Pune Vidyarthi Griha's

Shriram Sadashiv Dhamankar College of Commerce, Science & Arts, Nashik

Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution

Pune Vidyarthi Griha's
Shriram Sadashiv Dhamankar College of
Commerce, Science & Arts, Nashik

206, Dindori Road, Mhasrul, Nashik

PROGRAM OUTCOMES

BACHELOR OF COMMERCE - (B.COM).

P.O.1	**:**	Students can synthesize values through the three year degree program of Bachelor of Commerce which helps build character that is unique to a commerce graduate and contributes a lifelong way of thinking that influences their holistic development.
P.O.2	**:**	After completing three year degree program of Bachelor of Commerce (B.Com.) the students will be capable of executing comprehensive knowledge and understanding of one or more disciplines such as Accounting, Taxation, Business Economics, Commerce and Human Resource Management.
P.O.3	**:**	The students will gain the ability of critical and lateral thinking by understanding the concepts in the fields of Business Economics, Accountancy and Commerce.
P.O.4	**:**	The students will be able to solve business problems and apply the classroom learning in to practice to offer solutions in the fields of their interest.
P.O.5	**:**	On completion of the program, the students will be able to analyze information, data, resources and technologies necessary to address various topics, tasks or problems and reason the solution to the problems.
P.O.6	**:**	Well-designed course assessment, hands on experience in the form of industrial trainings, field visits, exposure to industrial wizards in combination with voluntary education done with the purpose of achieving personal fulfillment will give a lifelong learning experience to the students.
P.O.7	**:**	The B.Com. Program will make students competent with their required professional skills to provide expert man power, integrating inter-disciplinary knowledge and social values with practices to address social needs.
P.O.8	**:**	The students will develop application skills in the domain of accountancy, management, auditing, taxation, economics, commerce, human resource management, advertising and finance.
P.O.9	**:**	The program will enhance logical reasoning skills, mathematical skills, accounting skills, communication skills, self-confidence and practical awareness required to face global employability in the corporate world and grow in to resourceful and responsible citizens of India.
P.O.10	**:**	The students will acquire the capacity to demonstrate decision making skills in the areas of accounting, taxation, advertising, economics, e-commerce and environment.

Class : F.Y.B.COM

Course Outcome Sem-I & II

Course :- Financial Accounting-I/ II (Subject Code : 112 / 122)

Sr. No	Description
CO-1	-To enable the students to learn principals and concepts of accounting
Co-2	-To enable the students to learn principal and concept of accountancy
Co-3	-Students are enabled with the knowledge in the practical applications of accounting
Co-4	-To enable the students to learn the basic concept of Partnership accounting ,and allied aspect of accounting
Co-5	-The student will get through knowledge on the accounting practice prevailing in partnership firm and other allied aspect. To find out the technical expertise in maintaining the books of accounts
Co-6	-To encourage the students about maintaining the books of accounts for further reference
Co-7	-Students are enabled with the knowledge in the practical applications of accounting

Course :- Marketing & Salesmanship-I/ II (Subject Code : 116 C / 126 C)

CO-1	This course enables the students, the practical knowledge and the tactics in the marketing.
CO-2	To study and critically analyze the basic concepts and trends in Marketing.
CO-3	To aware of the recent changes in the field of marketing.
CO-4	Demonstrate knowledge of segmentation and approach to target market.
CO-5	Develop strategies and positioning product/services in the market
CO-6	Specify and analyze the consumers expectation in services .
CO-7	Understand the acquire knowledge on emerging trends in service marketing.

Course :- Organisational Skill Developement-I/ II (Subject Code : 115 A / 125 A)

CO-1	To make familiar the students with the emerging changes in the modern office environment and to develop organizational skills.
CO-2	To build up the conceptual , analytical , technical and managerial skills of students efficient office organization and records management
CO-3	Technical skills among the students for designing and developing effective means to manage records , consistency and efficiency of work flow in the administrative section of an organization will be developed
CO-4	To develop employability skills among the students.

Class : S.Y.B.COM

Course outcomes Sem- III & IV

Course :- Business Communication – I / II (Subject Code : 231 / 241)

CO-1	- To assess and justify the place of technology in the world of work and in personal communication
CO-2	- To identify and explain the process of listening and to acquire listening skills
CO-3	- To explain the process of communication and its multifaceted nature.
CO-4	- The student synthesizes the finer nuances of the process of communication and thereby assesses its use in day-to-day life.
CO-5	- To examine ethical business behaviour, and assess the use of ethical behaviour in day-to-day life
CO-6	-To plan and develop writing competency strategies: Letters-Parts, Structure, Types Statement of Purpose

Course :- Corporate Accounting I / II (Subject Code : 232 / 242)

CO-1	Understand accounting standards in detail for AS 5, AS 6 , AS 10, AS 14 and AS 21.
CO-2	Understand details related to company accounts and aspects related to issue of shares, structure of share capital and types of shares.
CO-3	Analyse the accounting procedure for forfeiture of shares and reissue of forfeited.
CO-4	Understand issue of preference shares, redemption of preference

	shares and capitalization of profit and loss in conformity with Schedule VI, Companies Act 2013.
CO-5	Understanding overall corporate accounting concepts and preparation of financial statements.

Course :- Business Management I / II (Subject Code : 234 / 244)

CO-1	To understand the concept & functions and importance of management and its application
CO-2	To make the student understand principles, functions and different management theories.
CO-3	Students Understand Leadership Styles For Effective Management
CO-4	To Understand Various Emerging Trends in Business Management
CO-5	Identify the applications of management principles
CO-6	Relate theory to practical knowledge of the subject.
CO-7	Apply the basic techniques to real life situations
CO-8	Compare management practices of different organizations

Course :- Elements of Company Law I / II (Subject Code : 235/ 245)

CO-1	To impart students with the knowledge of fundamentals of Company Law and provisions of the Companies Act of 2013.
CO-2	To apprise the students of new concepts involving in company law regime.
CO-3	To acquaint the students with the duties and responsibilities of Key Managerial Personnel.

Course :- Banking & Finance I / II (Subject Code : 236 B / 246 B)

CO-1	To understand overall Indian banking structure
CO-2	To understand the role of private as well as public sector banks.
CO-3	To develop the understanding of other financial options using the platform of banking system.
CO-4	To understand the basic concept in banking system
CO-5	To create the awareness among the students of Indian banking system.
CO-6	To enables students to understand the reforms and other developments in the Indian Banking
CO-7	To provide students insight into the functions and role of Reserve Bank of India

Course :- Cost & Works Accounting I / II (Subject Code : 236 E / 246 E)

CO-1	To understand Basic Cost concepts, Elements of cost and cost sheet.
CO-2	Providing knowledge about difference between financial accounting and cost accounting
CO-3	Ascertainment of Material and Labor Cost
CO-4	Student's Capability to apply theoretical knowledge in practical situation will be increased.

CO-5	Students understand the objectives and scope of Cost Accounting
CO-6	Students would evaluate the attendance, payroll procedure and calculate the remuneration and incentive plans in preparation of labour cost statement
CO-7	Students would classify costs and prepare cost sheet
CO-8	Students would evaluate the material procurement procedure, inventory control and prepare stock ledge

Class : T.Y.B.COM

Course outcomes Sem- V & VI

Course :- Business Regulatory Framework (Mercantile Law) I / II (Subject Code : 351 / 361)

CO-1	To acquaint students with the basic concepts, terms & provisions of Mercantile and Business Laws.
CO-2	To develop the awareness among the students regarding these laws affecting business, trade and commerce.
CO-3	To understand the agreement procedures, rules that should be applied at the time of agreement
CO-4	Describe Offer, Acceptance, consideration and contractual Capacity.
CO-5	Concept of Mercantile law its rights and obligations arising out of mercantile transactions.
CO-6	To develop in the student acceptable attitudes and viewpoints with respect to business ethics and social responsibility.
CO- 7	Communicate effectively using standard business and legal terminology.

Course :- Auditing & Taxation I /II (Subject Code : 354 / 364)

CO-1	Describe the concept of auditing, types and methods of auditing
CO-2	To acquire knowledge about vouching of cash & credit transaction, verification of assets & liabilities.
CO-3	Describe preparation of different methods & auditor's responsibility regarding depreciation & reserves.
CO-4	Acquire knowledge about audit in EDP environmental part knowledge on the provisions of Income tax law and practice and make students compute the assessment practices under the various heads of income.
CO-5	Acquire knowledge about taxation, Rates of tax.
CO-6	Enhance assessment of Individuals filing of returns and PAN
CO-7	Understand the concept of deductions under the section 80C.
CO - 8	Treatment of Agricultural income and its benefits

Course :- Advanced Accounting I /II (Subject Code : 352 / 362)

CO-1	To provide the knowledge of various accounting concepts
CO-2	To impart the knowledge about accounting methods, procedures and techniques.
CO-3	To acquaint students with practical approach to accounts writing by using
CO-4	Software package and by learning various accounts.
CO-5	Know about the final accounts of the Banking & Cooperative Societies
CO-6	Learn about the journal entries of issue of shares and issue of shares and debentures.

Course :- Banking & Finance II /II (Subject Code : 355 B / 365 B)

CO-1	To Understand the Dynamics of Indian Banking Sector.
CO-2	To Analyze the Pertinent Issues in the Banking Sector
CO-3	To Familiarize students with the Reforms in the Banking Sector.
CO-4	Comprehend the need, definition, functions and economic significance of financial institution sand markets.
CO-5	To Critically understand the evolving role of Central Banking and Grasp the conduct of monetary policy

Course :- Banking & Finance III / III (Subject Code : 356 B / 366 B)

CO-1	Banking Occupies a vital role in a nation's economy.
CO-2	Banks, are the backbone of all activities because every transaction where money is involved the banks is the main character
CO-3	This subject is an attempt to offer to student's a fundamental tool which will enhance their understanding of banking business.
CO-4	To acquaint the students with banking Law & Practices in relation to the Banking System in India
CO-5	To understand the legal aspects of Banking transactions and its implication as Banker and Customers
CO-6	To make the students aware of the Banking Law and Practices in India

Course :- Cost & Works Accounting II / II (Subject Code : 355 E / 365 E)

CO-1	To define the objectives for learning the subject of Cost Accounting
CO-2	To develop an understanding on the various elements of cost
CO-3	To compare the financial and the costing records and reconcile the difference.
CO-4	To classify various overheads.

CO-5	To solve the problems based on the preparation of the Cost statement and the various elements (Material, Labour and Overheads)
CO-6	To apply the knowledge gained for decision making in the field of Cost Accounting

Course :- Cost & Works Accounting III / III (Subject Code : 356 E / 366 E)

CO-1	To define the emerging concepts in Cost Accounting.
CO-2	To develop an understanding on the various aspects of Contract and Process Costing and Standard Costing.
CO-3	To construct the break-even analysis chart for the decision making in Marginal Costing
CO-4	To solve the problems based on the above topics
CO-5	To apply the knowledge gained for decision making in the field of Cost Accounting
CO-6	To understanding the various types of budget & solve numerical on budget

MASTER OF COMMERCE –(M.Com)

Programme Outcomes (POs)

PO1. Critical Thinking : Develop the ability to completely evaluate new ideas, research findings evaluation to business and commerce related issues.

PO2. Communication skills : Ability to communicate ideas effectively in both written and oral formats develops communicate business analysis to the static holder and clean effective and appreciate manner.

PO3. Team Spirit : Work collaboratively and productively in group.

PO4. Social Responsibility : Recognize and understand the ethical and moral responsibility of the individuals and organization in society.

PO5. Global Citizen : Evolve into a global citizen who understands the duties for the welfare of our society and country.

PO6. Managerial Skill : Ability to complete knowledge into performance makes business decision through capability to interact and motivate and understand concept, develop ideas and implement strategies.

PO7. Employ ability : Prepare students for employment in various fields like charted accountancy, company secretary, banking sector, business management etc.

Class : M.COM First Year

Course outcomes Sem- I

Course :- Management Accounting (Subject Code : 121)

Sr. no.	Description
CO1	Students understand working capital management.
CO2	To understand implicit and explicit cost.
CO3	To understand the meaning of preference share, equity shares and retained earnings.
CO4	Students understand capital budget and its evaluation.

Course :- Strategic Management (Subject Code : 122)

Sr. no.	Description
CO1	Students understand the basic concepts of management.
CO2	They appreciate the evolution of management thoughts
CO3	They learn the functions of management and the organizational structure.
CO4	To identify and appreciate the theories of leadership.

Course :- Advanced Cost Accounting I (Subject Code : 127)

Sr. no.	Description
CO1	Students understand evaluation in cost accounting.
CO2	They understand cost accounting, its meaning and scope.
CO3	They understand the elements of cost accounting.
CO4	They understand the meaning of cost accounting and budgeting techniques.

Course :- Costing Techniques & Responsibility Accounting II (Subject Code : 128)

Sr. no.	Description
CO1	Students understand Costing techniques & Responsibility accounting
CO2	Students understand the changing role of costing techniques & responsibility accounting.
CO3	They understand responsibility accounting and costing Techniques.

Course :- Legal Framework Of Banking I (Subject Code : 135)

Sr. no.	Description
CO1	Students understand the customer banker relationships.
CO2	Determine rights and duties of a banker
CO3	Explain the role of hi tech banking and modern instruments.
CO4	State the role of RBI in framework of banking.

Course :- Central Banking II (Subject Code : 136)

Sr. no.	Description
CO1	Students understand the role of the central bank.
CO2	Functions of RBI are explained.
CO3	Identify the role of NBFCs.
CO4	Role of International Organizations IMF, ADB SAARC and WTO are explained.

Class : M.COM First Year

Course outcomes Sem- II

Course :- Financial Analysis & Control (Subject Code : 221)

Sr. no.	Description
CO1	Students understand Financial Analysis & Control.
CO2	To understand implicit and explicit Control.
CO3	To understand the meaning of preference share, equity shares and retained earnings.

Course :- Industrial Economics (Subject Code : 222 A)

Sr. no.	Description
CO1	Students understand the basic concepts of Industrial Economics.
CO2	They appreciate the evolution of management thoughts
CO3	They learn the functions of Industrial Economics and the organizational structure.
CO4	To identify and appreciate the theories of leadership.

Course :- Application of Cost Accounting III (Subject Code : 227)

Sr. no.	Description
CO1	Students understand evaluation in cost accounting.
CO2	They understand cost accounting, its meaning and

	scope.
CO3	They understand the elements of cost accounting.
CO4	They understand the meaning of cost accounting and budgeting techniques.

Course :- Cost Control & Cost System IV (Subject Code : 228)

Sr. no.	Description
CO1	Students understand Cost Control & Cost System
CO2	Students understand the changing role of Cost Control & Cost System.
CO3	They understand cost control& Cost system.

Course :- Banking Law & Practices III (Subject Code : 235)

Sr. no.	Description
CO1	Students understand the Banking Law and Practices.
CO2	Determine rights and duties of a banker
CO3	Explain the role of hi tech banking and modern banking laws and act.
CO4	State the role of RBI in framework of banking.

Course :- Monitory Policy IV (Subject Code : 236)

Sr. no.	Description
CO1	Students understand the role of monetary policy.
CO2	Functions of RBI are explained.
CO3	Identify the role of NBFCs.

Class : M.COM Second Year

Course outcomes Sem- III

Course :- Business Finance (Subject Code : 321)

Sr. no.	Description
CO1	Students understand the sources of Finance
CO2	Students identify the foreign direct investments and policies for FDI
CO3	Students understand explanation about the capital market mechanism and the organizational structure.
CO4	Students understand the share ownership pattern in India.

Course :- Research Methodology (Subject Code : 322)

Sr. no.	Description
CO1	Students understand meaning and importance of Research methodology in social sciences.
CO2	Students identify areas in various steps for research
CO3	Calculate various steps in conducting research
CO4	Design the research report writing.

Course :- Cost Audit V (Subject Code : 327)

Sr. no.	Description
CO1	Students identify the meaning and importance of cost audit.
CO2	Students understand the various methods and techniques in costing.
CO3	Students calculate the various types of budgets
CO4	Students calculate various types of variances.

Course :- Management Audit VI (Subject Code : 328)

Sr. no.	Description
CO1	Students understand effects of advanced topics in accounting of audit.
CO2	Explain the effects in accounting by amalgamation and consolidation.
CO3	Identify the effects of accounting standards.
CO4	Define the international accounting standards.

Course :- Foreign Exchange V (Subject Code : 335)

Sr. no.	Description
CO1	Students understand the importance of foreign exchange.
CO2	They note definitions and explanations given by various laws in international banking
CO3	The procedure in international trade is explained.
CO4	Role of various agencies in international trade is narrated.

Course :- Internation Finance VI (Subject Code : 336)

Sr. no.	Description
CO1	Students understand the importance of International Finance.
CO2	They note definitions and explanations given by various laws in international banking
CO3	The procedure in international trade is explained.

CO4	Role of various agencies in international trade is narrated.

Class : M.COM Second Year

Course outcomes Sem- IV

Course :- Capital Market & Financial Services (Subject Code : 421)

Sr. no.	Description
CO1	Students can acquire sound knowledge.
CO2	Concepts and structure of capital market and financial services.

Course :- Industrial Economics Environment (Subject Code : 422 A)

Sr. no.	Description
CO1	Students will gather a good basic knowledge about the subject.
CO2	The course will enhance the ability of students to be acquainted with current national and global economic scenario and international trade relations among the countries of the world.

Course :- Recent Advanced in Cost Accounting and Cost System VII (Subject Code : 427)

Sr. no.	Description
CO1	Get the knowledge on recent advances in cost accounting and cost system.
CO2	They understand cost accounting, its meaning and scope.
CO3	They understand the elements of cost accounting.
CO4	They understand the meaning of cost accounting and budgeting techniques.

Course :- Advanced Cost & Works Accounting VIII (Subject Code : 428)

Sr. no.	Description
CO1	Get the knowledge on recent advances in cost accounting and cost system.
CO2	They understand cost accounting, its meaning and scope.
CO3	They understand the elements of cost accounting.
CO4	They understand the meaning of cost accounting and budgeting techniques.

Course :- Recent Advanced in Banking & Finance VII (Subject Code : 435)

Sr. no.	Description
CO1	Students understand the customer banker relationships.

CO2	Determine rights and duties of a banker
CO3	Explain the role of hi tech banking and modern instruments.
CO4	State the role of RBI in framework of banking.

Course :- Advanced Banking & Fiinance VIII (Subject Code : 436)

Sr. no.	Description
CO1	Students understand the customer banker relationships.
CO2	Determine rights and duties of a banker
CO3	Explain the role of hi tech banking and modern instruments.
CO4	State the role of RBI in framework of banking.

PROGRAM OUTCOMES

BACHELOR OF science - (B.sc.)

B.Sc.

Programme Specific Outcomes(PO's)
At the end of the programme, student will be able to

PO1:-Students learn the basic terms, theories, principles of chemistry and of its different sub-subjects.
PO2:- Identify and analyse problems and issues with well-defined solutions.
PO3 :-Students get the hands on training of the chemistry related equipment's.
PO4 :-Use modern techniques, software's and web resources .
PO5 :-Create an awareness about the impact of chemistry on the environment.
PO6:- know the safety rules of chemistry required for working in and outside the Laboratory.
PO7:- Know historical development of chemistry.
PO8:- Role of Chemical industry in the economy.
PO9:- Get acquainted with advance chemistry related equipment's.
PO10:-Use of the modern research techniques.

Course Outcome

On completion of the course, student will be able to

Course CH-101: Physical Chemistry

CO1:-Students should be define thermodynamic principles(Remembering)

CO2:- Students should illustrate for Calculations of enthral, Bond energy, Bond dissociation energy, resonance energy, Kirchhoff's equation.(Understanding)

CO3:- Students should be identify Relation between Free energy and equilibrium and factors affecting on equilibrium constant.(Appling)

CO4:- Students examine Gas equilibrium, equilibrium constant and molecular interpretation of equilibrium constant, Van's Haff equation and its application.(Analyzing)

CO5:- Students will be justify concept to ionization process occurred in acids, bases and pH scale(Evaluating) Students will estimate concepts such as Common ion effect hydrolysis constant, ionic product, solubility Product, Degree of hydrolysis and pH for different salt ,buffer solutions(Creating).

Course CH-102 : Organic Chemistry

CO1:- Define Physical Effects, Electronic Displacements: Inductive Effect, Electro metric Effect, Resonance and Hyper conjugation. (Remembering)

CO2 :-Understand the fundamentals, principles, and recent developments in the subject area.(Understanding)

CO3:-Interpret R/S, E\Z Configurations of organic compounds.(Appling)

CO4:- Explain Inter conversion of Wedge Formula, Newman, Sawhorse and Fischer. representations. Conformations concerning ethane, butane and Cyclo hexane.(Analyzing)

CO5:-Develop a method for the preparation of alkane, alkene.

CO6:- Create the foundation for research and development in chemistry.

Course CH-103 : Practical Chemistry-I

CO1:-Students should be define the Importance of chemical safety and Lab safety while performing experiments in the laboratory, Set up the apparatus properly.(Remembering)

CO2: -Students will classify thermo chemical parameters and related concepts.(Understanding)

CO3:- Students make use of techniques of pH measurements.(Appling)

CO4:- Students should analyse preparation of buffer solutions.(Analyzing)

CO5:- Students should be determine organic compounds (non instrumental)(Evaluating)

CO6:- Students will test of chromato graphic techniques for separation of constituents of mixtures.(Creating)

Course BO-111 :Plant life and utilization-I

CO1:- Outline cryptograms and phanero-grams.

CO2:- Distinguish characters of cryptograms and Phanero-grams.
CO3:- Classify the plants in to cryptograms and Phanero-grams.
CO4:- Describe the Life cycle of plant forms of cryptograms.

Course BO-112 : Plant morphology and Anatomy
CO1:- Define Plant anatomy & morphology.
CO2:- Describe botanical concepts, including plant anatomy
CO3:- Differentiate with respect to tissue distinguishing
CO4:- Study reproductive structures in plant
CO5:- Learn about the formation of fruits.

Course BO-113 Practical Course (Sem-I)
CO1:- Recognize the live forms of Crypto-gamic and Phanero-gamic plants.
CO2:- Analyse and describe botanical concepts, including plant anatomy
CO3:- Illustrate the floral parts, fruits, leaves and their types.
CO4:- Study the mushroom cultivation.
CO5:- Categorize the plants into Monocot and Dicot on the basis of anatomical character

Course ZO-111 :Animal Diversity
CO1:-To study various types of phyllums
CO2:-To understand the Animal diversity around us.
CO3:-To understand the differences and similarities in the various aspects of classification.
CO4:- To classify invertebrates and to be able to understand the possible group of The invertebrate observed in nature.to understand our role as a caretaker and promoter of life.

Course ZO-112 :Animal Ecology
CO1:- To understand anticipate, analyse and evaluate natural resource issues.
CO2:- The learner will be able to link the intricacies of food chains, food webs.
CO3:- The Learner understands and appreciates the diversity of ecosystems and link it with human life for its betterment and for non-exploitation of the The biotic and non-biotic components and beyond the syllabi to understand the local lifestyle and problem of the community applies.
CO4:-The working in nature to save environment will help development of leadership Skills to promote betterment of environment.

Course ZO-113 : Zoology Practical Paper
CO1:-To understand the Animal diversity around us

CO2:-To understand the differences and similarities in the various aspects of classification.

CO3:- The learners will be able to identify and critically evaluate their own beliefs,valuesand actions in relation to professional and societal standards of ethic and its impacton ecosystem and biosphere due to the dynamics in population.

Course : MT111: Algebra and Geometry

CO1:-To learn divisibility of integers and congruence relations.

CO2:-To learn operations on polynomials, finding GCD of two polynomials and Roots of polynomials.

CO3:- To learn basic matrix algebra and method to find solutions to system of linear equations. Also to learn eigenvalues and eigenvectors of matrix

CO4:-To learn analytical geometry of 2 and 3 dimensions which include study of conics, planes,lines, sphere, cone and cylinder.

CO5:- To learn divisibility of integers and congruence relations.

Course : MT112: Calculus-I and Differential Equations

CO1:- To lea basic properties of real numbers and its subsets which is backbone of Analysis.

CO2:-To study functions in detail which is a fundamental structure in all sciences, and to be able

CO3:- To learn basic matrix algebra and method to find solutions to system of linear equations. Also to learn eigen values and eigenvectors of matrix.

CO4:- To learn analytical geometry of 2 and 3 dimensions which include study of conics, planes,lines, sphere, cone and cylinder.

Course : MT113: Mathematics Practical

CO1:-Problem solving skills of students are enhanced.

CO2:-Theoretical concepts are strengthened by solving maximum no. of problems

CO3:- Due to one to one interaction with the teacher doubts of the students get cleared if any.

CO4: Students learn how to apply mathematical concepts to practical and real life problems.

Course: PHY-111 Mechanics and Properties of Matter

CO1:-To understand the general structure of atom, spectrum of hydrogen atom.

CO2:-To understand the atomic excitation and LASER principles

CO3:-To understand the bonding mechanism and its different types.

CO4:-To demonstrate an understanding of electromagnetic waves and its spectrum.

CO5:- Understand the types and sources of electromagnetic waves and applications.

CO6:-To demonstrate quantitative problem solving skills in all the topics covered.

Course:PHY-112 Physics Principles and Application

CO1:- To understand the general structure of atom, spectrum of hydrogen atom.
CO2:- To understand the atomic excitation and LASER principles.
CO3:- To understand the bonding mechanism and its different types.
CO4:- To demonstrate an understanding of electromagnetic waves and its spectrum.
CO5:- Understand the types and sources of electromagnetic waves and applications.
CO6:- To demonstrate quantitative problem solving skills in all the topics covered.

Course:Gg-111 Introduction to Physical Geography I (Geo-morphology)
CO1 :Explain principal terms, definitions, concept and theories of Geo-morphology.
CO2: Discuss how different scales of time and space affect Geo-morphological processes and the development of micro to mega scale landform.
CO3 : Explain different concept, theories and models for landscape evolution.
CO4 : Describe the exogenous and endogenous processes in the landscape, their importance inlandform development, and distinguish the mechanisms that control these processes.
CO5 : Describe the different Materials of the earth crust, rock types, types of weathering, mass movements and types of slope.

Course:Gg-112 Introduction to Physical Geography-II(Geography of Atmosphere and Hydrosphere)
CO1: Explain basic concepts of air temperature, air pressure and its measurement.
CO2: Explain basic concepts of wind and wind measurement.
CO3 : Describe scales of Atmospheric Motion and Models of air circulation.
CO4: Explain basic concepts of hydro logical cycle, condensation and evaporation.
CO5: Describe concept of Lapse Rate, Stable and unstable Atmosphere, Air Masses & Fronts.

Course:Gg-113 Practicals in Physical Geography
CO1: Develop an idea about scale and draw different types of scale like linear, diagonal and vernier.
CO2: Acquire knowledge different types of map projection.
CO3: Gain knowledge about topographical maps and apply this knowledge in ground surface.
CO4: Topographical maps and its application in practical.

Course:CH-201: **Inorganic Chemistry**
CO1: Students define various theories and principles applied to revel atomic structure origin of quantum mechanics and its need to understand structure of hydrogen atom(Remembering).
CO2: Students explain Schrodinger equation for hydrogen atom, radial and angular part of hydrogenic wave functions.(Understanding)
CO3: Students apply rules for filling electrons in various Orbitals -Aufbau's principle, Pauli exclusion principle,

Hund's rule of maximum multiplicity (Appling)

CO4: Students design Skeleton of long form of periodic table, atomic structure, geometry and effect of lone pairs with examples such as ClF3, Cl2O, BrF5.(Analyzing)

CO5: Students assess the Skeleton of the long form of the periodic table.(Evaluating)

CO6: Students apply various principals for construction of Molecules.

Course:CH-202:-**Analytical Chemistry**

CO1: Define term mole, millimole, molar concentration, molar equilibrium concentration and Percent Concentration. (Remembering)

CO2: Outline the Basics of type determination, characteristic tests and classifications, reactions of different functional Groups.

CO3: Calculations of mole, molar concentrations and various units of concentrations will be helpful for the preparation of the solution (Appling)

CO4: Assemble SI units, the distinction between mass and weight (Analyzing)

CO5: Decide Working of pH meter, elemental analysis

CO6: Designing flow sheet of separation of binary mixture Purification techniques.(Creating).

Course:CH-203:-**Practical Chemistry-II**

CO1: Students should be defined inorganic estimations using volumetric analysis(Remembering)

CO2: Students should analyses synthesis of inorganic compounds(Understanding)

CO3: Students will classify commercial products(Appling)

CO4: Students will able to build techniques of purification of organic compounds(Analyzing)

CO5: Students should evaluate mechanism of reactions.(Evaluating)

CO6: Student plan for preparations and Mechanisms of reactions(Creating)

Course: BO 121:-Plant life and utilization II

CO1: Outline of vascular plants.

CO2 : Utilization & amp; economic importance of Vascular plants

CO3: Life cycle pattern in vascular plants

CO4: Study reproductive structures in plant

CO5: Utilization and economic importance of Plant: In food, fodder, fibers, horticulture and medicine.

Course : BO 122 Principles of plant science

CO1: Students will be able to know Introduction, Definition and scope of plant physiology

CO2: To understand Structure of plant cell, differences between prokaryotic and

eukaryotic cell.

CO3: Students will be able to know introduction and scope of molecular biology, Central dogma of molecular biology.

Course: BO123 :-Practical Course (Sem-II)

CO1: Recognize the live forms of Crypto-gamic and Phanero-gamic plants.

CO2: Study of utilization and economics imp of angiosperms.

CO3: Comparative account of dicots and monocots.

CO4: Know the systematic, morphology and structure, of nephrolepis Understand the life cycle pattern of nephro lepis.

Coures:ZO121:- Animal Diversity –II

CO1: To understand the Animal diversity around us.

CO2: Able to understand morphology of animals

CO3: To understand the differences and similarities in the various aspects of Classification.

Course: ZO122:- Cell biology

CO1: The learner understands and compares between the prokaryotic and Eukaryotic system and extrapolates the life to the aspect of development.

CO2: The learner will understand the importance of cell as a structural and Functional uni tof life

CO3: The cellular mechanisms and its functioning depends on endo-membranes And structures. They are best studied with microscopy**.**

Course: ZO123:- Zoology Practical Paper

CO1: The learner understands and compares between the prokaryotic and Eukaryotic system and extrapolates the life to the aspect of development

CO2: The cellular mechanisms and its functioning depends on endo-membranes And structures. They are best studied with microscopy.

CO3: To understand the Animal diversity around us.

Course : PHY-121 Heat and Thermodynamics

CO1: To understand the concept of the electric force, electric field and electric potential for stationary charges.

CO2: Able to calculate electrostatic field and potential of charge distributions using Coulomb's law and Gauss's law.

CO3: To understand the dielectric phenomenon and effect of electric field on dielectric.

CO4: To Study magnetic field for steady currents using Bio-Savart and Ampere's Circuital laws.

CO5: To study magnetic materials and its properties.

CO6: Demonstrate quantitative problem solving skills in all the topics covered.

Course : PHY-122 Electricity and Magnetism

CO1: To understand the concept of the electric force, electric field and electric potential for stationary charges.

CO2 : Able to calculate electrostatic field and potential of charge distributions using Coulomb's law and Gauss's law.

CO3: To understand the dielectric phenomenon and effect of electric field on dielectric.

CO4: To Study magnetic field for steady currents using Bio-Savart and Ampere's Circuital laws.

CO5: To study magnetic materials and its properties.

CO6: Demonstrate quantitative problem solving skills in all the topics covered.

Course :MTC-121 Analytical Geometry

CO1: The mathematical maturity of students in their current and future courses Shall develop.

CO2: The student develops theoretical, applied and computational skills.

CO3: The student gains confidence in proving theorems and solving problems.

Course : MTC122: Calculus – II

CO1: Describe the definite integral and construct anti derivatives using the Fundamental Theorem of Calculus.

Course : MTC123: Mathematics Practical

CO1: The mathematical maturity of students in their current and future courses Shall develop.

CO2: The student develops theoretical, applied and computational skills.

CO3: The student gains confidence in proving theorems and solving problems.

Course:Gg-121 :Introduction to Human Geography

CO1 : Acquaint students with the nature of man-environment relationship.

CO2 : Understand the spatial distribution of different racial groups, population, movement and its consequences, and settlement.

CO3 : Develop ideas on man-environment issues.

CO4 : To aware about different human economic activities.

CO5 : The geographical maturity of students in their current and future courses shall develop**.**

Course:Gg-122 :Population and Settlement Geography

CO1: Understand various facets pertaining to the spatial variation in the distribution of human population with special reference to the physical, cultural, and socioeconomic environment.

CO2: Gain understanding of the spatial and temporal characteristics of human

settlement and the influence of environmental factors on settlement.

CO3: Understand the trend and growth of rural and urban settlement and how Urbanization impacts the environment.

CO4: Learn the role of demography and population studies as a distinct fields of human geography.

CO5 : Examine population dynamics and characteristic with contemporary issues.

Course:Gg-123 :Practicals in Human Geography

CO1:- Acquire "real world" experience for the purpose of developing direct leadership, programming,and skills for entry into professional career

CO2 : Gain knowledge about measuring arithmetic growth rate of population and also measures of in equality.

CO3: Necessity of field report in practical geography; collection of data and how to prepare a report from the data collected.

CO4:-Lessons on carto-grams like pie graph, bar graph, and age-sex pyramid etc.

CO5 :-To understand various methods of human geography.

Course : CH-301Physical and Analytical Chemistry

CO1:-Students should be define kinetics, rate law, order,molecularity.(Remembering)

CO2:- Students should illustrate calculations of Arrhenius equation, Collision and transition state theory.(Understanding)

CO3:- Students should be illustrates surface chemistry, adsorption, adsorption materials. Relation with Langmuir adsorption isotherm, Freundlich's adsorption isotherm, BET theory.(Appling)

CO4:- Students assumes errors, accuracy, precision,minimization of errors, significant figures and computation and shows reliability of results And numerical.(Analyzing)

CO5:-Students will be perceive concept of volumetric analysis in Neutralization, Complexometric, redox and precipitation titrations.(Evaluating)

Course : CH302:- Inorganic and Organic Chemistry

CO1:- Define terms related to MOT, coordination compound, Hydrocarbons.(Remembering)

CO2:- Explain the terms LCAO principle, types of Mo's.(Understanding)

CO3:- Recognize functional groups and their reactions, addition reaction,nucleo-philic substitution, elimination reaction(Appling)

CO4:-Apply reaction mechanism to predict the products of the reaction in

SN1, SN2, E1, E2, rearrangement reaction. Apply rules of absolute configuration and will predict the configuration at chiral C atom.(Analyzing)

CO5:- Decide whether the reaction SN1, SN2, E1, E2 Reaction.(Evaluating)

CO6:-Plan for the synthesis of Alcohol, Ether, and Phenol.

Course :CH303:-Practical Chemistry-III

CO1:- Verify theoretical principles experiment Interpret the experimental data on the basis of theoretical principles.

CO2:-Interpret the experimental data on the basis of theoretical principles.

CO3:-Correlate theory to experiments. Understand/verify theoretical principles by Experiment observations; explain practical output / data with the help of theory.

CO4:-Understand systematic methods of identification of substance by chemical methods.

CO5:-Write balanced equation for the chemical reactions performed in the laboratory.

CO6:- Perform organic and inorganic synthesis and is able to follow the progress of the chemical reaction by suitable method (colour change, ppt. formation,TLC.)

CO7:-Set up the apparatus / prepare the solutions - properly for the designed experiments.

CO8:- Perform the quantitative chemical analysis of substances explain principles behind it.

CO9:-Systematic working skill in laboratory will be imparted in student

Course : BO 231 Taxonomy of Angiosperm Plant Ecology

CO1: Define plant taxonomy and taxonomic related terminologies.

CO2:-Explain different classification systems of angiosperms,learn plant families With examples

CO3:-Use required data sources for classification of angiosperms

CO4:-Determine Botanical Nomenclature of angiosperm plants

CO5:- Recognize ecological plant groups with examples.

Course : BO 232 Plant Physiology

CO1:-Knowledge of Plant - water relations.

CO2:-Concept to Transpiration and Factors affecting the rate of transpiration

CO3:-Knowledge of Plant growth and plant growth regulators

CO4:-Concept to Nitrogen metabolism.

CO5:-Knowledge of Seed dormancy and germination and concept Of Physiology of flowering plants.

Course :BO233 Practical Course

CO1:-Enable students to identify lab equipment

CO2:-Understand the fundamentals of Recombinant DNA Technology

CO3:- Micro/Mega-sporogenesis, pollination, fertilization, embryo & Endosperm formation in plants

CO4:-Understand the principle and basic protocols for Plant Tissue Culture.

Course :ZO231 Animal Diversity – III

CO1:-The students will be able to understand, classify and identify the diversity of higher vertebrates.

CO2:- The students will able to understand the complexity of higher vertebrates

CO3:- To understand different behaviours and adaptations in higher vertebrates.

Course :ZO232 Applied Zoology I

CO1:-To understand the biology, varieties of silkworms and the basic techniques of silk production and harvesting of cocoons.

CO2:-To learn the different silkworm species and their host plants.

CO3:- To study types of agricultural pests and Major insect pests of agricultural importance.

CO4:- To study Pest control practices.

Course :ZO233Zoology Practical Paper

CO1:- To study types of agricultural pests and Major insect pests of Agricultural importance.

CO2:-To understand the biology, varieties of silkworms and the basic techniques of silk production and harvesting of cocoons.

CO3:-The students will be able to understand, classify and identify the diversity Of higher vertebrates.

CO4:-The students will be able to understand the linkage among different groups Of higher vertebrates.

Course:Gg231:-Environmental Geography I

CO1 :-To create environmental awareness amongest the students.

CO2 :-To familiarize the students with fundamentals concepts of Environmental Geography.

CO3 :- To acquaint the students to past, present, and future utility and potentials of resources at regional, national and global levels.

CO4 :- To enable the students to understand dynamics of man–environment relationship in various region of the world.

Course:Gg232:-Geography of Maharashtra(Physical I)

CO1 :-To appraise the students with salient features of the Maharashtra State.

CO2 :-To familiarize the students with the climatic characteristics of the State.

CO3 :-To make the students aware of the geographic problems of Maharashtra in

the view of sustainable development.

Course:Gg233:-Surveying I

CO1 :-To acquaint the students with the principles of surveying, its importance, and its utility in the Geographical study.

CO2 :-To familiarize the students with the basic aspects of linear, vertical and Angular measurements of surveying.

CO3:-To understand the importance, basic principles and uses of GPS in surveying.

CO4 :-To identify sources and types of errors occurs during surveys.

CourseMT-231: Calculus of Several Variables

CO1:-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.

CO2:-A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.

CO3:-A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

CO4:-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.

CO5: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 MT-232A)Numerical Methods and It's Application

CO1:-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.

CO2 :-A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.

CO3:-A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

CO4:- 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.

CO5:-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: MT-233:-Mathematics Practical

CO1:-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.

CO2:-A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.

CO3:-A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

CO4:- 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.

CO5:-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:PHY-231: Mathematical Methods in Physics-I

CO1:- Understand the complex algebra useful in physics courses.

CO2:-Understand the concept of partial differentiation.

CO3:-Understand the role of partial differential equations in physics.

CO :- Understand vector algebra useful in mathematics and physics.

CO5:-Understand the concept of singular points of differential equations.

Course:PHY-232:-Electronics-I

CO1:-Apply different theorems and laws to electrical circuits.

CO2:-Understand the relations in electricity.

CO3:-Understand the parameters, characteristics and working of transistors.

CO4:-Understand the functions of operational amplifiers.

CO5:-Design circuits using transistors and applications of operational amplifiers.

CO6:-Understand the Boolean algebra and logic circuits.

Course:PHY-233:-Physics Laboratory-2A

CO1:-Use various instruments and equipment.

CO2:- Design experiments to test a hypothesis and/or determine the value of an unknown quantity.

CO3:-Investigate the theoretical background of an experiment.

CO4:- Setup experimental equipment to implement an experimental approach.
CO5:-Analyze the data, plot appropriate graphs and reach conclusions from data analysis.
CO6:-Work in a group to plan, implement and report on a project/experiment.
CO7:-Keep a well-maintained and instructive laboratory logbook.

Course: LA 231 English
CO1.:-To develop competence among the students for self-learning.
CO2:-To familiarize students with excellent pieces of prose and poetry in English so that the realize the beauty and communicative power of English.
CO3:-To develop students' interest in reading literary pieces.
CO4:-To expose them to native cultural experiences and situations in order to Develop humane values and social awareness.
CO5:-To develop overall linguistic competence and communicative skills of the Students.

Marathi Session 1 Applied Marathi (AECC-2A)
CO1:-Marathi language, literature and their interrelationships can be made aware.
CO2:-The development of Marathi language in terms of definition and style can be brought tothe notice of the students.
CO3:-Marathi language adaptive skills can be developed.
CO4:-Literary tastes can be developed.
CO5:-Marathi language, literature and their interrelationships can be made aware.
CO6:- The study of literature can help in understanding life.
CO7:-Scientific comprehension can be enhanced.

Course EVS-231 : Environmental Awareness
CO1:- Discover knowledge in ecological perspective and value of environment
CO2:- Understand the significance of various natural resources and its management.
CO3:- To understand the world's biodiversity and the importance of its conservation.
CO4:-To know about sustainability & sustainable development.

Course :CH-401:-Physical and Analytical Chemistry
CO1:-Students should define phase, components, degrees of freedom Gibbs phase rule.(Remembering).
CO2:-Students should illustrate phase diagrams of one-component systems- water, carbon dioxide and sulphur systems, problems.(Understanding)

CO3:-Students should apply ideal solutions, Raoult's and Henry's Law to relation with binary systems of partially miscible liquids-CST.(Appling)

CO4:-Students assumes Electrolytic Conductance, Resistance,conductance, Ohm's law, cell constant Kohlrausch & amp;#39;s la wand Whetstone Bridge.(Analyzing).

CO5:-Students will perceive concept Lambert-Beer's Law Principle, Construction and Working of calorimeter.Students conclude column chromatography with application.(Evaluating).

Course :CH-402 Inorganic and Organic Chemistry

CO1:-Isomerism in coordination complexes

CO2:-Explain different types of isomerism in coordination complexes.

CO3:-Apply principles of VBT to explain bonding in coordination compound of Different geometries

CO4:-Correlate no of unpaired electrons and orbitals used for bonding.

CO5:- Identify / explain / discuss inner and outer orbital complexes.**CO6**:-Explain / discuss limitation of VBT.

CO7:-Explain principle of CFT.

CO8:-Apply crystal field theory to different type of complexes (Td, Oh, Sq. Pl complexes)

CO9:-Explain: i) strong field and weak field ligand approach in Oh complexes ii) Magnetic properties of coordination compounds on the basis of weak and strong ligand field ligand concept.

CO10:-iii) Origin of colour of coordination complex Course

Course : CH-403Course : Practical Chemistry

CO1:- Student find theoretical principles experimentally

CO2:- Student Interpret the experimental data on the basis of theoretical principles

CO3:- Student make use of theory to the experiments.Understand / verify theoretical principles by experiment.(Appling)

CO4:- Student take part in systematic methods of identification of substance By chemical methods.

CO5:- Student assess to write balanced equation for all the chemical reactions performed in the laboratory.

CO6:-Student develop and perform organic and inorganic synthesis and able to follow the progress of the chemical reaction. Perform the quantitative chemical analysis of substances and able to explain principles.

Course :ZO241 Animal Diversity – IV

CO1:-To understand the origin and advancement of higher vertebrates (tetrapoda)

CO2:-To understand general characters of different groups of higher vertebrates.

CO3:-To classify vertebrates and to become able to understand the possible group Of vertebrates observed in nature.

CO4:- The students will able to understand the complexity of higher vertebrates.

Course :ZO242Applied Zoology II

CO1:-The learner understands the basics about beekeeping tools, equipment, and Managing beehives.

CO2:-To understand the basic life cycle of the honeybees, beekeeping tools and equipments.

CO3:-To understand the basic information about fishery, cultural and harvesting Methods of fishes.

CO4:-To understand fish preservation techniques.

Course :ZO243 Zoology Practical Course

CO1:-To understand general characters of different groups of higher vertebrates.

CO2:-The learner understands the basics about beekeeping tools, equipment, And Managing beehives.

CO3:- To understand fish preservation techniques.

Course : BO 241: Plant Anatomy and Embryology

CO1:- Study Plant Anatomy, Embryology

CO2:-Describe various tissue systems in plants like epidermal, mechanical And vascular.

CO3:- Interpret the Principles- incomprehensibility ,inextensibility,shearing stress Etcin plants.

CO4:-Discuss the Structure and development process of male and female Gameto-phyte,The types of micro spore, ovules, embryo, seed and endosperm.

CO5:-Explain the process of normal and abnormal secondary growth in plants.

Course : BO242:-Plant Biotechnology

CO1:- Define the terminologies related to plant biotechnology.

CO2:-Describe the fermentation process&enzyme technology.

CO3:- Interpret the production of Single cell proteins Study the concept Of phy to remediation.

Course : BO243:-Practical Course

CO1:-Enable students to identify lab equipments.

CO2:-Understand the fundamentals of Recombinant DNA Technology

CO3:-Micro/Mega sporogenesis, pollination, fertilization, embryo &

Endosperm formation in plants

CO4:- Understand the principle and basic protocols for Plant Tissue Culture**.**

Course:Gg241:-Environmental Geography II

CO1:-To introduce the methods and assessments of the impact on the environment amongst the students.

CO2:-To acquaint the students with environmental protection laws, acts, planning, and management.

CO3 :-To appraise the students with various indigenous environmental conservation measures.

CO4 :-To make aware the students about various programs and policies carried out in the regional and global scale.

Course:Gg242:- Geography Of Maharashtra(Human II)

CO1:-To acquaint the students with the relationship between man and environment in MaharashtraState.

CO2 :-To familiarize the students with the agricultural pattern, problems and prospects in the state.

CO3 :-To study and understand the industrial sector, spatial distribution, development and problemsfaced within the state

CO4 :-To know the status of transport and communication in Maharashtra state.

Course:Gg243:-Surveying-II

CO1:- acquaint the students with the principles of surveying, its importance and utility in the Geographical study.

CO2 :-To familiarize the students with the basic aspects of linear, vertical, and angular measurementsof surveying.

CO3 :-To introduce the importance, basic principles, and uses of GPS in surveying.

CO4:- To identify sources and types of errors occurs during surveys.

CO5 :-To enable the students to use various instruments of surveying .

Course:MT-241: Linear Algebra

CO1:-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.

CO2:-A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.

CO3:-A student should get adequate exposure to global and local concerns that

explore them many aspects of Mathematical Sciences.

CO4:- 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.

CO5:-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:MT-242 A): Vector Calculus

CO1:-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.

CO2:-A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.

CO3:-A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

CO4:- 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.

CO5:-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:MT-243:-Mathematics Practical

CO1:-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.

CO2:-A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.

CO3:-A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

CO4:- 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.

CO5:-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: PHY-241: Oscillations, Waves and Sound

CO1:-To study underlying principles of oscillations and its scope in development. **CO2:-** To understand and solve the equations / graphical representations of motion for simple harmonic, damped, forced oscillators and waves.

CO3:- To explain oscillations in terms of energy exchange with various practical applications.

CO4:-To solve numerical problems related to undamped, damped, forced oscillations and superposition of oscillations.

CO5:-To study characteristics of sound, decibel scales and applications.

Course: PHY-242:Optics

CO1:- Acquire the basic concept of wave optics.

CO2:-Describe how light can constructively and destructively interfere.

CO3:- Explain why a light beam spread out after passing through an aperture.

CO4:-Summarize the polarization characteristics of electromagnetic wave.

CO5:- Understand the operation of many modern optical devices that utilize wave optics.

CO6:-Understand optical phenomenon such polarization, diffraction and interference in terms of the wave model.

CO7:- Analyze simple example of interference and diffraction.

Course PHY-243: Physics Laboratory-2B

CO1:-Use various instruments and equipment.

CO2:-Design experiments to test a hypothesis and/or determine the value of an unknown quantity.

CO3:- Investigate the theoretical background of an experiment.

CO4:-Setup experimental equipment to implement an experimental approach.

CO5:-Analyze the data, plot appropriate graphs and reach conclusions from data analysis.

CO6:-Work in a group to plan, implement and report on a project/experiment.

CO7:-Keep a well-maintained and instructive laboratory logbook

Course: LA 241 English

CO1:-To develop competence among the students for self-learning.

CO2:-To familiarize students with excellent pieces of prose and poetry in English

so that the realize the beauty and communicative power of English.

CO3:- To develop students' interest in reading literary pieces.

CO4:-To expose them to native cultural experiences and situations in order to Develop humane values and social awareness.

CO5:-To develop overall linguistic competence and communicative skills of the Students.

Marathi Session 1 LA 241 Applied Marathi (AECC-2A)

CO1:-Marathi language, literature and their interrelationships can be made aware.

CO2:-The development of Marathi language in terms of definition and style can be Brought t othe notice of the students.

CO3:-Marathi language adaptive skills can be developed.

CO4:- Literary tastes can be developed.

CO5:-Marathi language, literature and their interrelationships can be made aware.

CO6:-The study of literature can help in understanding life.

CO7:-Scientific comprehension can be enhanced

TYBSC CO's

501: Physical Chemistry- I

CO1:- Tell historical of development of quantum mechanics in chemistry. (Remembering).

CO2:-Explain the differences between classical and quantum mechanics. (Understanding).

CO3:-Utilize the idea of wave function, Photo chemistry & Quantum chemistry (Appling)

CO4:-Simplify De Broglie hypothesis and the uncertainty principle (Analyzing)

CO5:-Interpret the operators: Position, momentum and energy(Evaluating)

CO6.:-Estimate Schrodinger equation for 1D, 2D and 3D model(Creating)

CH-502 Analytical Chemistry-I

CO1:-Define basic terms in gravimetry, spectrophotometry,qualitative analysis and parameters in instrumental analysis.(Remembering)

CO2:- Illustrate important parameters in analytical processes or estimations. (Understanding)

CO3:- Experiment with different principles involved in the gravimetric, spectro photometer, parameters in instrumental analysis, qualitative analysis. (Appling)

CO4:- Examine quantitative calculations depending upon equations student has studied in the theory. (Analyzing**)**

CO5:-Evaluate the different analytical terms, process and analytical methods. (Evaluating)

CO:- Design analytical procedure for given sample. (Creating)

CH-503 Physical Chemistry Practical-I

CO1:- Recall of Refractometer, Spectrophotometer, Conductometer and Viscometers and their principles. To find R.I. , absorbance, maximum wavelength, conductance and viscosity of different solutions (Remembering**)**

CO2:- Demonstration of refractometer, spectrophotometer, conductometer and viscometer (Understanding).

CO3:- Application of various instruments and developing knowledge (Appling**)**

CO4:- Examining the changes in solution on mixing by using instrumental methods (Analyzing)

CO5:-Imporatance of the instruments like Refractometer, Conductometer, Spectro photometer, Viscometer(Evaluating)

CO6:-Building of knowledge of handling the instruments.

CH-504: Inorganic Chemistry - I

CO1:-To define all the terms in MOT of Coordination Compounds, Metals, Semiconductors and Superconductors etc. (Remembering)

CO2:- To explain electro neutrality principle an different types of pi bonding, Nephelauxetic effect towards covalent bonding, electrical conductivity of metals with respect to valence electrons, effect of temperature and impurity on conductivity of metals and semiconductors. (Understanding)

CO3:-To develop the interest in MOT of Coordination Compounds, Metals, Semiconductors and Superconductors etc. (Applying)

CO4:-To compare the different approaches to bonding in Coordination compounds and to distinguish the difference between Na, Mg, and Al in terms of valence electrons and conductivity. (Analysing)

CO5:- To give importance of lanthanide elements in different **i**ndustries.(Evaluating)

CO6:-To develop interest in MOT of Coordination Compounds, Metals, Semiconductors and Superconductors and Inorganic Reaction Mechanism etc. (Creating)

CH-505 Industrial Chemistry

CO1:- Define various term used in chemical industries & list the application of chemicals.(Remembering)
CO2:- Explain physico-chemical principle to the manufacturing of various chemicals. (Understanding)
CO3: -Make use of catalyst in chemical reaction.(Appling)
CO4:- Distinguish between soap & detergents, Dyes & pigments.(Analyzing)
CO5:- Decide the used of correct raw material for particular production.(Evaluating) etc. (Creating)

CH-506 Inorganic Chemistry Practical-I

CO1:- Define the terms Gravimetric estimation, Inorganic preparation and Inorganic Qualitative analysis.(Remembering)
CO2:- Interpret Gravimetric estimation, Inorganic preparation and Inorganic Qualitative analysis.(Understanding)
CO3:-Experiment with Gravimetric estimation, Inorganic preparation and Inorganic Qualitative analysis.(Applying)
CO4:-Examine the inorganic practical techniques.(Analysing)
CO5:-Determine the various techniques of inorganic practical chemistry.(Evaluating)

CH-507: ORGANIC CHEMISTRY-I

CO1:- Recall the terms- Aromatic, Non-aromatic, Anti aromatic compounds. (Remembering)
CO2:-Explain different types of elimination reactions and factor affecting the reactivity-effect of structure, attacking base, and leaving groups (Understanding)
CO3:-List of different types of rearrangement reaction and their synthetic applications. (Applying)
CO4:-Make use of different active methylene compounds in

organic synthesis. (Analysing)

CO5:-Criteria for deciding the compounds into aromatic, non-aromatic anti aromatic etc. (Evaluating)

CO6:- Discuss the electrophilic and nucleo-philic substitution reaction of polycyclic and hetero aromatic compounds. (Creating)

CH-508:-Chemistry of Bio molecules

CO1:-To define various terms in Carbohydrates, Lipids Amino acids and proteins, Enzymes and Hormones. (Remembering)

CO2:-To classify different amino acids and proteins. (Understanding)

CO3:- To makes uses of different charts of Carbohydrates, Lipids Amino acids and proteins,Enzymes and Hormones prepared by students.(Applying)

CO4:- List different types of amino acids and proteins.(Analysing)

CO5:-To explain classes of enzyme with sub classes and examples. (Evaluating)

CO6:-To discuss concept of endocrinology, types of endocrine gland and their hormones. (Creating)

CH-509:-Organic Chemistry Practical-I

CO1:- Student should define general concept in Organic chemistry practicals.(Remembering)

CO2:-Student should apply the effectively communicate scientific information and research results in written and oral formats.(Understanding)

CO3:-Students develop experimental techniques by using modern instrumentation methods.(Appling)

CO4:-Student should take part in the laboratory skills needed to design, safely conduct and interpret chemical research.(Analyzing)

CO5:-Student should deduce the qualitative chemical analysis of substances and able to explain principles behind it.(Evaluating)

CO6:-Student should develop skills required in chemistry such as the appropriate handling of apparatus and chemicals. (Creating)

CH-510B:-Polymer Chemistry

CO1:- Define the history of polymers. (Remembering)

CO2:- Compare the simple compounds and polymer.(Understanding)

CO3:- Identify the names of polymers and various ways of nomenclature.(Appling)

CO4 :- Distinguish between natural, synthetic, organic and

inorganic polymers. (Analyzing)

CO5:- Terms-Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight. (Evaluating)

CO6:- Predict the role of polymer industry in the economy and advantages of polymers.(Creating)

CH-511A:- Environmental Chemistry

CO1:- To define environment, some environmental concepts, segments of environment, hydrosphere, and water pollution. Which analytical techniques and methods of treatments used in water pollution? (Remembering)

CO2:- Explaination of various terms used in environmental chemistry. Classification of water pollutants, anions, cations elements in water. (Understanding)

CO3:- Identification of water pollutants, different elements in water. Make use of various water treatments. To plan various measures to minimize water pollution..(Appling)

CO4 :- To assume various factors affecting environmental pollution, to classify pollutants into different categories. List of water pollutants. (Analyzing)

CO5:- Explaining natural cycles, COD, BOD, DO. To evaluate DO, organic, inorganic pollutants Evaluating)

CO6:- Building a knowledge of environmental pollution, various segments in environment, Minimizing water pollution by designing different methods decreasing pollution. .(Creating)

Course :CH-601: PHYSICAL CHEMISTRY – I

CO1:- To know and understand: Electro-chemical cells: explanation of Daniel cell,conventions to represent electro-chemical cells 2.Thermodynamic condition so reversible cell, explanations of reversible Electro-chemical cell with suitable example.

CO2:-To Distinguish between crystalline and amorphous solids / an-isotropic and isotropic solids. Explain the term crystallography and laws of crystallography.

CO3:-To know 1. Radioactivity 2. Types and properties of radiations: alpha, beta And gamma 3. Detection and Measurement of Radioactivity: Cloud chamber, Ionization Chamber, Geiger-Muller Counter, Scintillation Counter, Film Badges.

CO4:-To Discuss Application of radioisotopes as a tracer: Chemical investigation- Esterification, Friedel - Craft reaction and structure determination w.r.t pcl5, Age determination use of tritium and C14 dating.

Course :CH-602: PHYSICAL CHEMISTRY –III

CO1:- Meaning of the terms-Solution, electrolytes, non electrolytes and Colligative properties,

CO2:- Rate laws for reactions in solid state

CO3:-Applying rate laws for solid state Reactions Results of kinetics studies

CO4:-Cohesive Energy of ionic crystals based on coulomb's law and Born Haber Cycle 2.Correspondence between energy levels in the atom and energy bands in solid 3.Band structure in solids – Na , Ca and diamond.

CO5:-History of polymers. 2) Classification of polymers 3) Chemical bonding &Molecular forces in Polymer 4) Molecular weight of polymers

Course : CH-603 PHYSICAL CHEMISTRY PRACTICAL – II

CO1:- Calculate specific rotation .

CO2:- Determine specific rotations and percentage of to optically active substances by polorimetrically.

CO3:- Study the energy of activation and second order reaction.

CO4:-Study the stability of complex ion and stranded free energy change and equilibrium constant by potentiometry.

CO5:- Find out the acidity, basicity and pka value on pH meter

Course : CH -604Inorganic Chemistry- II

CO1:-To define organometallic chemistry, homogeneous and heterogeneous catalysis. (Remembering)

CO2:- To classify essential properties of heterogeneous catalysts, metals as enzymatic and non-enzymatic. (Understanding)

CO3:-To identify the biological role of inorganic ions & comppounds.(Applying)

CO4:-To compare organic polymers . (Analysing)

CO5:- To explain the functions of hemoglobin and myoglobin in O2transport and storage. (Evaluating).

Course :CH_605 Inorganic Chemistry -III

CO1:-To define different theories of Acid-Bases, Pauling's univaplentradius and crystal radius. (Remembering)

CO2:- To explain various methods of nano particle synthesis, Zeolite synthesis and their structure, Strength of various types acids.(Understanding)

CO3:-To solve simple problems based on Pauling's univalent radii and crystal radii, simple problems based on Born- Haber cycle.(Applying)

CO4:-To distinguish between the defects. (Analysing)

CO5:-To explain Application of zeolites, Nano particles, carbon nanotube.

(Evaluating)

CO6:- To develop interest in Nano chemistry. (Creating)

Course: CH-606 Inorganic Chemistry Practical-II

CO1:-Define the terms volumetric estimations, Flame Photo metry,chromatography, nano synthesis.(Remembering)

CO2:-Interpret volumetric estimations, Flame photo metry,chromatography, Nano synthesis. (Understanding)

CO3:- Experiment with volumetric estimations, Flame photometry,chromatography, nano synthesis.(Appling)

CO4:- Examine the inorganic practical techniques.(Analyzing

CO5:- Determine the various techniques of inorganic practical chemistry.(Evaluating)

CO6:- Test the various inorganic estimations and synthesis. (Creating).

Course Code: CH-607:Organic Chemistry-II

CO1:-Students will define the principle of mass spectroscopy, its instrumentation and nature of mass spectrum. (Remembering)

CO2:-Students will illustrate the principle of UV spectroscopy and the nature of UV spectrum. They will learn types of electronic excitation.(Understanding

CO3:-Students will be able to Experiment with calculate maximum wavelength for Any conjugated system. And from the value of λ-max they will be able to find out theextent of conjugation in the compound. (Appling)

CO4:-Students will examine the principle of IR spectroscopy, types of vibrations and the nature of IR spectrum. (Analyzing)

CO5:-Justify the IR spectrum, they will be able to find out IR frequencies of Different functional groups. And thus, they will be able to find functional groups present in the compound. (Evaluating)

CO6:-Students will be able to design the NMR data and they will be able to use it For determination of structure of organic compounds.(Creating).

Course : CH-608 Organic Chemistry-III

CO1:- Recall the terms related to Retro synthetic Analysis and Applications OrganicReaction Mechanism and Synthetic Applications ,Reagents in Organic Synthesis,Natural Products (Remembering)

CO2:- Compare and classified various retro synthetic reactions and explain the Terms prelated to natural products(Appling)

CO3:- Apply stability, energy calculations and optical activity of conformers (Understanding)

CO4 :-Analyze and distinguish different models and to draw different types of conformational isomers of decalin in chair form (Analyzing)

CO5:- Justify the stability of geometrical isomers of decalin (Evaluating)

CO6:- Design various types of molecular rearrangement reactions (Creating)

Course : CH-609 Organic ChemistryPracticalII

CO1:- Student should define "fingerprint region" of an infrared spectrum canused in the identification Of unknowncompound.(Remembering)

CO2:-Illustrate the broad regions of the infrared spectrum in which absorption Caused by N−H, C−H, and O−H, C≡C and C≡N, C=O, C=N, C=C.(Appling)

CO3:-Identify the functional group or groups present compound.(Understanding)

CO4:-Student should analyze and Understand use NMR spectra to determine the Structures of compounds.(Analyzing)

CO5:-Determination of structure of the organic compounds by using Infrared as Well as NMR Spectra.(Evaluating)

CO6:-Develop the practical skills required to estimations of glucose and glycine.(Creating).

Course : 610 (A) : Chemistry of Soil and Agrochemical

CO1:- Understood various components of soil and soil properties and their impact On plant growth.

CO2:- Understood the classification of the soil.

CO3:- Explores the problems and potentials of soil and decide the most Appropriate treatment for land use.

CO4:-Understood the Reclamation and management of soil physical and chemical constraints.

CO5:- Useful in making decisions on nutrient dose, choice of fertilizers and Method of application etc. practiced in crop production.

CO6:- Got experience on advanced analytical and instrumentation methods in the estimation of soil.

CO7:- Understood various Nutrient management concepts and Nutrient use efficiencies of major and micro-nutrients and enhancement techniques.

CO8:- Proper understanding of chemistry of pesticides will be inculcated among The students.

CO9:- Imparts knowledge on different pesticides, their nature and, mode of Action and their fate in soil so as to monitor their effect on the environment.

Course 611A:Analytical Chemistry

CO1:- Define basic terms in solvent extraction, basics of chromatography, HPLC, GC, and AAS and AES. Some important terms are: solvent extraction, aqueous and organic phase, distribution ratio and coefficient, solute remain unextracted, percent extraction, ion association complex, theoretical plate, HETP, retention time, selectivity, resolution, stationary phase, normal and reverse phase, ion exchange, column efficiency, carrier gas, split and spitless injection, packed column, tubular column, atomic absorption and emission spectroscopy, electronic excitation in atoms, nebulization, atomization, reduction of metal ions in flame, absorbance by atoms in flame, flame atomizers, furnace atomizers, interference in AES and FES, HCL, hydride generator.

CO2: Identify important parameters in analytical processes or estimations. Example: minimum analyte concentration in particular method, reagent concentration for

particular analysis, reagent for particular analysis, reaction condition to convert analyte into measurable form, wavelengthselection in HPLC with spectrophotometric and fluorometric detector, solvent or carrier gas in HPLC and GC, choice method for the sample preparation in atomic spectroscopic methods, choice of filter and HCL in atomic spectroscopic methods, etc.

CO3:- Explain different principles involved in the analyses using solvent extraction, basics of chromatography, HPLC, GC, and atomic spectroscopic techniques..

CO4:- Perform quantitative calculations depending upon equations students has studied in the theory.Furthermore, student should able to solve problems on the basis of theory.

CO5:- Discuss / Describe procedure for different types analyses included in the syllabus.

CO6:- Select particular method of analysis if analyte sample is given to him.

CO7:- Differentiate / distinguish / compare among the different analytical terms, process and analytical methods.

CO8:- Demonstrate / explain theoretical principles with help of practical.

CO9:- Design analytical procedure for given sample.

CO9:- Apply whatever theoretical principles he has studied in theory during practical in laboratory.

PROGRAM OUTCOMES

BACHELOR OF ARTS- (B.A).

Programme Outcome for Bachelor in Arts (General):

PO1: Communication Skills : A graduate student in arts/social sciences/humanities shall be confident to speak, write, read, listen and understand the English language and one or more Indian languages. Relate the ideas, knowledge, books, and people. Think and decide rationally, and adopt technology and electronic/print media in disseminating thoughts, facts and realities.

PO2: Social responsibility: Develops an obligation to act for the benefit of society at large. Cultivates the responsibility to maintain a balance between the economy and the ecosystems. Nurtures a moral obligation to minimize the adverse effect on those immediately around them.

PO3: Critical, logical and rational thinking: Acquire the ability for objective, rational, skeptical, logical, and unbiased analysis of factual evidences to form a judgment or conclusion. Enhance the process of rational thinking, problem solving and analytical

evaluation from different perspectives.

PO4: Enlightened and effective Citizenship: Cultivates progressive citizenship for a knowledge society for peace and prosperity of nations and the world. Develops clear, rational and progressive thinking. Participating in decision-making concerning the society and upholding national development, integrity, unity and fraternity.

PO5: Values and Ethics: Recognizes the importance, worth and usefulness of principles and standards of behaviour, moral dimensions of one's own decisions ad judgment of what is important in life. Understand the rules of behaviour based on systematizing, defending and recommending the concepts of right and wrong.

PO6: Sustainable development: Understands, organizes and promotes the principle of human development goals by sustaining the ability of natural systems, natural resources and ecosystem services upon which the economy and society depends.

PO7: Life-long process of Learning: Cultivates the proficiency to engage in independent, life-long and progressive learning abilities in the broadest context of changing sociopolitical-economic-cultural and technological scenario.

Program Specific Outcomes (PSO): BA ENGLISH

PSO1 : Linguistic and Communicative Competencies among the Students will be enhanced.

PSO2 : The Students will be introduced to English Literature and Literatures in English.

PSO3 : The Students will get sensitized about Various Forms of Literature.

PSO4 : Thinking and Critical Abilities will be inculcated in them.

PSO5 : Values of Equality, Integrity and Nationalism will be imbibed in students.

PSO6 : To develop the listening skills of the students so that they can understand English in a

range ofcontexts.

PSO7 : To develop the skills of the students so that theycan express their thoughts, opinions, arguments and a range of language functions with sufficient clarity and accuracy of language and Pronunciation.

PSO8 : To develop the writing skills of the students soas to enable them to express their thoughts, opinions, arguments and a range of language functions in support their tasks..

PSO9 : To raise the students' awareness of the English

FYBA

FYBA Compulsory English Sem. I (11011)

CO1 : Students will get familiarized with excellent pieces of prose and poetry in English so that

They realize the beauty and communicative power of English.

CO2 : They will get exposed to native cultural experiences and situations in order to develop

humane values and social awareness

CO3 : The students will develop overall linguistic competence and communicative skills.

FYBA Compulsory English Sem. II (11012)

CO1 : Students will have acquainted with prose and poem to realize the beauty and communicative power of English.

CO2 : They will be exposed to different cultural experiences and developed humane values

CO3 : The students will develop overall linguistic competence and communicative skills.

FYBA Optional English Sem. I (11331)

CO1 : Students will be exposed to the basics of literature and language

CO2 : They will learn about with different types of literature in English, the literary devices and terms so that they understand the literary merit, beauty and creative use of language.terms so that they understand the literary merit, beauty and creative use of language.

CO3 : To introduce the basic units of language so that they become aware of the technical aspects and their practical usage.

CO4 : Students will go for detailed study and understanding of literature and language.

CO5 : They will develop integrated view about language and literature in them

FYBA Optional English Sem. II (11332)

CO1 : Students will be exposed to the basics of literature and language

CO2 : They will learn about with different types of literature in English, the literary devices and terms so that they understand the literary merit, beauty and creative use of language.

CO3 : To introduce the basic units of language so that they become aware of the technical aspects and their practical usage.

CO4 : Students will go for detailed study and understanding of literature and language.

CO5 : They will develop integrated view about language and literature in them

S.Y.B.A.

SYBA Compulsory English Sem. III (23001)

CO1. Students will get exposed to the best examples of literature in English and to contributeto their emotional quotient as well as independent thinking.

CO2. Universal human values will be instilled through best pieces of literature in English

CO3. Students will develop effective communication skills by developing ability to use right words in the right context.

SYBA Compulsory English Sem. IV (24001)

CO1. Eemployability of the students will be enhanced by developing their basic soft skills

CO2. Universal human values will be instilled through best pieces of literature in English

SEC1A SYBA Advanced Study of English Language Sem. III (23333)

CO1. Students will get familiarized with the various components of language.

CO2. They will develop overall linguistic competence.

CO3. Students will be introduced to some advanced areas of language study.

SEC2B SYBA Advanced Study of English Language Sem. IV (24333)

CO1. Students will be prepared to go for detailed study and understanding of language.

CO2. Communicative skills of students will be enhanced by developing insight into the working of language.

DSC 1A Appreciating Drama Sem. III (23331)

CO1. Students will be introduced Drama as a major form of literature

CO2. They will be introduced minor forms of Drama

CO3. The students will be acquaint and get familiarized with the elements and the types of Drama.

CO4. They will be acquainted and enlightened students regarding the literary and the performing of language.

DSC 1B Appreciating Drama Sem. IV (24331)

CO1. Students will be able to make a detailed study of masterpieces of English Drama from different parts of the world

CO2. Interest will be developed to appreciate and analyze drama independently among the Students.

CO3. Students' awareness regarding aesthetics of Drama will evolve and they will be empowered to evaluate drama independently

DSC 2A Appreciating Poetry Sem. III (23332)

CO1. Students will be acquainted with elements of poetry like figures of speech and stanzaforms

CO2. They will be able to distinguish among the different types of poetry thereby studying poetry with greater insight.

CO3. They will enjoy select masterpieces of English poetry.

DSC 2B Appreciating Poetry Sem. IV (24332)

CO1. Students will be acquainted with a few modernist poets and thus be encouraged to read notable poetry of the modernist era.

CO2. They will be introduced to the poetic themes like discrimination, perseverance, empathy etc. enhancing their insight of human values.

CO3. They will be able to comprehend the diverse poetic canvas through some of the

poems of Australian, American, and Indian poets.

SEC2A Certificate Course in Skill Development Mastering Communication Skills

Sem. III (23334)

CO1. Students will be able to improve their overall communication skills

CO2. They will get acquainted with the nuances of verbal and nonverbal communication

CO3. They will get exposure to spoken English in different situations.

SEC2B Certificate Course in Skill Development Mastering Communication Skills

Sem. IV (24334)

CO1. Students will acquire basics of soft skills

CO2. They will be able to interact in English

CO3. Students will gain confidence in public speaking

T. Y. B. A.

Compulsory English (Subject Code : 35001 & 36001)

CO1. To familiarize students with some excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English.

CO2. To enable students to become competent and effective users of English in real life situations.

CO3. To contribute to the overall personality development of the students.

CO4. To instill humanitarian values and foster sympathetic attitude in the students.

CO5. To train the students in practical writing skills required in work environment.

CO6. To impart knowledge of some essential soft skills to enhance their employ ability.

English General Paper III (G-3) : Skill Enhancement Course SEC-1C & Sec-1D

Title : Enhancing Employability Skills

Subject Code : 35333 & 36333)

CO1. To get the awareness of career opportunities available to them.

CO2. To identify the career opportunities suitable to them.

CO3. To understand the use of English in different careers.

CO4. To develop competence in using English for the career of their choice.

CO5. To enhance skills required for their placement.

CO6. To use English effectively in the career of their choice.

CO7. To exercise verbal as well as nonverbal communication effectively for their career.

English Special Paper III (S-3): Discipline Specific Elective DSE-1C & DSE-1D

Title : Appreciating Novel

Subject Code : 35331 & 36331

CO1. To introduce students to the basics of novel as a literary form.

CO2. To expose students to the historical development and nature of novel.

CO3. To make students aware of different types and aspects of novel.

CO4. To develop literary sensibility and sense of cultural diversity in students.

CO5. To expose students to some of the best examples of novel.

English Special Paper IV (S-4): Discipline Specific Elective DSE-2C & DSE-2D

Title : Introduction to Literary Criticism

Subject Code : 35332 & 36332

CO1. To introduce students to the basics of literary criticism.

CO2. To make them aware of the nature and historical development of criticism.

CO3. To make them familiar with the significant critical approaches and terms.

CO4. To encourage students to interpret literary works in the light of the critical approaches.

CO5. To develop aptitude for critical analysis.

Skill Enhancement Course (SEC2-C & SEC 2-D)

Title : Mastering Life Skills and Life Values.

CO1. To equip the students with the social skills

CO2. To train the students interpersonal skills

CO3. To build self-confidence and communicate effectively

CO4. To Encourage the students to think critically

CO5. To learn stress management and positive thinking

CO6. To enhance leadership qualities

CO7. To aware the students about universal human values

CO8. To develop overall personality of the students

S. Y. B. Sc. & S. Y. B. Sc. (Computer Science) English

CO1. To develop competence among the students for self-learning.

CO2. To familiarize students with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English.

CO3. To develop students' interest in reading literary pieces.

CO4. To expose them to native cultural experiences and situations in order to develop humane values and social awareness.

CO5. To develop overall linguistic competence and communicative skills of the Students.

F.Y.B.Com : Subject : Compulsory English

CO1. To offer relevant and practically helpful pieces of prose and poetry to students so

that they not only get to know the beauty and communicative power of English but also its

practical application.

CO2. To expose students to a variety of topics that dominate the contemporary socio-economic and cultural life.

CO3. To develop oral and written communication skills of the students so that their employability enhances.

CO4. To develop overall linguistic competence and communicative skills of students.

F.Y.B.Com : Subject : Additional English

CO1. To expose students to a good blend of old and new literary extracts having various themes that are entertaining, enlightening and informative so that they realize the beauty and communicative power of English.

CO2. To make students aware of the cultural values and major problems in the world today.

CO3. To develop literary sensibilities and communicative abilities among students.

DEPARTMENT OF MARATHI

Program Specific Outcomes (PSO): B.A.(Marathi) section objectives are as follows-

PSO1 : Develop Communication Skills in Marathi and analyse the basic problem of students in communication skills

PSO2 : Develop Phonetics in Students.

PSO3 : Creating an interest in Marathi literature

PSO4 : Students will be introduced to the rich and glorious tradition of Marathi language and literature.

PSO5 : students will develop interest in Marathi language.

PSO6 : will develop the personality of the students.

PSO7 : The values of life will be inculcated in students.

PSO8 : The relationship between the curriculum and its interactive use of life can be explained.

F. Y. B. A.

Marathi General Paper I - CC-A (General Level-1)

Sem-I : Marathi Literary Stories and Linguistic Skills Development /
Sem-II : MarathiLiterature : Drama and Linguistic Skills Development

CO1. Will introduce Marathi literature, Marathi language and Marathi culture respectively
CO2. Interest in Marathi literature will be created.
CO3. Literary tasted will develop.
CO4. Different streams and types of Marathi literature will be noticed.
CO5. It will help in developing skills in various linguistic fields.
CO6. It will help to know the application skills of Marathi language.

Outcomes of Second Year Art (S. Y.B.A.) G2 are as under

Session 1 : Linguistic Skills Development and Modern Marathi Literature Type :

Novel

[CC -1 C (3)] /

Session 2 Linguistic Skills Development and Modern Marathi Literature Type :

Lalitgadya [CC-1D (3)]

CO1. The nature, elements, genre and movement of this genre of novel can be understood.

CO2. The assigned novel can be assessed, tasted and analyzed.

CO3. Linguistic skills can be developed.

CO4. The nature, composition, type and movement of this type of literature can be understood.

CO5. Fine prose can be assessed, tasted and analyzed in the designated textbook.

CO6. Linguistic skills can be developed.

Outcomes of Second Year Arts (S.Y. B.A.) S1 are as under

Season 1 : Modern Marathi Literature: Prakashvata [DSE 1 A (3)] /

Season 2 : Medieval Marathi Literature : Selected Medieval Prose,

Verse

CO1. The autobiography will explain the nature and concept of the genre.

CO2. The autobiography will introduce the inspiration and movement of this literary genre.

CO3. Fine prose will explain the uniqueness of autobiography as compared to other literary genres.

CO4. Assess, enjoy and analyze this assigned autobiography

Outcomes of S2 Session 1 Literary Thought [DSE 1B (3)] /

Session 2 Literature Review[DSE 2 B (3)] are as under

CO1. The concept, form and purpose of literature can be understood on the basis of Indian and Western literary thought.

CO2. The production process of literature can be explained.

CO3. Understanding the language and style of literature can be understood.

CO4. The concept and format of literature review can be introduced.

CO5. The interrelationships between literature and criticism can be understood and studied.

CO6. The nature of the review can be understood and studied according to the type of literature.

CO7. The difference between introduction, examination and review of books can be explained.

Outcomes of Session 1 Publishing and Editing [SEC 24 (2)] /

Session 2 Applied WritingSkills [SEC 2 B (2)] are as follows-

CO1. Skills required for publishing and editing can be acquired.

CO2. Necessary training can be taken for publishing and editing.

CO3. Demonstration skills can be acquired along with demonstrations for publishing and editing.

CO4. The skills required for advertising, interview writing and editing can be acquired.

CO5. Necessary training for advertising, interview writing and editing can be obtained.

CO6. Application skills can be acquired with demonstrations for advertising, interview writing and editing.

CO7. Training can be obtained by visiting publishing houses, advertising agencies, presses, newspaper offices, distribution agencies, bookstores, flex production centers, news letters.

Session 1 Marathi Linguistic Communication Skills [MIL 2 (2)] / Session 2 Outcomes of Marathi (MIL 2 (2)] for New Media and Social Media are as follows-

CO1. Ability to develop advanced linguistic skills.

CO2. The nature and place of communication in the media can be clarified.

CO3. The correlation between personality development and language can be explained.

CO4. The interrelationships between the way of life in a democracy and the media can be explained.

CO5. Writing skills can be developed for the media.

CO6. The nature and place of new media and social media in communication can be clarified.

CO7. The interrelationships between language, lifestyles and new media, social media can be explained.

CO8. Writing skills can be developed for new media and social media

CO9. New media and social media literacy can be created.

CO10. The use and impact of new media and social media can be discussed.

TYBA

Linguistic Skills in Session 1 Program Coordination: Part-1 [SEC2 C (2)] / LinguisticSkills in Session 2 Program Coordination: Outcomes of Part 2 [SEC2D (2)] are as follows-

CO1. Will understand the nature and type of programs.

CO2. The program will gain linguistic skills in combination.

CO3. Writing skills in program combination

CO4. The program will acquire writing skills in combination.

CO5. The program will gain linguistic skills in combination.

CO6. Will combine the linguistic skills of virtual programs.

CO7 . Invitation card and invitation card can be written.

Outcomes of Third Year Arts (T. Y. B.A.) G3 Regular Course are as follows

Session 1 Linguistic Skills Development and Modern Marathi Literature Type: Travelogue [CC-1E (3)] / Session 2 Linguistic Skills Development and Modern Marathi Literature Type:Poetry [CC-1F (3)]

CO1. Writing skills can be acquired for print media.

CO2. Travelogue The nature, motivation, purpose, features and movement of this type of literature can be understood.

CO3. Designated travelogues can be assessed, tasted and analyzed.

CO4. Information on Marathi literature, linguistic skills development and governance can be obtained.

CO5. The nature, movement, inspiration, tendency and features of this genre of poetry can be understood.

CO6. Selected poems in the designated textbook can be understood, tasted and analyzed.

CO7. Poetry The various inventions in the literary genre and language forms can be identified on the basis of the poems in the textbook..

Outcomes of 3rd year Arts (T. Y. B.A.) S3 are as under-

Session 1 Gross History of Medieval Marathi Literature: Beginning to I.S. 1600 [DSE 1 C (3 + 1)] / Gross History of Medieval Marathi Literature: Beginning to I.S. 1601 to c. 1817 [DSE 1 D (3 + 1)] /

CO1. Literary history can be understood as concept, form, motivation, tendency.

CO2. The social, cultural background of the medieval period can be understood.

CO3. The history of Marathi language and literature can be understood in chronological order.

Outcomes of 3rd Year Art (T.Y.B.A.) S4 are as under -

Session 1 Descriptive Linguistics: Part 1 [DSE 2 C (3) +1] / Session 2 Descriptive Linguistics: Part 2 [DSE 2 D (3) +1]

CO1. To explain language formats, features and functions.

CO2. The need for language study can be explained.

CO3. To study the branches of language and various methods can be briefly introduced.

CO4. The structure, function, and self-formation can be explained.

CO5. To explain phonology, phonetics and Marathi phonetics.

CO6. Morphology and morphology of Marathi can be explained.

CO7. Syntax and syntax can be introduced in the context of Marathi language.

CO8. The Concept of Semantics can be introduced by the linguistic organ.

Linguistic Skills in Session 1 Program Coordination: Part-1 [SEC2 C (2)] / Linguistic Skills in Session 2 Program Coordination: Outcomes of Part 2 [SEC2D (2)] are as follows-

CO1. The nature and type of programs can be understood.

CO2. Linguistic skills in program coordination can be acquired.

CO3. The morphology and morphology of Marathi can be explained

CO4. The concept of semantics can be explained.

CO5. Syntax and syntax can be introduced by the linguistic organ.

S. Y. B. Sc. (Second Year Science) Session 1 Applied Marathi (AECC-2A) /

Outcomes of Session 2 Marathi Literature (AECC - 2 B) (Ideological, Social, Science) are asfollows-

CO1. Marathi language, literature and their interrelationships can be made aware.

CO2. The development of Marathi language in terms of definition and style can be brought to the notice of the students.

CO3. Marathi language adaptive skills can be developed.

CO4. Literary tastes can be developed.

CO5. Marathi language, literature and their interrelationships can be made aware.

CO6. The study of literature can help in understanding life.

CO7. Scientific comprehension can be enhanced.

First Year Commerce (Marathi)

Outcomes of Session 1 Language, Literature and Skill Development

[117] / Session 2Language and Skill Development [117] are as under-

CO1. To explain the nature and need for language communication in different areas.

CO2. The position of Marathi language in the field of can be explained and the actual use of Marathi.

CO3. Skills for use of various regional Marathi language can be developed.

CO4. To enable students to study different writing styles and use actual writing skills.

CO5. can be used to identify the cars and ideas of competent people in various fields.

CO6. Ethical, professional and ideological values can be nurtured in students.

DEPARTMENT OF POLITICAL SCIENCE

Program Outcomes of Political Science

PSO1 : Students are expected to develop academic proficiency in the sub fields of Introduction Indian constitution, An introduction to Political Ideology, western political thoughts, Political journalism, basics of Indian constitution, Political Ideology, International Relations, Public Administration.

PSO2 : They will develop and be able to demonstrate skills in conducting as well as presenting research in political science

PSO3 : Students will be able to analyse political and policy problems and formulate policy options.

PSO4 : They will be enabled to discuss the major theories and concepts of political science and itssubfields, and also deliver thoughtful and well-articulated presentations of research findings

Political Science General Paper I

Title : Introduction to Indian Constitution I

Semester I (Subject Code : 11161)

CO1. Students will be able to identify the causes, impact of British colonial rule.

CO2. Students will develop insights to appreciate the various phases of Indian national movement.

CO3. Students will be inculcated with values in regarding patriotism.

CO4. Students will be able to understand the various Government of Indian acts their provision and reforms.

CO5. Students will be able to know the salient features in making of Indian constitution

CO6. Students will appreciate the sociolect-economic political factors which lead to the freedom struggle.

CO7. Students will be able to to appreciate the fundamental rights and duties and the directiveprinciple of state policy.

Political Science General Paper I

Title : Introduction to Indian Constitution II

Semester I (Subject Code : 12161)

CO1. Students will get the insights into the evolution, functioning and consequences of politicalparties in India.

CO2. Students will identify how electoral rules and procedure in India effect election outcomes.

CO3. They will get familiarized with the working of the constitutions of India

CO4. Students get acquainted with India's legislature process.

CO5. Students will comprehend India's executive process and their own duty.

CO6. Students will understand India's judiciary process and justice.

S. Y. B. A.

Political Science General Paper II

Course title: An introduction to Political Ideology (CC-2C)

Semester III (Subject Code : 23164)

CO1. Student will understand the role of different political Ideologies and their impact in Politics.

CO2. They will be able to comprehend the different streams and subtle nuances within eachideology, the change and continuities in its doctrine and its relevance to contemporary times are highlighted.

CO3. Students are expected to understand the core doctrines of each of the ideologies.

Political Science General Paper II

Course title: An introduction to Political Ideology (CC-2C)

Semester III (Subject Code : 24164)

CO1. Student will be able to understand the role of different political Ideologies and their impact inPolitics.

CO2. They will be able to understand the different streams and subtle nuances within each ideology, the change and continuities in its doctrine and its relevance to contemporary times are highlighted.

CO3. Students enable to Marxism, Phule - Ambedkarism, Gandhism and feminism.

CO4. They will understand the significance of ideologies in order to understand the socio-political systems at large.

Political Science Special Paper I

Course title: Western Political Thoughts

Semester III (Subject Code : 23161)

CO1. Students will examine political thought through the Classical, Renaissance, and Enlightenmentperiods based on the works of Plato, Aristotle, Machiavelli, Locke.

CO2. They will be able to compare and contrast the concepts of justice, freedom, equality, citizenship,and sovereignty in the works of Machiavelli, Hobbes, Locke, and Rousseau.

CO3. They will be able to comprehend the different versions of, and importance of, the state of natureto political thought.

Political Science Special Paper I

Course title: Western Political Thoughts

Semester IV (Subject Code : 24161)

CO1. Students will be able to examine political thought through the Classical, Renaissance, and Enlightenment periods based on the works of Rousseau, Hegel, mill and Marx.

CO2. They will get significant glimpses of Karl Marx's worldview, with regard to his critique of democracy and the modern, politically liberal state; how it came to be; and its

fundamental link capitalism: and Explain John Stuart Mill's theory on utilitarianism and how he applies itto society and the state.

Political Science Special Paper II

Course title: Political Journalism

Semester III (Subject Code : 23162)

CO1. Students will understand the basic concepts of journalism and political journalism.

CO2. They will learn about the communication, its purpose and effects.

CO3. They will be well versed with news, its purpose and importance.

CO4. The course will create general awareness about societal, environmental, historical, and political happenings.

CO5. Students will become aware about the responsibility and role press plays in democracy

CO6. Students will become aware about the responsibility and role press plays in democracy

CO7. They will understand the role played by press during British rule in creating awareness aboutbringing social change and Swarajya.

Political Science Special Paper II

Course title: Political Journalism

Semester IV (Subject Code : 24162)

CO1. Students will be able to think scientifically about the mass communication process and beable to do scientific research in Communication and Journalism

CO2. They will understand his responsibility as a media person to the society

CO3. They will understand the role media plays in building the nation, its wellbeing and development.

CO4. They will be able to find the discrepancies and question them and if need be, raise a voice

CO5. They will be able to rationally think in terms of benefit of society

Political Science Skill Paper

Course title: Basics of Indian Constitution

Semester III & Semester IV (Subject Code : 23165 & 24165)

CO1. Students will be able to identify the causes and impact of British colonial rule.

CO2. They will be able to appreciate the various phases of Indian national movement.

CO3. Students will get the knowledge about the various Government of India acts, their provisionand reforms.

CO4. They will know the salient features in making of Indian constitution

CO5. Students will be able to appreciate the fundamental rights and duties and the Directive principle of state policy

T. Y. B. A.

Political Science General Paper III

Course title: Local Self Government in Maharashtra

Semester V (Subject Code :)

CO 1.To Understand the evaluation of Local Self Government in Maharashtra.

CO 2. To Make Students understanding About 73th and 74rt Constitutional Amendment

CO 3. To Understanding the student structure of local Self Government.

CO 4. To understanding the composition, Power, Function of local Bodies.

DEPARTMENT OF ECONOMICS

F.Y.B.A.

Economics General Paper I (Code No11151)

CO1 To familiarize the students with the recent developments in the Indian Economy

CO2 To provide the students with the background of the Indian Economy with focus on contemporary issues like economic environment

CO3 To help the students to prepare for varied competitive examinations

CO4 Ability to develop an understanding of the economic environment and the factors affecting economic environment

CO5 Ability to develop awareness on the various new developments in the different sectors of an economy-agriculture, industry, services, banking, etc.

CO6 Ability to compare and contrast Indian Economy with other world economic development

CO7 At the end of the course, the students should be able discuss and debate on the various issues and challenges facing the Indian Economic Environment.

S.Y.B.A.

Subject- Economics S 1 Subject Code – 23151

CO1 To develop an understanding about subject matter of Economics.

CO2 To develop an understanding of basic theories of micro economics and their application.

CO3 To demonstrate that the theories discussed in class will usually be applied to real-life situations.

CO4 To help the students to prepare for varied competitive examinations.

CO5 To analyze and interpret charts, graphs and figures

CO6 To impart knowledge of microeconomics

CO7 To clarify micro economics concepts.

S.Y.B.A.

Subject- Economics S 2 Subject Code – 23152

CO1 To introduce students to the historical background of the emergence of macro economics.

CO2 To familiarize students with the differences between microeconomics and macroeconomic

CO3 To familiarize students with Keynesian macroeconomic theoretical framework of consumption and investment functions.

CO4 To introduce students to the conceptual and theoretical frameworks of inflation, deflation and stagflation, Business Cycle.

CO5 To introduce students to the role of money in an economy

CO6 To introduce students to the role of money in an economy.

S.Y.B.A.

Subject- Economics G 2 Subject Code – 23153

CO1 To understand fundamentals of modern financial system

CO2 To understand the recent trends and developments in banking system

CO3 To understand the role of the Reserve Bank of India in Indian financial system.

CO4 To provide the knowledge of various financial and non-financial institutions.

CO5 To provide the students the intricacies of Indian financial system for batter financial decision making

S.Y.B.A.

Subject- Economics (Skill Based) Subject Code – 23154

CO1 Prepare a chart showing the steps of research

CO2 Prepare a chart showing the sampling technique

CO3 Prepare Charts shoeing sources of primary data.

CO4 Prepare a chart showing sources of secondary data

CO5 Construct questionnaire to measure students attitude towards the purchase of two wheeler ready made garments etc

CO6 Collect the data related to any schemes of your locality and present in front of the students.

CO7 Construct a questionnaire for collection of primary data on any Social issue.

T.Y.B.A.

Subject- Economics G 3 Subject Code – 35153

CO1 To relate and recognize the concept and indicators of Economics Development.

CO2 To describe and analyze the concept and indicators of Human Development.

CO3 To explain the characteristics of Developing and Developed Countries.

CO4 To describe the constraints to the process of Economics Development.

CO5 To describe and explain the process of Economic Planning.

CO6 To describe and examine the changing structure of planning process in India.

CO7 To describe and explain the relation between Economic Development and Environment.

T.Y.B.A.

Subject- Economics S 3 Subject Code – 35151

CO1 To related and recall the concepts of International Economics and International Trade

CO2 To describe and apply the theories of international trade

CO3 To explain and comprehend the issues relating to Terms of trade and Balance of Payment

CO4 Ability to relate and explain the concept of Exchange Rate and Foreign Exchange Market.

CO5 Ability to describe the trends in Growth, Composition and Direction of India's Foreign Trade.

CO6 Ability to comprehend the issues relating to Foreign Capital and Regional and International Co-Operation.

T.Y.B.A.

Subject- Economics S 4 Subject Code – 35152

CO1 To make students to analyze the role of Public Finance in Economic Development

CO2 To know the sources of Revenue, Expenditure and Debt of Govt. of India.

CO3 To make students competent to become success in competitive examination

CO4 To make students able to analyze Budget process of India

CO5 To make the students aware about Role and working of Finance Commission

CO6 To make students competent to become success in competitive examination.

T.Y.B.A.

Subject- Economics (Skill Base) Subject Code – 35154

CO1 Business planning and decision making

CO2 Leadership Skill-Ability to work in teams at the same time, ability to show leadership qualities

CO3 Practical Exercises in Decision Making Process/ Problem Solving

CO4 Exhibitions Business Plan Ideas Competitors

CO5 Preview to Students for Project Report

CO6 Analytical skill-Ability to analyze data collected and interprets in the most logical manner

CO7 Leadership Skill: Ability to show leadership skill with business ideas or work on business ventures as a practical example.

DEPARTMENT OF ECONOMICS – BACHELOR OF ECONOMICS

F.Y.B. COM.

Subject – Business Economics (Micro) Subjet Code – 113 Sem - I

CO1 To impart knowledge of business economics.

CO2 To clarify micro economic concepts.

CO3 To analyze and interpret charts and graphs

CO4 To understand basic theories, concepts of micro economics and their application

F.Y.B. COM.

Subject – Business Economics (Micro) Subjet Code – 123 Sem – II

CO1 To understand the basic concepts of micro economics.

CO2 To understand the tools and theories of economics for solving the problem of decision making by consumers and producers.

CO3 To understand the problem of scarcity and choices.

S.Y.B.COM.

Subject – Business Economics (Macro) Subject Code-233 Sem - III

CO1 To familiarize the students to the basic theories and concepts of Macro Economics and their application.

CO2 To study the relationship among st broad aggregates.

CO3 To impart knowledge of business economics.

CO4 To understand macro economics concepts.

CO5 To introduce the various concepts of National Income.

S.Y.B.COM.

Subject – Business Economics (Macro)- II

Subject Code-243 Sem - IV

CO1 To familiarize the students to the basic theories and concepts of Macro Economics and their application.

CO2 To understand the theories of money.

CO3 To understand the phases of trade cycle and policy measures to elongate the trade cycle.

CO4 To understand various concepts related to public finance.

CO5 To understand credit creation of banks and money measures of RBI.

T.Y.B.COM

Subject – Indian & Global Economic Development

(Sub Code 353) Sem – V

CO1 Students will able to understand present Economic Scenario of Indian Economy as well as World Economy.

CO2 Students will be able to understand the various aspects of development in Agriculture, Industrial and service sector in India.

CO3 Students will be able to critically evaluate the role of India in international economy.

CO4 Students will be able to evaluate the working of international financial organization and institutions.

T.Y.B.COM

Subject – Indian & Global Economic Development

(Sub Code 363) Sem - VI

CO1 Students will be able to understand the concept of Human Resource

Development.

CO2 Students will be able to understand the role of foreign capital in Economic Development.

CO3 Students will be able to critically evaluate the Indian Foreign Trade Policy.

C04 Students will be able to analyze the role of International Financial Institutions.

CO5 Students will be able to evaluate the success of Regional Economic Co operations..

Department of Geography

Program Specific Outcomes (PSO) : BA GEOGRAPHY

PSO1 : The students will be familiar with the physical characteristics of the earth. Students will be aware of the isomorphic processes that shape the earth. They will be able to correlate physical attributes of the earth with the human attributes.

PSO2 : Students will understand the importance of human activities on the earth. They will understand the impact of human activities on the environment. Students will also understand the reasons of cultural differences among st the different cultures.

PSO3 : Conduct Sociology-economic surveys: Students will know how to conduct social and economic surveys for the analysis of a specific problem.

PSO4 : Application of surveying instruments: Students will learn the application of modern surveying instruments such as Dumpy Level, Theodolite etc.

PSO5 : Understand the environmental problems: Students will be able to understand the environmental problems.

PSO6 : Development of map preparation and map reading skills.

PSO7 : Students will learn how different branches of geography interact with each other's

PSO8 : Through this interdisciplinary subject, students will be able to help the policymakers in different economic and environmental project.

PSO9 : Develop skills of surveying.

FYBA

FYBA Geography General Sem. I (GG. 110 (A))

CO1 : Students will be sensitizing with urgent need of protection and conservation of different aspects of Earth and its environment.

CO2 : Students will be acquainted with atmospheric pressure and wind system. With this scientific knowledge they would understand intricacies of monsoon system that affects on Indian economy and polity.

CO3 : Students will understand insolation and heat budget of the Earth. This is essential to understand causes and effects of global warming.

CO4 : Students will be able to understand various geographical phenomenon, their origin, distribution and effect on life.

CO5 : Students will understand the theories regarding Origin of Continents and oceans.

Geography General Sem. II(Gg. 110 (B))

CO1 : To describe the basic and latest concepts in Human Geography.

CO2 : To demonstrate applications of Human Geography in different regions of environment.

CO3 : Spatial variation in human population and patterns of migration in the world.

CO4 : To define the Settlement pattern and rural and urban settlement.

CO5 : The geographical maturity of students in their current and future courses shall develop.

SYBA

Geography General Sem. III(Gg.201 (A))

CO1 : Students will understand the basic concepts of Environment Geography.

CO2 : Create awareness about dynamic environment among the student.

CO3 : To acquaint the students with fundamental concepts of environment geography for development in different areas.

CO4 : The students should be able to integrate various factors of economic development and dynamic aspect of economic geography.

CO5 : To make aware the students about the problems of environment, their utilization and conservation in the view of sustainable development.

SYBA Geography Special-1 Sem. III(Gg- 220 (A))

CO1 : Learn the geography of Maharashtra state.

CO2 : Aware about problems and prospects of Maharashtra.

CO3 : Understand the relationship between geographic variations and society in Maharashtra.

CO4 : Learn the recent trends in regional studies.

CO5 : The students should be able to integrate various factors of State development and dynamic aspect of geography of geography of Maharashtra.

SYBA Geography Special-2 Sem. III(Gg. 210 (A))

CO1 : Gain knowledge about topographical maps and apply this knowledge in ground surface.

CO2 : Students will understand map scales and its types.

CO3 : Students will acquire skills of drawing various map projections with their advantages and limitations.

CO4 : Able to develop and use of survey and mapping skills.

CO5 : At the end of this course students will be able to gain knowledge about troposphere map reading and interpretation of the same.

SYBA Geography SEC-A- APPLIED COURSE OF DISASTER MANAGEMENT Sem. III

CO1 : The basic concepts and fundamentals in disaster management.

CO2 : The problem solving abilities on disaster management.

CO3 : To assess the situation and design plan for disaster management.

CO4 : To prepare students for efficient and cost-effective management of disasters and hazards whether they are natural or man-made.

SYBA
SYBA Geography General Sem. IV(Gg.201 (B))

CO1 : Create awareness about dynamic environment among the students.

CO2 : To acquaint students with the fundamental concepts of Environmental Geography.

CO3 : To acquaint students about the past, presents and future utility and potentials of natural resources.

CO4 : To make aware students about the problems of environment, its utilization and conservation in the view of sustainable development.

CO5 : At the end of this course the students will become more responsible & sensitive towards the environment . They will develop observational skills and right decision making in protecting the environment.

SYBA Geography Special-1 Sem. IV(Gg- 220 (B))

CO1 : Aware about the problems and prospects of agriculture in Maharashtra.

CO2 : Learn the distribution of population and patterns of settlements in Maharashtra.

CO3 : Learn the concepts in rural development.

CO4 : Understand the prospectus of tourism activities in Maharashtra with role of MTDC in development.

CO5 : Understand the role of MIDC in industrial development in rural Maharashtra.

SYBA Geography Special-2 Sem. IV(Gg. 210 (B))

CO1 : Able to develop and use of map scale and projections.

CO2 : Aware of the new techniques, accuracy and map making skills.

CO3 : Students join in Field Excursion/Village Survey and prepare a report.

CO4 : At the end of this practical course, the students will be able to express and appreciate globe and map information through. It will enable the students to understand and interpret the same.

CO5 : The students will also acquire basic skills of drawing a variety of physical geography graphs and cardiograms.

SYBA Geography SEC-B-Applied Course of Travel & Tourism SEM-IV

CO1 : Students acquire basic knowledge about Travel and Tourism.

CO2 : Know the essential skills for tour management and execution.

CO3 : Explain and Estimate tour plan.

CO4 : At the end of this skill based course, the students will be able to be comprehend the possibilities and unforeseen challenges in travel and tourism activity.

CO5 : The information gained from the course will enable the students to become fair businessman or worker. Finally the students will acquire confidence of taking up tourism related activities which is expanding every where across the world

TYBA
TYBA Geography General Sem. V(Gg.310 (A))

CO1 : To help the students & society to understand the interrelationship between tourism and employment generation opportunities.

CO2 : To understand the impact of tourism on Physical and Human Environments.

CO3 : To understand the history of Tourism .

CO4 : To introduce the students to the basic concepts in Tourism Geography.

CO5 : To gain knowledge different aspects of Tourism Geography.

TYBA Geography Special-3 Sem. V(Gg- 320 (A))

CO1 : To acquaint the students with geography of our Nation.

CO2 : To make the student aware of the magnitude of problems and Prospects at National level.

CO3 : To help the students to understand the inter relationship between the subject and the society.

CO4 : To help the students to understand the recent trends in regional studied

CO5 : To introduce the students to the basic information of Indian Geography.

TYBA Geography Special-4 Sem. V (Gg. 301 (A))

CO1 : To introduce the students with SOI Toposheet and acquire the Knowledge of Toposheet interpretation.

CO2 : To introduce the students with Weather Maps and acquire the Knowledge of its interpretation.

CO3 : To introduce the students with Aerial Photographs and Satellite Images and acquire knowledge to interpret it .

CO4 : To acquaint students with the spatial and structural characteristics of Practical Geography.

CO5 : To explain the elementary and essential principles on field of practical work.

TYBA Geography SEC-C- Research Methodology – I SEM-V

CO1 : To develop the understanding of the basic concept of research

CO2 : To develop the understanding of the basic framework of sampling and data collection

CO3 : To develop the understanding of various sampling methods and techniques

TYBA Geography General Sem. VI(Gg.310 (B))

CO1 : To understand the history of Tourism

CO2 : To introduce the students to the basic concepts in Tourism Geography.

CO3 : To understand the types of Tourism

CO4 : To gain knowledge different aspects of Tourism Geography

CO5 : To understand the impact of tourism on cultural and economic Environments.

TYBA Geography Special-3 Sem. VI(Gg- 320 (B))

CO1 : To acquaint the students with geography of our Nation.

CO2 : To make the student aware of the magnitude of problems and Prospects at National level.

CO3 : To help the students to understand the inter relationship between the subject and the society.

CO4 : To help the students to understand the recent trends in regional studied.

CO5 : To generate an awareness and responsibility for the environment and India.

TYBA Geography Special-4 Sem. VI(Gg- 301 (B))

CO1 : Students understand the use of statistics in Geography and learn basic concepts in statistics.

CO2 : Students calculate Central Tendency and Dispersion related questions.

CO3 : Students make the hypothesis and test it.

CO4 : Students join in Field Excursion/Village Survey and prepare a report.

CO5 : To acquaint students with the spatial and structural characteristics of Practical Geography.

TYBA Geography SEC-D- Research Methodology – II SEM-VI

CO1 : To identify various sources of information for data collection.

CO2 : Understanding of the conducting survey on various issues and develop the Report writing skill of students

Department of Geography

Program Specific Outcomes(PSO) :BSc GEOGRAPHY

PSO1 : Physical Geography: The students will be familiar with the physical characteristics of the earth. Students will be aware of the geomorphic processes that shape the earth. They will be able to correlate physical attributes of the earth with the human attributes.

PSO2 : Human Geography: Students will understand the importance of human activities on the earth. They will understand the impact of human activities on the

environment. Students will also understand the reasons of cultural differences amongst the different cultures.

PSO3 : Ability to solve problems: They will understand the problems arising due to physical and cultural differences. They will also solve the problems arising due to these differences.

PSO4 : Conduct Sociology-economic surveys: Students will know how to conduct social and economic surveys for the analysis of a specific problem.

PSO5 : Application of surveying instruments: Students will learn the application of modern surveying instruments such as Dumpy Level, Theodolite etc.

PSO6 : Application of modern GIS and map making tools: Students will learn the use of modern techniques like GIS and other cartographic techniques.

PSO7 : Enhancement in the ability conduct a research: Students will be capable of undertaking a research problem and conduct a research in the field of Geography.

PSO8 : Understand the environmental problems: Students will be able to understand the environmental problems.

FYBSc

FYBSc Geography Paper-I Sem-I(Gg- 111)

CO1 : Explain principal terms, definitions, concept and theories of Geo morphology. CO5: Describe the different Materials of the earth crust, rock types, types of weathering, mass movements and types of slope.

CO2 : Discuss how different scales of time and space affect geomorphological processes and the development of micro to mega scale landform..

CO3 : Explain different concept, theories and models for landscape evolution.

CO4 : Describe the exogenous and endogenous processes in the landscape, their importance in landform development, and distinguish the mechanisms that control these processes.

CO5 : Describe the different Materials of the earth crust, rock types, types of weathering, mass movements and types of slope.

FYBSc Geography Paper-II Sem-I(Gg- 112)

CO1 : Explain basic concepts of air temperature, air pressure and its measurement.

CO2 : Explain basic concepts of wind and wind measurement.

CO3 : Describe scales of Atmospheric Motion and Models of air circulation.

CO4 : Explain basic concepts of hydrological cycle, condensation and evaporation.

CO5 : Describe concept of Lapse Rate, Stable and unstable Atmosphere, Air Masses & Fronts.

FYBSc Geography Paper-III Sem-I(Gg- 113)

CO1 : Develop an idea about scale and draw different types of scale like linear, diagonal and vernier.

CO2 : Acquire knowledge different types of map projection.

CO3 : Gain knowledge about topographical maps and apply this knowledge in ground serface.

CO4 : Topographical maps and its application in practical.

FYBSc Geography Paper-IV Sem-II (Gg- 121)

CO1 : Acquaint students with the nature of man-environment relationship.

CO2 : Understand the spatial distribution of different racial groups, population, movement and its consequences, and settlement.

CO3 : Develop ideas on man-environment issues.

CO4 : To aware about different human economic activites**.**

CO5 : The geographical maturity of students in their current and future courses shall develop.

FYBSc Geography Paper-V Sem-II (Gg- 122)

CO1 : Understand various facets pertaining to the spatial variation in the distribution of human population with special reference to the physical, cultural, and socio-economic environment.

CO2 : : Gain understanding of the spatial and temporal characteristics of human settlement and the influence of environmental factors on settlement.

CO3 : Understand the trend and growth of rural and urban settlement and how urbanization impacts the environment.

CO4 : Learn the role of demography and population studies as a distinct fields of human geography.

CO5 : Examine population dynamics and characteristic with contemporary issues.

FYBSc Geography Paper-VI Sem-II (Gg- 123)

CO1 : Acquire "real world" experience for the purpose of developing direct leadership, programming, and skills for entry into professional career

CO2 : Gain knowledge about measuring arithmetic growth rate of population and also measures of inequality.

CO3 : Necessity of field report in practical geography; collection of data and how to prepare a report from the data collected.

CO4 : Lessons on cartograms like pie graph, bar graph, and age-sex pyramid etc.

CO5 : To understand various methods of human geography

SYBSc

SYBSc Geography Paper- I Sem-III (Gg- 231)

CO1 : To create environmental awareness amongst the students.

CO2 : To familiarize the students with fundamentals concepts of Environmental Geography.

CO3 : To acquaint the students to past, present, and future utility and potentials of resources at regional, national and global levels.

CO4 : To enable the students to understand dynamics of man–environment relationship in various region of the world.

SYBSc Geography Paper- II Sem-III (Gg- 232)

CO1 : To appraise the students with salient features of the Maharashtra State.

CO2 : To familiarize the students with the climatic characteristics of the State.

CO3 : To make the students aware of the geographic problems of Maharashtra in the view of sustainable development.

SYBSc Geography Paper- III Sem-III (Gg- 233)

CO1 : To acquaint the students with the principles of surveying, its importance, and its utility in the Geographical study.

CO2 : To familiarize the students with the basic aspects of linear, vertical and angular measurements of surveying.

CO3 : To understand the importance, basic principles and uses of GPS in surveying.

CO4 : To identify sources and types of errors occurs during surveys.

SYBSc Geography Paper- I Sem-IV(Gg- 241)

CO1 : To introduce the methods and assessments of the impact on the environment amongst the students.

CO2 : To acquaint the students with environmental protection laws, acts, planning, and management.

CO3 : To appraise the students with various indigenous environmental conservation measures.

CO4 : To make aware the students about various programs and policies carried out in the regional and global scale.

SYBSc Geography Paper- II Sem-IV(Gg- 242)

CO1 :.To acquaint the students with the relationship between man and environment in Maharashtra State.

CO2 : To familiarize the students with the agricultural pattern, problems and prospects in the state.

CO3 : To study and understand the industrial sector, spatial distribution, development and problems faced within the state.

CO4 : To know the status of transport and communication in Maharashtra state.

SYBSc Geography Paper- III Sem-IV(Gg- 243)

CO1 : To acquaint the students with the principles of surveying, its importance and utility in the Geographical study.

CO2 : To familiarize the students with the basic aspects of linear, vertical, and angular measurements of surveying.

CO3 : To introduce the importance, basic principles, and uses of GPS in surveying.

CO4 : To identify sources and types of errors occurs during surveys.

CO5 : To enable the students to use various instruments of surveying .

Department of History

Programme Outcomes (Pos)

PO1. The main objectives of the paper to study the major sources and their uses in the process of historical reconstruction.

PO2. historical consciousness of the past in early cultures and to study the different schools of historiography.

PO3. representative historians in particular schools of interpretation.

PO4. The student will have a wide-ranging idea on the different sources of the early India and their mode and different way of interpretation in the process of historical reconstruction.

PO5. Student will develop the ability to analyze sources for Maratha History.

PO6. Student will learn significance of regional history and political foundation of the region.

PO7. It will enhance their perception of 17th century Maharashtra and India in context of Maratha history.

PO8. Appreciate the skills of leadership and the administrative system of the Marathas.

PO9. It will enable students to develop an overall understanding of Modern India.

PO10. It will increase the spirit of healthy Nationalism, Democratic Values and Secularism among the Students.

PO11. Students will understand various aspects of the Indian Independence Movement and the creation of Modern India.

F.Y.B.A. History G I

Sem I : Title : Early India : From Prehistory to the age of the Mauryas

Subject Code : 11171

Sem II : Title : Early India : Post Mauryan age to the Rashtrakutas

Subject Code : 12171

CO1. The history of Early India is a crucial part of Indian history.

CO2. It is a base for understanding the entire Indian history.

CO3. To help the students to understand the contribution of Early Indians to polity, art, literature, philosophy, religion and science and technology.

CO4. It also aims to foster the spirit of enquiry among the students by studying the major developments in early Indian history.

CO5. To highlight the factors and forces behind the rise, growth and spread of civilization and culture of India along with the dynastic history.

S.Y.B.A. History G II

Title : History of the Maratha's: (1630-1707)

Code No : 23171 & 24171

CO1. To introduce the students to the regional history of medieval Maharashtra and India.

CO2. To study political, social and conceptual history of the Marathas in an analytical way with the help of primary sources.

CO3. To evaluate contribution of Chapatti Shivaji Maharaja to the establishment of Swarthy, contribution of successors and later development of the Maratha kingdom.

CO4. To study administrative Institutions of the Maratha.

CO5. It will enhance their perception of 17th century Maharashtra and India in context of Maratha history.

T.Y.B.A. History G III

Title : Indian National Movement (1885-1947)

Subject code Nos : 35171 & 36171

CO1. The course is designed to make the students aware about the making of Modern India and the struggle for independence.

CO2. To make the students aware of the multi-dimensional of Modern India.

CO3. To highlight the ideas, institutions, forces and movements that contributed to be shaping of Indian Modernity.

CO4. To acquaint the students with various interpretative perspectives.

CO5. It will enable students to develop an overall understanding of Modern India.

PROGRAM OUTCOMES

BACHELOR OF COMPUTER SCIENCE - (BSC.COMP.SCI)

PO1: Learn how to organize information efficiently in the forms of outlines, charts, etc. by usingappropriate software. Develop the skills to present ideas effectively and efficiently.

PO2: Do Academic and Professional Presentations - Designing and delivering an effectivepresentation and developing the various IT skills to the electronic databases.

PO3: Use the Systems Analysis Design paradigm to critically analyze a problem. Solve the problems (programming networking database and Web design) in the Information Technologyenvironment. Function effectively on teams to accomplish a common goal and demonstrate professional behavior.

PO4: Develop IT-oriented security issues and protocols. Design and implement a web page.Improve communication and business management skills, especially in providing technical support. Serve as the System Administrators with thorough knowledge of DBMS.

PO5: An ability to apply design and development principles in the construction of softwaresystems of varying complexity.

PO6: An ability to use appropriate techniques, skills, and tools necessary for computing practice.

PO7: An ability to apply mathematical foundations, algorithmic principles, and computer sciencetheory in the modeling and design of computational systems in a way that demonstrates comprehension of the trade offs involved in design choices.

PO8: An understanding of professional, ethical, legal, security, and social issues andresponsibilities for the computing profession.

PO9: Ability to ideTo make the students aware of concepts in micro economics • To help the students understand the difference between micro and macro economics • To make the students understand economic and noneconomic goals of firms ntify, formulate, and develop solutions to computational challenges.

Class- F.Y.B.SC (CS)

Course OutcomesSEM-I

Course: --CS-101- Problem Solving Using Computer and 'C' Programming – I,

Sr. no.	Description
CO1	Explore algorithmic approaches to problem solving.
CO2	Develop modular programs using control structures and arrays in 'C'.

Course: CS-102 Database Management System

Sr. no.	Description
CO1	To understand the fundamental concepts of database.
CO2	To understand user requirements and frame it in data model.
CO3	To understand creations, manipulation and querying of data in databases.
CO4	Understand basic database management operations.
CO5	Solve real world problems using appropriate set, function, and relational models.

Course: CS-103 Practical course on Problem Solving using Computer and 'C' programmingand Database Management Systems

Sr. no.	Description
CO1	Devise pseudo codes and flowchart for computational problems.
CO2	Write, debug and execute simple programs in 'C'.
CO3	Write, debug and execute programs using advanced features in 'C'.

Course: ELC-111: **Semiconductor Devices and Basic Electronic Systems-Paper-I**

Sr. no.	Description
CO1	To study various types of semiconductor devices
CO2	To study elementary electronic circuits and systems.
CO3	Understand the basics of diodes, transistors and their applications in day today life.
CO4	Understand basics of JFET and MOSFET and use them to build some basic applications.

Course: ELC-112: Principles of Digital Electronics-Paper-II

Sr. no.	Description
CO1	To get familiar with concepts of digital electronics
CO2	To learn number systems and their representation.
CO3	To understand basic logic gates, Boolean algebra and K-map.
CO4	To study arithmetic circuits, combi national circuits and sequential circuits.

Course: ELC-113-Electronics Lab IA(Electronics Practical)Paper-III

Sr. no.	Description
CO1	Identify and test various components and use data sheets.
CO2	Use DMM, Frequency generator and CRO for measurement and testing.
CO3	Build and test analog and digital circuits

Course: -MTC-111- Matrix Algebra-Paper-I

Sr. no.	Description
CO1	A students should be able to work with graphs and identify certain parameters and Properties of the given graphs.
CO2	Students should be able to perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
CO3	A students should be able to solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
CO4	A students should develop an appreciation for the literature on the subject and be able to read and present results from the literature.
CO5	A students should be able to write cohesive and comprehensive solutions to exercises and be able to defend their arguments.

Course: MTC-112: Discrete Mathematics-Paper-II

Sr. no.	Description
CO1	Students will be able to write an argument using logical notation and determine if the argument is or is not valid.
CO2	Students will understand basic proofs involving sets and functions.
CO3	Students will be able to demonstrate the ability to write and evaluate a proof or outline the basic structure of and give examples of each proof technique described.
CO4	Students will understand the basic principles of sets and operations in sets.
CO5	Students will understand the ideas of permutations and combinations.
CO6	Students will understand the addition and multiplication principles for counting.
CO7	Students will understand how to apply combination ideas to practical problems
CO8	Students will understand Boolean algebra and truth tables.

Course: MTC-113: Mathematics Practical-Paper-III

Sr. no.	Description
CO1	Introduction of free, open source Maxima software which is user friendly.
CO2	Helps to students for 2D, 3D visualizations.
CO3	Students can also obtain numerical solutions to the analysis and design problemswhich they tackle.
CO4	Students completing this course will be able to compute the inverse of an convertiblematrix. Students completing this course will be able to find the null space of a matrix and represent it as the span of independent vectors.
CO5	Solve systems of linear equations using various methods including Gaussian andGauss Jordan elimination and inverse matrices.

ours Title: CSST 111 Descriptive statistics

Sr. no.	Description
CO1	The main purpose of descriptive statistics is to provide a brief summary of thesamples and the measures done on a particular study.
CO2	To provide basic information about variables in a dataset

Course Title: CSST 112 Mathematical Statistics

Sr. no.	Description
CO1	It will help students develop skills in thinking and analyzing problems from a probabilistic and statistical point of view
CO2	It will provide difference between Discrete and continuous distributions

Course Title:- CSST 113 Statistics Practical Paper I

Sr. no.	Description
CO1	It will help students develop skills in thinking and analyzing problems from a probabilistic and statistical point of view
CO2	It will provide difference between Discrete and continuous distributions

Course Outcomes Class- F.Y.B.SC (CS)SEM-II

Course: CS 201-Advance 'C' Programming

Sr. no.	Description
CO1	Develop modular programs using control structures, pointers, arrays, strings and structures
CO2	Design and develop solutions to real world problems using C.

Course: CS-202-Relational Database Management Systems

Sr. no.	Description
CO1	To teach fundamental concepts of RDBMS (PL/Pg SQL)
CO2	Knowledge of SQL Queries.
CO3	To teach database management operations
CO4	Basics of relational design
CO5	Be familiar with the basic issues of transaction processing and concurrency control

Course - CS-203 Practical Course based on CS-201 and CS-202(Advanced C and RDBMS

Sr. no.	Description
CO1	Devise pseudo codes and flowchart for computational problems.
CO2	Write, debug and execute simple programs in 'C'.
CO3	Write, debug and execute programs using advanced features in 'C'.

Course: ELC-121 Instrumentation System

Sr. no.	Description
CO1	To study basics of sensors, different instruments.
CO2	To clear the concept of application of Op-Amp.
CO3	To study smart instrumentation system

Course: ELC-122 Basics of Computer Organization

Sr. no.	Description
CO1	To study computer applications in digital electronics
CO2	Understand sequential circuits such as flip flop, counter, shift registers and their

	applications.
CO3	To learn memory organization

Course: ENC- 123 Electronics Lab BI-Practical

Sr. no.	Description
CO1	To get familiar with practical implementation of electronic devices
CO2	Work in a group and apply theoretical knowledge and develop analytical skills.
CO3	They will be able to communicate and present their knowledge.

Course: MTC 121-Linear Algebra

Sr. no.	Description
CO1	A students should be able to work with graphs and identify certain parameters and properties of the given graphs.
CO2	Students should be able to perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
CO3	A students should be able to solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
CO4	A students should develop an appreciation for the literature on the subject and be able to read and present results from the literature.
CO5	A students should be able to write cohesive and comprehensive solutions to exercises and be able to defend their arguments.

Course: MTC 122 -Graph Theory

Sr. no.	Description
CO1	Explain the basic concepts of Graph Theory
CO2	Discuss the applications of trees in networking problems
CO3	Solve the Network optimization problems using Graph theory
CO4	Solve the counting problems using Combinations

Course: MTC 123: Mathematics Practical-Paper-III

Sr. no.	Description
CO1	Explain the basic concepts of Graph Theory
CO2	Discuss the applications of trees in networking problems
CO3	Solve the Network optimization problems using Graph theory
CO4	Solve the counting problems using Combinations

Course Title: - CSST 121 Method of Applied Statistics

Sr. no.	Description
CO1	To create a mathematical model that can be used to predict the values
CO2	To Handle large data and analyze it by statistical tools

and Testing of Hypothesis

Sr. no.	Description
CO1	To study distribution of various data
CO2	Student should use these techniques for their project.

Course Title: - CSST 123 Statistics Practical

Sr. no.	Description
CO1	How to use statistical tools in real life situation.
CO2	Handling data for research purpose

Class- S.Y.B.SC (CS)

Course OutcomesSEM-III

Course Title: - CS 231;- Data Structures and Algorithms – I

CO1	To use well-organized data structures in solving various problems.
CO2	To differentiate the usage of various structures in problem solution.
CO3	Implementing algorithms to solve problems using appropriate data structures.

Course Title:- CS – 232-:Software Engineering

Sr. no.	Description
CO1	Compare and chose a process model for a software project development
CO2	Identify requirements analyze and prepare models
CO3	Prepare the SRS, Design document, Project plan of a given software system.

Course: CS 232- Practical course on CS 231 (Data Structures and Algorithmsand Software Engineering.

Sr. no.	Description
CO1	To use well-organized data structures in solving various problems.
CO2	To differentiate the usage of various structures in problem solution.
CO3	Implementing algorithms to solve problems using appropriate data structures.
CO4	Compare and chose a process model for a software project development.
CO5	Identify requirements analyze and prepare models.
CO6	Prepare the SRS, Design document, Project plan of a given software system.

Course: ELC 231-Microcontroller Architecture & Programming

Sr. no.	Description
CO1	To write programs for 8051 micro controller
CO2	To interface I/O peripherals to 8051 micro controller.
CO3	To design small micro controller based projects

Course: ELC-232-Digital Communication and Networking

Sr. no.	Description
CO1	Define and explain terminologies of data communication
CO2	Understand the impact and limitations of various digital modulation techniques
CO3	To acknowledge the need of spread spectrum schemes.
CO4	Identify functions of data link layer and network layer while accessing communication link
CO5	To choose appropriate and advanced techniques to build the computer network

Course: ELC-233-Practical Course

Sr. no.	Description
CO1	To design and build his/her own micro controller based projects.
CO2	To acquire skills of Embedded C programming.
CO3	To know multiplexing and modulation techniques useful in developing wireless application.
CO4	Do build and test own network and do settings.

Course: MTC-211-Groups and Coding Theory

Sr. no.	Description
CO1	A student should be able to recall basic facts about mathematics and should be able todisplay knowledge of conventions such as notations, terminology and recognize basicgeometrical figures and graphical displays, state important facts resulting from their studies.
CO2	A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematicalreasoning.
CO3	A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.
CO4	A student be able to apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematicalformulae or techniques in order to process the information and draw the relevant conclusion.

Course: MTC-212: Numerical Analysis

Sr. no.	Description
CO1	Demonstrate understanding of common numerical methods and how they are used to obtainapproximate solutions to otherwise intractable mathematical problems.
CO2	Apply numerical methods to obtain approximate solutions to mathematical problems.
CO3	Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, andthe solution of differential equations.
CO4	Able to apply their skills and knowledge, that is, translate information presented verbally intomathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.

Course: MTC-213: Practical

Sr. no.	Description
CO1	Acquire mathematical modelling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.
CO2	Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.
CO3	Use mathematical tools and software to solve problems as well as to develop programs.
CO4	Understand difficult concepts in Mathematics using mathematical tools.

Course:-English

Sr. no.	Description
CO1	To develop competence among the students for self-learning
CO2	To familiarize students with excellent pieces of prose and poetry in English so thatthey realize the beauty and communicative power of English.
CO3	To develop students' interest in reading literary pieces.
CO4	To expose them to native cultural experiences and situations in order to develop humanvalues and social awareness
CO5	To develop overall linguistic competence and communicative skills of the Students.

Course EVS-231: Environmental Awareness

Sr. no.	Description
CO1	Discover knowledge in ecological perspective and value of environment.
CO2	Understand the significance of various natural resources and its management.
CO3	To understand the world's biodiversity and the importance of its conservation.
CO4	To know about sustainability & sustainable development.

Sam-IV Course: Data Structures and

lgorithms –

Sr. no.	Description
CO1	Implementation of different data structures efficiently
CO2	Usage of well-organized data structures to handle large amount of data
CO3	Usage of appropriate data structures for problem solving

CO1	Have a good understanding of the OSI and TCP/IP Reference Models and in particular have a good knowledge of Layers.
CO2	Understand the working of various protocols.
CO3	Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies

Course: ELC-241- Embedded System Design

Sr. no.	**Description**
CO1	To understand the difference between general computing and the Embedded systems
CO2	To know the fundamentals of embedded systems
CO3	Understand the use of Single board Computer (Such as Raspberry Pi) for an embedded system application.
CO4	Familiar with the programming environment to develop embedded systems and their interfaces with peripheral devices.
CO5	To develop familiarity with tools used to develop in an embedded environment.

Course: ELC-242- Wireless Communication and Internet of Things

Sr. no.	**Description**
CO1	Know working of wireless technologies such as Mobile communication, GSM, GPRS
CO2	Become familiar with 3G and 4G Cellular Network Technologies for Data Connections.
CO3	Understand working principles of short range communication application
CO4	Get introduce to upcoming technology of Internet of Things
CO5	Explore themselves and develop new IoT based applications

Course: ELC-243 Practical Course

Sr. no.	Description
CO1	To design and develop own smart applications using Raspberry-Pi
CO2	To write Python program for simple applications
CO3	To build own Io T based system
CO5	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: MTC-241- Computational Geometry

Sr. no.	Description
CO1	Recognize situations in which typical decision problems occur.
CO2	Distinguish the different classes of decision problems.
CO3	Apply the studied algorithms to calculate a solution to minor provided problems
CO4	Translate MP-based models in state of the art, design oriented optimization tools

Course: MTC-222: Operations Research

Sr. no.	Description
CO1	Recognize situations in which typical decision problems occur.
CO2	Distinguish the different classes of decision problems.
CO3	Apply the studied algorithms to calculate a solution to minor provided problems
CO4	Translate MP-based models in state of the art, design oriented optimization tools

Course: MTC-223: Practical

Sr. no.	Description
CO1	Acquire mathematical modelling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.
CO2	Reflecting the broad nature of the subject and developing mathematical tools for continuingfurther study in various fields of science.
CO3	Use mathematical tools and software to solve problems as well as to develop programs.
CO4	Understand difficult concepts in Mathematics using mathematical tools.

Course- EVS-241: Environmental Awareness

Sr. no.	Description
CO1	Categorize different types of pollution and their control measures.
CO2	Discover effective methods of waste Management.

CO3	Analyse global environmental problems and come out with best possible solutions.
CO4	Understand environmental policies & laws

ours:-English

Sr. no.	**Description**
CO1	To develop competence among the students for self-learning
CO2	To familiarize students with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English.
CO3	To develop students' interest in reading literary pieces.
CO4	To expose them to native cultural experiences and situations in order to develop human values and social awareness
CO5	To develop overall linguistic competence and communicative skills of the Students.

Class- T.Y.B.SC (CS)

Course OutcomesSEM-IV

Course: CS-351 Operating Systems – I

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Processes and Thread Scheduling by operating system.
CO2	To understand the concept of operation system and its principle.
CO3	To study the various functions and services provided by operating system.
CO4	Synchronization in process and threads by operating system.
CO5	Memory management by operating system using with the help of various schemes.

CS-352 Computer Networks – II

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To understand different protocols of application layer.
CO2	To understand concepts of multimedia.
CO3	Explore the different methods used for Network/INTERNET security.
CO4	Understand, compare and apply cryptographic techniques for data security.
CO5	Identify information security goals.

CS-353 Web Technologies – I

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To Design dynamic and interactive Web pages.
CO2	To Learn Core -PHP, Server Side Scripting Language.
CO3	To Learn PHP-Database handling.
CO4	Understand how to develop dynamic and interactive Web Page.

CS-354 Foundations of Data Science

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Perform Exploratory Data Analysis
CO2	Obtain, clean/process, and transform data.
CO3	Detect and diagnose common data issues, such as missing values, special values, outliers, inconsistencies, and localization.
CO4	Demonstrate proficiency with statistical analysis of data.
CO5	Present results using data visualization techniques.
CO6	Prepare data for use with a variety of statistical methods and models and recognize how the quality of the data and the means of data collection may affect conclusions.

CS-358 Practical course based on CS 353 and CS 354

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To Design dynamic and interactive Web pages.
CO2	To Learn Core-PHP, Server Side Scripting Language.
CO3	To apply statistical, data pre-processing and visualization techniques on data sets.

CS-355 -Object Oriented Programming using Java – I

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Understand the concept of classes, object, packages and Collections.
CO2	To develop GUI based application.
CO3	Understand the concept of Inheritance, Interface
CO4	Understand the concept of Exception Handling, File Handling
CO5	Develop event-driven application

CS-356 -Theoretical Computer Science

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Understand the use of automata during language design
CO2	Relate various automata and Languages
CO3	To understand the relation between Automaton and Language

CS-359 Practical Course based on CS 355

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Use an integrated development environment to write, compile, run, and test simple object-oriented Java program
CO2	Read and make elementary modifications to Java programs that solve real-world problems.
CO3	Validate input in a Java program.

CS-3510 -Python Programming

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Develop logic for problem solving
CO2	Determine the methods to create and develop Python programs by utilizing the data
CO3	Structures like lists, dictionaries, tuples and sets.
CO4	To be familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc.
CO5	To write python programs and develop a small application project

CS-3511-Blockchain Technology

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Learn the fundamentals of Blockchain Technology.
CO2	Learn Blockchain programming
CO3	Basic knowledge of Smart Contracts and how they function

Semester VI

CS-361 Operating Systems – II

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Management of deadlocks and File System by operating system
CO2	Scheduling storage or disk for processes
CO3	Distributed Operating System and its architecture and the extended features in mobile OS

CS-362 Software Testing

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To understand various software testing methods and strategies
CO2	To understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software.
CO3	To design test cases and test plans, review reports of testing for qualitative software
CO4	To understand latest testing methods used in the software industries

CS-367:- Practical course based on CS 361

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Process synchronization
CO2	Processes and Thread Scheduling by operating system
CO3	Memory management by operating system using with the help of various schemes

CS-363:-Web Technologies – II

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To Learn different technologies used at client Side Scripting Language.
CO2	To Learn XML and XML parsers.
CO3	To One PHP framework for effective design of web application.
CO4	To Learn Java Script to program the behavior of web page.
CO5	To Learn AJAX to make our application more dynamic.

CS-364:-Data Analytic

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Deploy the Data Analytics Lifecycle to address data analytics projects.
CO2	Develop in depth understanding of the key technologies in data analytics.
CO3	Understand different data mining techniques like classification, prediction, clustering andassociation rule mining.

CO4	Apply modelling and data analysis techniques to the solution of real world business problems.

CS-368 Practical course based on CS 363 and CS 364

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To Learn different technologies used at client Side Scripting Language.
CO2	To Learn XML and XML parser.
CO3	To One PHP framework for effective design of web application.
CO4	To Learn Java Script to program the behavior of web pages.
CO5	To Learn AJAX to make our application more dynamic.

CS-365 Object Oriented Programming using Java – II

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To access open database through Java programs using Java Data Base Connectivity (JDBC) and develop the application.
CO2	Understand and Create dynamic web pages, using Servlets and JSP.
CO3	Work with basics of framework to develop secure web applications.

CS-366:- Compiler Construction

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	Understand the process of scanning and parsing of source code.
CO2	Learn the conversion code written in source language to machine language.
CO3	Understand tools like LEX and YACC.

CS-369 Practical Course based on CS 365

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To Learn database Programming using Java
CO2	Understand and Create dynamic web pages using Servlets and JSP.

CO3	Work with basics of framework to develop secure web applications

CS-3610 Software Testing Tools

Course Outcomes (COs)	
Sr. no.	**Description**
CO1	To understand various software testing methods and strategies.
CO2	To understand a variety of software metrics and identify defects and managing those defects for improvement in quality for given software.
CO3	To design test cases and test plans, review reports of testing for qualitative software.
CO4	To understand latest testing tools used in the software industries.