing complexity of respiratory and circulatory physiology in evolutionary hierarchy.
		Learner will be able to correlate the habit and habitat of animals with respiratory and circulatory organs.
		Learner would understand the process of control and coordination by nervous and endocrine regulation.
		Learner would be amazed by various locomotory structures found in the animal kingdom.
		Learner would be acquainted with various reproductive strategies present in animals.
<b>USZOE1303</b> Ethology,	CO1	Learner would gain insight into different types of animal behavior and their role in biological adaptations.
	CO2	Learner would be sensitized to the feelings which are instrumental in social behavior.
	CO3	Learner would understand the general epidemiological aspects

Parasitology, Economic Zoology		of parasites that affect humans and take simple preventive measures for the same.
	CO4	Learner would comprehend the life cycle of specific parasites, the symptoms of the disease and its treatment.
	CO5	Learner would gain knowledge on animals useful to mankind and the means to make the most of it.
	CO6	Learner would learn the modern techniques in animal husbandry.
	CO7	Learner would pursue entrepreneurship as a career.
<b>S.Y.B.Sc. Sem IV</b>		
<b>S.Y.B.Sc</b> <b>USZO401</b> Origin and evolution of life, Population genetics and evolution, Scientific attitude, methodology, scientific writing and ethics in scientific research.	CO1	Learner will gain insights into the origin of life.
	CO2	Learner will analyze and critically view the different theories of evolution.
	CO3	Learner would understand the forces that cause evolutionary changes in natural populations.
	CO4	Learner would comprehend the mechanisms of speciation
	CO5	Learner will be able to distinguish between microevolution, macroevolution and megaevolution.
	CO6	The learner would develop qualities such as critical thinking and analysis.
	CO7	The learner will imbibe the skills of scientific communication and he/she will understand the ethical aspects of research.
<b>USZ0402</b> Cell Biology, Endomembrane System, and Biomolecules.	CO1	Learner would acquire insight into the composition of the transport mechanisms adopted by the cell and its organelles for its maintenance and composition.
	CO2	Learner would appreciate the intricacy of endomembrane system. Learner would understand the interlinking of endomembrane system for functioning of cell.
	CO3	The learner will realize the importance of biomolecules and their clinical significance.
<b>USZOE1403</b> Comparative Embryology, Aspects of Human Reproduction, Pollution and its effect on organisms.	CO1	Learner will be able to understand and compare the different types of eggs and sperms.
	CO2	Learner will be able to understand and compare the different pre- embryonic stages
	CO3	Learners will be able to understand human reproductive physiology.
	CO4	Learners will become familiar with advances in ART and related ethical issues.
	CO5	The learners will be sensitized about the adverse effects of pollution and measures to control it.

## DEPARTMENT OF GEOGRAPHY

On completion of B.A.. Geography, students will learn:

PO 1:- Students will acquire an understanding of and appreciation for the relationship between geography and culture.

PO 2:- Students will acquire an understanding of and appreciation for the role that geography can play in community engagement.

PO 3: Students will develop the ethical aptitudes and dispositions necessary to acquire and hold leadership positions in industry, government, and professional organizations.

PO 4: Students will read, interpret, and generate maps and other geographic representations as well as extract, analyze, and present information from a spatial perspective.

PO 5: Students will understand through lectures but also local, regional, and/or international travel the interconnection between people and places and have a general comprehension of how variations in culture and personal experiences may affect our perception and management of places and regions.

PO 6: Students will have a general understanding of physical geographic processes, the global distribution of landforms and ecosystems, and the role of the physical environment on human populations.

PO 7: Students will have a general understanding of cultural geographic processes, the global distribution of cultural mosaics, and the history and types of interaction between people within and among these mosaics.

PO 8: Students will have a general understanding of global human population patterns, factors influencing the distribution and mobility of human populations including settlement and economic activities and networks, and human impacts on the physical environment.

PO 9: Students will be able to think in spatial terms to explain what has occurred in the past as well as using geographic principles to understand the present and plan for the future.

PO 10: Students will have a general understanding of how the physical environment, human societies, and local and global economic systems are integral to the principles of sustainable development.

PO 11: Students will have a general understanding of the various theoretical and methodological approaches in both physical and human geography and be able to develop research questions and critically analyze both qualitative and quantitative data to answer those questions.

PO 12: Students will be able to present completed research, including an explanation of methodology and scholarly discussion, both orally and in written form and, wherever possible, utilize cartographic tools and other visual formats.

### Course Outcomes:

F.Y.B.A Sem I		
	CO1	<ul style="list-style-type: none"><li>Students will develop a solid understanding of the concepts of "space," "place" and "region" and their</li></ul>

<b>HUMAN GEOGRAPHY</b>		importance in explaining world affairs.
	CO2	<ul style="list-style-type: none"> <li>Students will understand general demographic principles and their patterns at regional and global scales.</li> </ul>
	CO3	<ul style="list-style-type: none"> <li>Students will be able to locate on a map major physical features, cultural regions, and individual states and urban centers.</li> <li></li> </ul>
	CO4	<ul style="list-style-type: none"> <li>Students will understand global and regional patterns of cultural, political and economic institutions, and their effects on the preservation, use and exploitation of natural resources and landscapes.</li> </ul>
		<b>F.Y.B.A Sem II</b>
<b>ENVIRONMENTAL GEOGRAPHY SEMESTER II</b>	CO1	<ul style="list-style-type: none"> <li>Students will be able to analyze human-environment interaction(s) for a specific case and for specified social and/or environmental conditions.</li> </ul>
	CO2	<ul style="list-style-type: none"> <li>Students will be able to identify, collect and process digital spatial data using industry-standard tools.</li> </ul>
	CO3	<ul style="list-style-type: none"> <li>An Environmental Studies major will be able to recognize the physical, chemical, and biological components of the earth's systems and show how they function</li> </ul>
	CO4	<ul style="list-style-type: none"> <li>An Environmental Studies major will be able to apply lessons from various courses through field experiences.</li> </ul>
<b>GEOGRAPHY OF MAHARASHTRA</b>	CO1	<ul style="list-style-type: none"> <li>To understand the physical and human characteristics of different regions</li> </ul>
	CO2	<ul style="list-style-type: none"> <li>To learn about the different cultures that exist in different parts of the Maharashtra.</li> </ul>
	CO3	<ul style="list-style-type: none"> <li>To understand how different regions interact with each other</li> </ul>
	CO4	<ul style="list-style-type: none"> <li>To find out about the economic, political, and social issues that affect different regions of the Maharashtra</li> </ul>
	CO4	<ul style="list-style-type: none"> <li>learn about the history of different regions of the Maharashtra.</li> </ul>

		<b>SYBA SEMESTER IV</b>
GEOGRAPHY OF INDIA	CO1	Students would be understanding geography of our nation
	CO2	Acquire an understanding and relationship of between physiography and drainage, climate, soil
	CO3	Locate resources of the country on map
	CO4	Understand significance of age and discover new technique used in agriculture
	CO5	Develop a solid understanding of the concept of region and its importance in planning and development
	CO6	Elaborate relationship with India and its neighbouring countries.
	CO7	Aware about the resources and its conservations.
		<b>TYBA SEMESTER V</b>
SETTLEMENT GEOGRAPHY Paper IV	CO1	A settlement is a neighbourhood with habitation. Settlements can range in size from a solitary cottage in a remote place to a megacity (a city with over 10 million residents). A settlement could be long-term or short-term. A refugee camp is a prime illustration of a transient abode.
	CO2	The study of human land usage, resource use, population density etc.
	CO3	settlement Geography refers to the branch of geography that analyses human settlement, expansion, and the physical, cultural, and socioeconomic variables that are related to them. It is one of the fields of knowledge that has lately been imagined and covers a diverse subject.
GEOGRAPHICAL TOOLS AND TECHNIQUE PART – I Paper -VI	CO1	Students understand the importance of toposheet and conventional signs and symbols.
	CO2	Differentiate various method of relief representation and draw profiles.
	CO3	Use various statistical techniques used in geography.
	CO4	Prepare maps using computer techniques and software.
GEOSPATIAL TECHNOLOGY Paper -IX	CO1	To provide knowledge to students to compile, analyze, and present geospatial data. Students will learn these basic geospatial concepts while working with ArcGIS software.

	CO2	To familiarize the students with various dimensions of Geospatial Technology and career opportunities available in these fields.
	CO3	To develop creative thinking among students and make them technology-savvy so that they could be ready to join the Geospatial industry
		TYBA SEMESTER—VI
ENVIRONMENTAL GEOGRAPHY PAPER IV	CO1	An Environmental Studies major will be able to critically examine all sides of environmental issues and apply understanding from disciplines such as history, economics, psychology, law, literature, politics, sociology, philosophy, and religion to create informed opinions about how to interact with the environment on both a personal and a social level.
	CO2	An Environmental Studies major will be able to recognize the physical, chemical, and biological components of the earth's systems and show how they function
	CO3	An Environmental Studies major will be able to do independent research on human interactions with the environment.
GEOGRAPHICAL TOOLS AND TECHNIQUE PART – II Paper -VI	CO1	Students understand the importance of toposheet and conventional signs and symbols.
	CO2	Differentiate various method of relief representation and draw profiles.
	CO3	Use various statistical techniques used in geography.
	CO4	Prepare maps using computer techniques and software.
RESEARCH METHODOLOGY Paper - IX		understand some basic concepts of research and its methodologies
		identify appropriate research topics
		select and define appropriate research problem and parameters
		prepare a project proposal (to undertake a project)
		organize and conduct research (advanced project) in a more appropriate manner.
		write a research report and thesis.
		write a research proposal (grants)

S.Y.B.A. Geography SEM III and IV

Paper III



Physical Geography of India	CO1	course help to understand the problem ,creat awareness and promote interest for conservation of environment .
	CO2	It gives information about to understand the distribution of physical and man- made environment.
	CO3	It will help to develop and promote the cartographic skills such as map filling and map reading.
	CO4	This course develop the geographic skills and knowledge to student and prepare them for competitive examination.
Agriculture Geography of India	CO1	Course help student to understand the physical and human factors affecting on agriculture.
	CO2	The course highlight the issues related with agriculture and suggest remedial measures to overcome them.
	CO3	It will help to develop and promote the cartographic skills such as map filling and statistical techniques.
T.Y.B.A. Geography SEM V and VI		
Paper VIII Geography of resources	CO1	This course help the students to know the different types of resources.
	CO2	It gives information about distribution of different types of resources.
	CO3	Course gives important knowledge to student about depletion and conservation of minerals and power resources.
	CO4	Course helps students to understand importance of forest and soil.
Paper V Geography of tourism and recreation	CO1	This course help the students to know the nature and scope of tourism geography.
	CO2	Course gives knowledge about the importance of planning and organization of tourism.
	CO3	It gives information about policies of tourism and places of tourist interested in India and Maharashtra
	CO4	Course help students to mark the precise locations of tourist centres on the map of India.

***F.Y.B.Com –SEM-I And SEM-II***

<b>Environmental Studies</b>	CO1	The successful completion of the course will create an environmental awareness among Commerce students.
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	CO2	It will make students aware about various environmental factors and their relation to the field of Commerce.
	CO3	The course will highlight functional and spatial links between environment, economy and society.
	CO4	The course will create an insight into various environmental issues

S.Y.B.A. SEM III and IV (Revised syllabus )2022-2023

Paper III

SEM-III Agricultural Geography	CO1	Course help student to understand the physical and human factors affecting on agriculture.
	CO2	The course highlight the issues related with agriculture and suggest remedial measures to overcome them.
	CO3	It will help to develop and promote the cartographic skills such as map filling and statistical techniques.
SEM-IV Geography of tourism a	CO1	This course help the students to know the nature and scope of tourism geography.
	CO2	Course gives knowledge about the importance of planning and organization of tourism.
	CO3	It gives information about policies of tourism and places of tourist interested in India and Maharashtra
	CO4	Course help students to mark the precise locations of tourist centres on the map of India.

S.Y.B.A. SEM III and IV (Revised syllabus )2022-2023

Paper III

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