The Bodwad Sarvajanik Co-op Education Society Ltd, Bodwad

Arts, Commerce and Science College, Bodwad

-: Course Outcomes :-

Bachelor of Arts

Bachelor of Commerce

Bachelor of Science

Master of Science

INDEX

COURSE OUTCOMES

Bachelor of Arts

F.Y.B.A.

Hindi

Hindi General Paper: Katha Sanchayan

CO1: To develop Hindi language speaking ability among students.

CO2: To acquaint students the types of stories.

CO3: To make students aware about the human values.

Adhunik Hindi kawaya prawaha , Kavayashashra

CO1: To introduce satire and irony in poetry.

CO2: To develop poetry writing ability among students.

CO3: To make students aware about the human values

CO4: To quaint students power of words.

Marathi

Marathi: Selected 10 stories of Hamid Dalwai

CO1: To introduce nature, characteristics, importance and types of study to students.

CO2: To aware students the salient features of story.

CO3: To know the narration, events, environment skill of preparation and language diction of the selected ten stories.

Poems

CO1: To introduce students nature and salient features of poetry.

CO2: To know the theme, experience, rhythm, images, symbols, composition and diction of the poetry.

English

Optional English: OENG -101/ OENG -201

CO1: To develop the ability of students to comprehend written texts.

CO2: To inculcate amongst students moral and human values.

CO3: To make the students aware of the aesthetic pleasure of literature.

CO4: To introduce to the students the basic forms of poetry.

CO5: To create interest among students for literature.

Compulsory English: CENG -101

CO1: To develop the ability of students to comprehend written texts.

CO2: To inculcate amongst students moral and human values.

CO3: To make the students aware of the aesthetic pleasure of literature.

CO4: To develop in students the proficiency in speaking and writing English for different purposes.

CO5: To make them aware of the importance of communicative competence

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Economics

Paper code Eco G-: 201: A: Fundamentals of Economics-II

CO1: Introduction & enhancement of the understanding of the students in the domain of economics.

CO2: Introduction to the main or common analytical tools which are used in economic analysis.

CO3: Increase rational outlook among the students about the economic matters happen around their surroundings.

CO4: To develop students' understanding about the organizational and policy implications.

CO5: To Aware the students to the Economic Environment Prevail in the Economic system.

Political Science

POL-G-101 & POL-G-201- A : Indian Constitution

CO1: This paper is a basic introduction to the process, concept and working of Indian Constitution.

CO2: To create responsible Indian citizen is the need of an hour.

CO3: To explain the students an importance of constitutions.

CO4: To learn Practical applicability of the constitution should be known to the students.

CO5: To make it includes the constitutional frame work machinery and recent trends in Indian democracy.

Psychology

PSY- G- 101(A) and PSY- G- 201(A): Modern General Psychology

CO1: To impart knowledge of the basic concepts and modern trends in Psychology.

CO2: To create interest in the subject of Psychology.

CO3: To help students think critically about the new information that they have learned and relate it to their own life.

CO4: To relate the fundamental principles of Psychology in everyday life.

CO5: To make the students aware of the applications of Psychological concepts in various fields.

Geography

Gg. 101 & Gg. 201: Physical Geography:

PART– I (Lithosphere) & II (Atmospheric& Hydrosphere):

CO1: To create awareness among students about earth and its characteristics (contained ocean, river and mountain).

COURSE OUTCOMES

Bachelor of Arts

S.Y.B.A.

Hindi

Hindi General Paper: Kathasethu.

CO1: To acquaint students the forms of stories.

CO2: To make students aware about the human values.

CO3: To make students acquaint with synonyms and antonyms, as well as grammatically correct writing.

CO4: To develop the letter writing skill of the students.

Hindi Special Paper II, III: Daud Novel

CO1: To know the students the features of novel.

CO2: To make students aware about the human values.

CO3: To arise sentiments among students through novel.

CO4: To know the students the forms of novel.

Kabira Khada Bazar Me

CO1: To know the students the features of drama.

CO2: To make students aware about the human values.

CO3: To arise sentiments among students through drama.

CO4: To know the students the forms of drama.

Marathi

Marathi General Paper : Vangmay Prakaracha Abhyas.

CO1: To introduce and inspire students to read modern novels.

CO2: To introduce autobiographies and its nature, writing and characteristics.

Marathi Special Paper I : Madhyayugin gaddya vangmayprkasraccch abbhyas

CO1: To introduce the history of Shivaji Maharaj and his concept of swarajya and his thoughts.

CO2: To introduce the schemes of the welfare of people.

CO3: To introduce the characters moral and ethics of the ruler of the middle age.

CO4: To understand the saint literature, it's nature and study.

Marathi Special paper II : Sahitya Swarup Vichar

CO1: To introduce several concept in literature of Northens And western.

CO2: To introduce nature of literature, objectives and creation of literature.

CO3: To briefly introduce the characteristics of several sub kinds in literature.

CO4: To teach difference between literature language and ordinary language.

CO5: To study perception, test and Cultural values.

CO6: To create interest of literature in students.

Geography

Gg 231: G2 – Human Geography & Gg 241: G2 – Economic Geography

CO1: To acquaint with the knowledge of economic realm in the world as well as in India.

CO2: To study the Economic Geography as a major branch of human geography.

CO3: To highlight the different economic activities observed in the world.

CO4: To study mineral and power resources in the specific regions of the world.

CO5: To explain the trade and transport activities of the world.

CO6: To study theory and models in economic geography.

Economics

ECO-232 & 242: Advanced Micro Economics I & II

CO1: To acquaint the students knowledge of Micro – Economics Concept and Theories.

CO2: To enable students to have understanding the Theory of consumer behavior.

CO3: To develop the analyzing capability in applying theories to real life situations

Eco-231&241: Indian Economy since 1980 – I & II

CO1: To enable students to have understanding the various issues of the Indian Economy.

CO2: To develop the analyzing capability in the context of current Indian Economic Problems.

CO3: To able the students for appearing the MPSC, UPSC and other competitive Examinations.

ECO-233& 243: Advanced Macro Economics I

CO1: To acquaint the students' knowledge of Macro Economic concept and theories.

CO2: To acquaint the students' knowledge of Macro Economic problems and policies.

CO3: To develop the analyzing capacity in applying theories to real life situation.

English

CENG - 231 & CENG - 241 : Compulsory English

CO1: To develop the ability of students to comprehend written texts.

CO2: To inculcate amongst students moral and human values.

CO3: To make the students aware of the aesthetic pleasure of literature.

CO4: To develop in students the proficiency in speaking and writing English for different purposes.

CO5: To make them aware of the importance of communicative competence.

ENG-232 & ENG-242 16th and 17th Century English Literature

CO1: To acquaint students with the major dramatists and essayists of the 16th and 17th Century English Literature.

CO2: To make the student aware of the literary history, salient features and cultural background

CO3: Of the period.

CO4: To help the students to grasp the content and critical appreciation of the prescribed texts.

CO5: To inculcate amongst students a liking for the Elizabethan and post-Shakespearean Literature.

ENG-233 & ENG-243: 18th and 19th Century English Literature

CO1: To impart basic ideas about the 18th and 19th Century English Literature with special reference to Poetry and Novel.

CO2: To make the students aware of the literary history, salient features and cultural background of the Romantic and Victorian age.

CO3: To help the students to grasp the content and critical appreciation of the prescribed texts.

CO4: To inculcate amongst students a liking for the Romantic and Victorian literature.

Psychology

Paper-I- G2 PSY- 231(A) Advanced Social Psychology

CO1: To impart knowledge of the basic concepts and modern trends in social psychology

CO2: To fetors in social psychology as field of study and research

CO3: To make the students aware of the applications of the various concepts in social psychology in the Indian contests.

Paper-I – G2 PSY- 241(A) Social Psychology Process

CO1: To impart knowledge of the basic concepts and modern trends in Social Psychology.

CO2: To foster interest in Social Psychology as a field of study and research

CO3: To make the students aware of the applications of the various concepts in Social Psychology in the Indian context.

COURSE OUTCOMES

Bachelor of Arts

T.Y.B.A

Hindi

Hindi General Paper: Ekanki Parimal, Nibhandh Manjari

CO1: To know the student about one act play and its beauty, thoughts and human value.

CO2: To introduce students the essay with its variety of thoughts and human value.

CO3: To develop one word formation skill of students.

Hindi Special paper IV, V: Bhasha Vidynan tatha Rashtra Bhasha Andolan ka Etihas

CO1: To introduce theoretical and practical knowledge of Hindi language.

CO2: To introduce nature of Hindi Regional, State, National level of Hindi language.

CO3: To introduce defects of Hindi language.

CO4: To know classification of group of words.

CO5: To familiar definition of linguistic.

CO6: To know relation between linguistic and grammar.

CO7: To know importance of part of linguistic.

CO8: To introduce history of literature to students.

CO9: To acquaint students different saints and aware them about human values, ethics and morality.

CO10: To make students aware about the human values.

Marathi

Marathi S4: "Bhashavidhnyan Aani Marathi Vyakaran"

CO1: To know the importance of language and its function in human life.

CO2: To understand the process of composition and function of Vagindriya.

CO3: To study traditional Marathi grammar.

Marathi

CO1: To understand the nature of language and its function in human life.

CO2: To understand the concept of formation and reconstruction of organs of speech.

CO3: To understand the concept of 'Swanigam and Rupim'.

CO4: To understand the nature of ' Vakyavinach and Aardhvinayas'.

CO5: To introduce with some important element in traditional grammar of Marathi.

Marathi General: Vadayanmain Marathi Jayant Pawar

CO1: To know nature of drama

CO2: To understand aspects of drama (plot, character, conflict, dialogue and style of language)

CO3: To introduce the trend of traditional, social, rural, backward and feminist drama in the history of drama.

CO4: To introduce comedy and tragedy major form of drama.

Literature from 'lalit prose'

CO1: To know 'Lalit Prose' a literature form

CO2: To understand the tradition of 'Lalit Prose'

CO3: To understand invention methods and writing Exprenices in 'Lalit Prose'

CO4: To estimate originality of writing Exprenices in 'Lalit Prose'

CO5: To understand nature of SAHITYA Academy award.

Marathi: History of modern Marathi literature (1920 to 1960)

CO1: To introduce literature and cultural transliteration from 1920 to 1960

CO2: To know literacy Form and literature works in period of same era

CO3: To know literacy function of story, Novel dramas and poetry in 1920 to 1960

CO4: To introduce with several literacy flaw of same period.

Geography

G 3: Population Geography

CO1: Population is an important resource. The development of any nation is depends on human resource. It is a prime deity to acquaint with the human resource of the nation.

CO2: To understand the recent problems of population in the world as well as nation.

CO3: To familiarize the students with different theories of population growth.

G-3: POLITICAL GEOGRAPHY

CO1: To discuss the impact of geographical factors on the political scenario of the nation.

CO2: Describe terrestrial differences and its impact on geopolitics.

English

CENG - 351 & 361: T.Y.B.A. Compulsory English

CO1: To develop the ability of students to comprehend written texts.

CO2: To inculcate amongst students moral and human values.

CO3: To make the students aware of the aesthetic pleasure of literature.

CO4: To develop in students the proficiency in speaking and writing English for different purposes.

CO5: To make them aware of the importance of communicative competence.

ENG-352 & ENG-362: Indian Writing in English and American Literature

CO1: To acquaint the students with the growth of Indian drama and novel in English during the 20^{th} century.

CO2: To enable the students to evaluate, analyze, appreciate and criticize drama and novel prescribed.

CO3: To acquaint the students with the social, political and cultural background and literary movements of the century.

CO4: To acquaint the students with the developments in American poetry and novel.

ENG-353 & ENG-363: The Study of English Language

CO1: To introduce the students to the properties and functions of language.

CO2: To inculcate phonological competence among students.

CO3: To acquaint the students with English grammatical forms and functions.

CO4: To acquaint the students with morphological concepts and processes.

CO5: To introduce the students to the basic concepts in syntactic and semantic levels of language.

Economics

Eco-351&361: Indian Economy since 1980 – III & IV

CO1: To enable students to have understanding the various issues of the Indian Economy.

CO2: To develop the analyzing capability in the context of current Indian Economic Problems.

CO3: To able the students for appearing the MPSC, UPSC and other competitive Examinations.

Eco-352(A) &362(A): **Public Finance and Policies-I&II**

CO1: To enable students to have understanding the various issues of Public Finance and Policies.

CO2: To develop the analyzing capability in the context of Public Finance and Policies.

CO3: To able the students for appearing the MPSC, UPSC and other competitive Examinations.

Eco-353(A) & 363(A) **International Trade and Practices -I&II**

CO1: To enable students to have understanding the various issues of International Trade and Practices.

CO2: To develop the analyzing capability in the context of International Trade and Practices.

CO3: To able the students for appearing the MPSC, UPSC and other competitive Examinations.

Psychology

PSY-351-A) Modern Applied Psychology

CO1: To facilitate the learning of traditional emerging fields of psychology.

CO2: To understand the relationship between theoretical and practical psychological principals.

CO3: To prepare the students to function effectively and confidently in wide range of society.

PSY-361-A) Applied Psychology and Human Life

CO1: To facilitate the learning of traditional emerging fields of psychology.

CO2: To understand the relationship between theoretical and practical psychological principals.

CO3: To prepare the students to function effectively and confidently in wide range of society.

COURSE OUTCOMES

Bachelor of Commerce

F.Y. B.Com

Paper: 101 English for Business

CO1: To introduce communication theory to students.

CO2: To inculcate various communication skills in English among students.

CO3: To introduce various soft skills to students.

CO4: To improve oral and written competency in English of students.

CO5: To develop linguistic competency of students through various grammatical and vocabulary exercises.

Paper: 103 Micro Economics

CO1: Introduction & enhancement of the understanding of the students in the domain of economics.

CO2: Introduction to the main or common analytical tools which are used in economic analysis

CO3: Increase rational outlook among the students about the economic matters happen around their surroundings,

CO4: To develop students' understanding about the organizational and policy implications

CO5: To Aware the students to the Economic Environment Prevail In the Economic system.

Paper No. 104, 204: Financial and Cost Accounting

CO1: To lay a foundation for understanding the Accounting.

CO2: Standards issued by the ICAI.

CO3: To gain the ability to solve problems relating to settlement of obligations on dissolution of partnership firm and also relating to their business combinations.

CO4: To introduce the concepts used in Cost Accounting, elements of costs and the concept of cost sheet.

Paper: 105 Computing Skills

CO1: To familiarize the Students with basics of Internet.

CO2: To understand the use of Office application.

CO3: To know the role of word processor, spread sheet, presentation in industry.

CO4: To understand the how of accounting software works.

CO5: To know the relevance of Tally accounting package in modern competitive world.

Paper: 106 a - Elective - Modern office Management

CO1: To understand the concept of office management.

CO2: To acquire operational skills of office management.

CO3: To develop the interest in methods and procedures of office management.

CO4: To know the secretarial procedure.

CO5: To understand office layout and environment in modern context.

CO6: To acquire the basic knowledge of office appliances and machines.

CO7: To understand office system.

CO8: To acquire knowledge of office meetings and proceedings.

Paper: 107 a - Elective - Principles & Practices of Banking

CO1: To acquaint students with the concept of banking.

CO2: To introduce the scope of function of banking.

CO3: To make the students aware of carrier opportunities in the field of banking.

Paper: 107 g - Geography of Disaster Management

CO1: To Understand basic concepts in Disaster Management

CO2: To Understand Definitions and Terminologies used in Disaster Management

CO3: To Understand Types, Categories and impact of Disasters.

COURSE OUTCOMES

Bachelor of Commerce

S.Y.B.Com

Macro Economics

CO1: To make students Familiar with the basic concepts of macro Economics.

CO2: To enable the students to Understand objectives of macro Economics The ones and Policies.

CO3: To develop students for MPSC and UPSC Exams.

Business & Tax Laws

CO1: The Law & Legal Principals OF Contract Act 1872.

CO2: Draft legal documents including partnership deed & service tax returns.

CO3: Understand the basic structure, rules & powers of consumer protection act.

CO4: To know the provision regarding strikes and lock outs under industrial dispute act.

CO5: Be acquainted with development of patents and environment protection act.

CO6: Students to gain a better underrating of the negotiable instrument act.

CO7: Learn how to analysis the legal constraints on business.

CO8: Be able to face the Problems on Various Sides of Business and Tax Law

Business Management

CO1: To introduce the concept of management to the students.

CO2: To acquaint the student with modern management practices.

CO3: To develop leadership skills and communication skills.

CO4: To familiarize the students with the nature and scope of management.

CO5: To help the students to understand the concept of management. Also expose the students to latest trends in management.

Corporate Accounting and Costing

CO1: To develop an understanding of the rules of measurement and reporting relating to various components of corporate financial transactions.

CO2: To provide working knowledge of accounting principles and procedures for recording of transactions related to corporate entities, and for preparing the corporate accounts and statements in accordance with the statutory requirements.

CO3: To introduce the relevant Accounting Standards issued by the Institute of Chartered Accounts of India.

CO4: To introduce different methods of Costing.

CO5: To lay a foundation for understanding the Labor & Overheads Accounting procedure.

Computing Management

CO1: To Understand the Objectives of Computerized Accounting.

CO2: To Know the Principles Of Tally Software.

CO3: To acquire Computing Skills.

CO4: To Study various features of Tally.

CO5: To Acquaint with Modern Technology In Accounting.

Business Entrepreneurship

CO1: To understand the concept of entrepreneurship.

CO2: To know the qualities of entrepreneur.

CO3: To describe the types of entrepreneur.

CO4: To identify the new business opportunities.

CO5: To know the Entrepreneurship Development Programme.

CO6: To acquaint with Role of Entrepreneur and Inducement measures.

CO7: To under entrepreneurship development theories and factors affecting.

CO8: To recognize women entrepreneurship.

Modern Banking and Financial System

CO1: To acquaint students with the new concepts of Banking

CO2: To update the students about new changes in Banking

CO3: To know the relevance Banking practices in modern competitive world

CO4: To make understandable of banking operations.

COURSE OUTCOMES

Bachelor of Commerce

T.Y.B.Com

Indian Economic Scenario (Since 1980-81)

CO1: To acquaint students with new concepts of Economics.

CO2: To update the students about new changes brought in Indian Economy.

CO3: To know the relevance Economic practices in modern competitive world.

CO4: To make students competent to become success in competitive examination.

CO5: To acquaint students with new concepts of Economics.

CO6: To update the students about new changes brought in Indian Economy.

CO7: To know the relevance Economic practices in modern competitive world.

CO8:To make students competent to become success in competitive examination

Principles & Practices of Auditing

CO1: Describe auditors' and managements' responsibilities and audit objectives.

CO2: Explain how analytical procedures are used as an audit tool.

CO3: Explain how materiality and risk affect an audit.

CO4: Illustrate effective internal controls.

CO5: Describe the auditor's responsibility for assessing fraud risk and detecting fraud.

CO6: Summarize the application of the audit process to the sales and collection cycle, the payroll and personnel cycle, as well as other cycles.

CO7: Apply ethical standards to issues in auditing

Income Tax

CO1: Know the various provisions relating to Income and Incomes tax computation

CO2: Understand the basic concepts of the Income Tax Act 1961 and get the elementary knowledge of scheme of taxation in India.

CO3: Compute Income and Tax of an Individual assesse under the Act

Soft Skills Development

CO1: To equip students with the necessary soft skills to enhance their competitive edge in the job market.

CO2: To imbibe in students positive attitude towards life and work.

CO3: To help students excel in their individual and professional lives using the soft skills

Human Resource Management

CO1: To introduce the concept, principles and practices of H.R.M. to the students.

CO2: To familiarize students with concepts of human resource planning, Job Analysis, Recruitment and selection procedures.

CO3: To introduce the concept Training and Management Development of H.R.M. to the students.

CO4: To provide recent trends in Human Resource Management.

CO5: To develop the total personality of students as future Human Resource of India.

CO6: To study the various dimensions of Human Resource Management.

Modern Management Technique- I&II

CO1: To learn about marketing management.

CO2: To learn banking management system.

CO3: To understand the basics concepts of modern management techniques.

Advanced Accounting–I

CO1: To impart the students, knowledge about accounting treatment of functional aspects of Corporate and Non-corporate undertakings

CO2: To appraise the students about need and importance of Accounting Standards concerning the Functional aspects accounting

CO3: To appraise the students about the application of accounting knowledge in preparation of financial Statements of Farm Activities, and Corporate Sector units.

Advanced Accounting–II

CO1: To impart the students, knowledge about accounting treatment of corporate undertakings restructuring.

CO2: To apprise the students about the application of accounting knowledge in preparation of financial statements of Bank Accounts.

CO3: To appraise the students about application of the A Concerning the aspects in accounting.

CO4: To appraise the students about the application of accounting knowledge in reading and interpreting the financial statements of corporate entities.

COURSE OUTCOMES

Bachelor of Science

F.Y.B.Sc.

Marathi

CO1: To analyze the characteristics aspects of plot of story, character sketches, conflicts, setting and language of short story collection 'Manadeshi'.

CO2: To introduce kind of formal and informal communication.

CO3: To introduce the importance factors for communication skill.

CO4: To utilise a nature of education, presentation, debate, anchoring, group discussion.

CO5: To introduce required elements for effective communication.

CO6: The vendor of sweet.

CO7: To learn from stories like Under the Banyan tree and other short story, Talkative man, Mr. Sampat, Grandmother tale, A Horse and two Goats, Malgudi days (short stories), Lowety road and other stories ,God's, Demons and other an Astrologers days.

CO8: To utilize the nature of advertisement in the medium of newspaper, television, radio.

CO9: To understand and utilized the application for job, demand, and complains.

Physics

PHY 101: Basic Mechanics

CO1: Apply the concept of use of knowledge of mechanics to real life problems.

CO2: Understanding of the course will create scientific temperament

CO3: Understand Derivatives of a vector with respect to a parameter.

CO4: Understand the Applications of Homogeneous and non-homogeneous differential equations of 1^{st} and 2^{nd} order homogeneous differential equations with constant coefficients.

CO5: Applications of Newton's Laws of motion, Dynamics of a system of particles.

CO6: Understand Rotational Motion.

PHY 102: Dynamics and Elasticity

CO1: Apply the concept of use of knowledge of DYNAMICS AND ELASTICITY to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand Newton's Law of Gravitation, Kepler's Laws of Planetary Motion and Basic idea of global positioning system.

CO4: Understand Simple harmonic motion and their parameters.

CO5: Understand Hooke's law, Stress-strain, viscosity and general concept of fluid flow.

Physics Lab: DSC 1a Lab: Mechanics

CO1: Apply the concept of use of knowledge of Mechanics to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand the real life Phenomenon.

CO4: Demonstrate an understanding of the scientific method and an ability to apply the scientific method in practice.

CO5: Choose appropriate tools and methods to solve scientific problems.

CO6: Accurately record, analyse, interpret and critically evaluate their findings.

CO7: Communicate the solution to a problem or the results of a scientific investigation using effective oral, written and presentation skills.

PHY 201: Electricity and Electrostatics

CO1: Apply the concept of use of knowledge of Electricity and Magnetism to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand vector algebra, Gauss-divergence theorem and Stoke's theorem of vectors.

CO4: Understand Network theorems in current electricity.

CO5: Understand Electrostatics, Gauss's theorem of electrostatics and Applications of Gauss theorem.

PHY 202: Dielectrics, Magnetism and Electromagnetism

CO1: Apply the concept of use of knowledge of Electricity and Magnetism to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand the Capacitance and dielectrics, Capacitors.

CO4: Understand the Magnetic properties of materials and Biot-Savart's law & its applications-straight conductor.

CO5: Understand the Electromagnetic Induction, Faraday's laws of electromagnetic induction.

CO6: Maxwell`s equations and Electromagnetic wave propagation through vacuum and isotropic dielectric medium, transverse nature of EM waves, polarization.

Physics Lab: DSC 2A Lab: Electricity and Magnetism

CO1: Apply the concept of use of knowledge of ELECTRICITY AND MAGNETISM to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand the real life Phenomenon.

CO4: Demonstrate an understanding of the scientific method and an ability to apply the scientific method in practice.

CO5: Choose appropriate tools and methods to solve scientific problems.

CO6: Accurately record, analyse, interpret and critically evaluate their findings.

CO7: Communicate the solution to a problem or the results of a scientific investigation using effective oral, written and presentation skills.

Botany

BOT-101: Microbial Diversity, Algae & Fungi

CO1: To gain knowledge about microbial diversity.

CO2: To understand the phylogeny of plants.

CO3: To know about various useful and harmful activities of Bacteria, Viruses, Algae and Fungi.

CO4: To understand life cycles of different Algal and Fungal species.

CO5: To explore economic importance of algae& fungi.

BOT. 102: Plant Taxonomy

CO1: To recognize the major groups of vascular plants and their phylogenetic relationships.

CO2: To know the economic importance of the angiospermic plants.

CO3: To gain the knowledge of making plant Herbarium.

BOT. 103: Practical Course

CO1: Familiarize with the external and internal structure of lower group organism. Learn the microscopic technique.

CO2: To gain proficiency in the use of keys and identification manuals for identifying any unknown plants to species level.

Zoology

ZOO 101: Animal Diversity I Semester I

CO1: To classify Phylum Porifera with taxonomic Keys.

CO2: To describe the Phylum Cnidaria and its Polymorphism.

CO3: To describe Platyhelminthes and life history of parasite.

CO4: To describe general characters of Nemathelminthes and their parasitic Adaptation.

CO5: To describe general characters and classification of Anelida and Metamerism in Annelida.

CO6: To describe General characters and classification of Arthropoda; Vision in Arthropoda, Metamorphosis in Insects.

CO7: To identify the given of Mollusca and Torsion in gastropods.

CO8: General characters and classification up to classes; Water-vascular system in Asteroidea.

ZOO 102: Animal Diversity II

CO1: To identify General features and Phylogeny of Protochordata.

CO2: To identify General features of Agnatha and classification of cyclostomes up to classes.

CO3: To describe General features and Classification up to orders; Osmoregulation in Fishes.

CO4: To describe General features and Classification up to orders; Metamorphosis in frog, Parental care.

CO5: To identify General features and Classification up to orders; Extinct reptiles, Poisonous and nonpoisonous snakes, Biting mechanism in snakes.

CO6: To classify General features and Classification up to orders; Flight adaptations in birds.

CO7: To identify Classification up to orders; Origin of mammals.

Practical: ZOO 103: Animal Diversity I & II

CO1: To study and understand the classification of whole phyla includes in Non-chordates with the help of charts/models/pictures.

CO2: To understand T.S. and L.S. of Sycon.

CO3: To understand life history stages of Taenia and T.S. of Male and female Ascaris.

CO4: Understand the Classification various classes of phylum Chordate i.e. Pisces, Reptiles, Aves and Mammals.

CO5: To identify Poisonous and nonpoisonous snakes.

Practical: ZOO 103: Animal Diversity I & II

CO1: To study and understand the classification of whole phyla includes in Non-chordates with the help of charts/models/pictures.

CO2: To understand T.S. and L.S. of Sycon.

CO3: To understand life history stages of Taenia and T.S. of Male and female Ascaris.

CO4: Understand the Classification various classes of phylum Chordate i.e. Pisces, Reptiles, Aves and Mammals.

CO5: To identify Poisonous and nonpoisonous snakes.

ZOO 201: Comparative Anatomy of Vertebrates Semester II

CO1: To understand Integumentary System and different Derivatives of integument w.r.t. glands and digital tips.

CO2: To study and understand Skeletal System and Evolution of visceral arches.

CO3: To know general plan of Digestive System and Brief account of alimentary canal and digestive glands.

CO4: To understand Respiratory System Brief account of Gills, lungs, air sacs and swim bladder.

CO5: Comparative study of Circulatory System and Evolution of heart and aortic arches.

CO6: To understand Urinogenital System and Succession of kidney, Evolution of urinogenital ducts.

CO7: To understand Comparative account of brain, Nervous System and Sense organ.

ZOO 201: Comparative Anatomy of Vertebrates

CO1: To understand Integumentary System and different Derivatives of integument w.r.t. glands and digital tips.

CO2: To study and understand Skeletal System and Evolution of visceral arches.

CO3: To know general plan of Digestive System and Brief account of alimentary canal and digestive glands.

CO4: To understand Respiratory System Brief account of Gills, lungs, air sacs and swim bladder.

CO5: Comparative study of Circulatory System and Evolution of heart and aortic arches.

CO6: To understand Urinogenital System and Succession of kidney, Evolution of urinogenital ducts.

CO7: To understand Comparative account of brain, Nervous System and Sense organ.

ZOO 202: Developmental Biology of Vertebrates

CO1: Understand basic concepts of developmental biology

CO2: Understand how fertilization and cleavage occur

CO3: Understand the process and consequence of gastrulation

CO4: Understand mesoderm induction and neural induction

CO5: Understand basic concepts of organogenesis

CO6: Understand basic concepts of growth, regeneration and aging

CO7: Understand basic concepts of gene expression and regulation

Practical: ZOO 203 Comparative Anatomy & Developmental Biology Of Vertebrates

CO1: To understand structure of bones disarticulated skeleton of fowl and rabbit.

CO2: To study Carapace and plastron of turtle /tortoise

CO3: To understand herbivorous and one carnivorous mammalian skulls.

CO4: To identify developmental stages of cleavage, blastula, gastrula, neural, tail bud stage, tadpole external and internal gill stages.

CO5: To understand histological structure of different types of placenta.

CO6: To understand Examination of gametes - sperm and ova.

Mathematics

MTH 101: Matrix Algebra

CO1: Upon successful completion of this course the student will be able to:

CO2: Understand concepts on matrix operations and rank of the matrix.

CO3: Understand use of matrix for solving the system of linear equations.

CO4: Understand basic knowledge of the Eigen values and Eigen vectors.

CO5: Apply Cayley-Hamilton theorem to find the inverse of the matrix.

CO6: Know the matrix transformation and its applications in rotation, reflection, translation.

MTH 102: Calculus

CO1: Upon successful completion of this course the student will be able to:

CO2: Understand basic concepts on limits and continuity.

CO3: Understand use of differentiations in various theorems.

CO4: Know the Mean value theorems and its applications.

CO5: Make the applications of Taylor's, Maclaurin's theorem.

CO6: Know the applications of calculus.

MTH 103(A): Coordinate Geometry

CO1: Students can visualize geometrical concepts and draw two dimensional figures) Students can find their standard forms by shifting and rotation of axes

CO2: Students also can draw three dimensional figures and their equations particularly Sphere, Cone and Cylinder.

Computer Science

UG CS 111 Basics of Computer

CO1: Understand the History of Computers.

CO2: Understand what is Computer and Basic concepts of computer.

CO3: Aware about various types of Computers, types of input and output devices.

CO4: Preparation of Algorithm and Flowchart of Program.

CO5: Learn computer networks, its types and basics of Internet.

CO6: Understand computer viruses and its types.

UG CS 112 C Programming -I

CO1: Develop their programming skills.

CO2: Be familiar with programming environment with C Program structure.

CO3: Declaration of variables and constants.

CO4: Understand operators, expressions and preprocessors.

CO5: Understand arrays, it's declaration and uses.

UG CS 121 Internet Computing

CO1: Understand the Types of Website, it's Structure, Site Organization Model , Site Planning and Testing.

CO2: Understand how to design website with different website development models.

CO3: Know the different page types on websites and it's navigations.

CO4: Designing website using HTML language.

CO5: Design advanced website using CSS.

UG CS 122 C Programming -II

CO1: Design programs using Functions, Pointers , Structures and Unions in C language.

CO2: Write a program using File Handling.

CO3: Writing programs for drawing different graphical shapes.

UG CS-103 LAB Course on Paper I

CO1: Develop programs using C to meet real world needs and able to develop their own websites.

CO2: This course provides platform to enhance student's basic skills required for advanced programming.

UG CS- 203 LAB Course on Paper II

CO1: Develop programs using C to meet real world needs and able to develop their own Websites.

CO2: This course provides platform to enhance student's basic skills required for advanced programming.

Chemistry

CH-101- Physical & Inorganic chemistry

CO1: Physical properties of gases.

CO2: Thermodynamics of gases.

CO3: Study and metallurgy.

CO2: Physical and chemical properties of s & p block elements.

CH-102- Organic & Inorganic chemistry

CO1: Synthesis and reactions of alcohols.

CO2: Synthesis and reactions of amines.

CO3: Preparations and reactions of carboxylic acids and there derivatives.

CO4: Volumetric analysis.

Chemistry Practical

CO1: Standardization of solutions & preparation of standard solution.

CO2: Quantitative analysis of organic and inorganic compounds

CO3: Determination of surface tension, viscosity, heat of solution, conductance etc.

COURSE OUTCOMES

Bachelor of Science

S.Y.B.S.c

Marathi

Marathi General : Katha vadyam sawap aani sathy by V. S. Khadekar

CO1: To realise development of story literature.

CO2: To study contribution of Marathi story.

CO3: To understand story elements - plot, characters, conflicts, style etc.

CO4: To know difference between story literature and other from literature.

Drama : Premachya gavi jawe -Vasant kanetkar

CO1: To study concept of drama and it's defenation.

CO2: To study history of Marathi drama.

CO3: To study the elements of drama - plot, charatorization,conflicts,style etc.

CO4: To study the form of drama (Social, historical, political)

Physics

PHY 231: Waves and Oscillations

CO1: Apply the concept of use of knowledge of Waves and Oscillations to real life problems.

CO2: Understanding of the course will create scientific temperament

CO3: Understand the Simple Harmonic Motion and its Composition with Lissajous Figures.

CO4: Understand the Un-damped free oscillations, Damped free oscillations, Differential equation of damped harmonic oscillator and its solution.

CO5: Understand the Idea of forced oscillations, Resonance and its types.

CO6: Understand the Sound intensity, Loudness, Pitch, Quality and timber, Acoustic intensity level measurement, Acoustic pressure and its measurement.

CO7: Understand the Doppler effect, Doppler effect in sound, Expression for apparent frequency.

PHY 232 (A) : Electronics-I

CO1: Apply the concept of use of knowledge of Electronics to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand the P-N junction diode and its working.

CO4: Understand the Rectifiers, Filters and its types and its working.

CO5: Understand the Basic construction of bipolar transistors (NPN and PNP), operation of transistor, transistor circuit configurations

CO6: Understand the Transistors Amplifier Sinusoidal Oscillators

CO7: Understand the Numbers systems and digital circuits.

PHY 233: Practical Course – I

CO1: Apply the concept of use of knowledge Waves and Oscillations and Electronics to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand the real life Phenomenon.

CO4: Demonstrate an understanding of the scientific method and an ability to apply the scientific method in practice.

CO5: Choose appropriate tools and methods to solve scientific problems.

CO6: Accurately record, analyse, interpret and critically evaluate their findings.

CO7: Communicate the solution to a problem or the results of a scientific investigation using effective oral, written and presentation skills.

PHY – 241: Modern Physics

CO1: Apply the concept of use of knowledge of Modern Physics to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand the Energy crisis, conventional and non-conventional energy sources.

CO4: Understand the Principle of LASER, Characteristics of LASER , Basic steps required to form a LASER.

CO5: Understand the Bohr's and Sommerfield theories of hydrogen atomUnderstand the Sound.

CO6: Understand the Wave particle duality of matter, de-Broglie hypothesis, Expression for matter waves, Electron diffraction.

PHY-242: Optics

CO1: Apply the concept of use of knowledge of Optics to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand the Deviation produced by thin lenses, Chromatic aberration, Achromatism.

CO4: Understand the Interference of Light, Newton's rings Michelson Interferometer.

CO5: Understand the Diffraction: Fresnel and Fraunhoffer diffraction, Fraunhoffer diffraction, Fresnel diffraction.

CO6: Understand the Polarization, Polarization by reflection, Brewster's law, Polarization by double refraction in uniaxial crystals, Maluss Law.

PHY 243: Practical Course-II

CO1: Apply the concept of use of knowledge MODERN PHYSICS & OPTICS AND LASER to real life problems.

CO2: Understanding of the course will create scientific temperament.

CO3: Understand the real life Phenomenon.

CO4: Demonstrate an understanding of the scientific method and an ability to apply the scientific method in practice.

CO5: Choose appropriate tools and methods to solve scientific problems.

CO6: Accurately record, analyse, interpret and critically evaluate their findings

CO7: Communicate the solution to a problem or the results of a scientific investigation using effective oral, written and presentation skills.

Botany

BOT. 201: Diversity of Archegoniates

CO1: To make students aware of the status of higher cryptogams& gymnosperms as a group in plant kingdom.

CO2: To understand the life cycles of selected genera.

CO3: To gain the knowledge of economic and ecological importance of Archegoniates

BOT. 202: Plant Ecology

CO1: To understand the plant communities and ecological adaptations in plants.

CO2: To aware and know the importance of conservation of biodiversity.

CO3: To know the botanical regions of India and vegetation types of Maharashtra.

BOT. 203: Practical Course

CO1: Familiarize with the external and internal structure of higher cryptogams and Gymnosperms. Learn the microscopic technique.

CO2: To know the working and uses of various ecological instruments.

CO3: To analyse soil samples

CO4: To gain the knowledge of measuring vegetation using quadrate method.

Zoology

ZOO 231: Non Chordates-II

CO1: Understand the Characters of class Asterias with help of animal Sea star.

CO2: Understand the internal as well as external morphology of that animal.

CO3: To study and understand the concepts-Metamorphosis, regeneration and autotomy.

CO4: Understand the Mouthparts of insects.

CO5: Understand the Canal system in sponges.

CO6: Understand the Locomotion in Protozoa.

CO7: To observe and study the Foot in Mollusca.

ZOO 232: Medical Zoology

CO1: To study and understand the scope and branches of Medical Zoology.

CO2: To aware the students for various parasites and diseases which spreads in human with the help of study of host-parasite relationship.

CO3: To increase awareness for the health in students.

CO4: Understand the various disease causing vectors like Mosquitoes.

CO5: To aware about the typhoid, cholera and other epidemic disease.

CO6: Understand the importance of medical diagnostic and also understand the term forensic Entomology.

ZOO 241: Chordates -II

CO1: To study and understand the external as well as internal characters of class Aves, by studying animal Columbia Livia domestica.

CO2: Understand the various systems of pigeon.

CO3: Understand the General Topics like Accessory respiratory organs in fishes.

CO4: Able to know the reptiles of Mesozoic era.

CO5: Understand the adaptations in aquatic mammals.

CO6: Birds are important for human life by various aspects and they found important for welfare of human life the present study will help to incorporate the use of birds for human welfare.

ZOO 242: Applied Zoology

CO1: Introduce the term apiculture to the students.

CO2: To aware the students and provides the economic importance of Apiculture.

CO3: Understand the Bee keeping equipment's and apiary management.

CO4: To study and understand the various species of Bees.

ZOO 243: Practical - II

CO1: Study of Evolutionary history of animals.

CO2: Study and understand the types of fins.

CO3: Understand the adaptation in Aquatic mammals ex. whale and seal.

CO4: Study and understand the diseases, pest, parasites and predators of Honey Bee.

CO5: To study and aware the students for honey bee products and their uses.

CO6: To aware the students for Adulteration.

Mathematics

MTH 201: Ordinary Differential Equations

CO1: Understand basic concepts in differential equations.

CO2: Understand method of solving differential equations

CO3: Understand use of differential equations in various fields

MTH 202: Theory of Equations

CO1: Students can find out roots of any equation of degree less than or equal to five.

CO2: Theory of equations is highly useful in various subjects like algebra, linear algebra, calculus, ordinary and partial differential equations etc.

MTH 203(A): Laplace Transform

CO1: Understand basic concepts on Laplace and Inverse Laplace transforms.

CO2: Understand convolution theorem.

CO3: Understand use of Laplace transform in solving Differential Equations

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Computer Science

COMP 211: Data Structure-I

CO1: Know what is data structure and basic algorithmic notations.

CO2: Analyze the time and space requirement of any algorithm.

CO3: Understand different linear data structures for conversion of mathematical expressions and polynomial l representations.

CO4: Know the file structures.

COMP 212: OOAD & Introduction to C++

CO1: Be familiar with Object Oriented Programming Environment.

CO2: Differentiate between Structure oriented programming and object oriented programming.

CO3: Understand different object modeling techniques and analysis like Generalization, Aggregation and Metadata

CO4: Write Reusable, Extensible and Robust programs in C++.

COMP 221: Data Structure –II

CO1: Know different nonlinear data structures that can be used to represent hierarchical relationship between objects

CO2: Traverse and represent the graphs in computer.

CO3: Understand the different approaches of sorting and searching elements in the arrays.

CO4: Understand different techniques of designing the algorithms.

COMP 222: Programming in C++

CO1: Explore polymorphism using Function and Operator Overloading.

CO2: Write programs for handling runtime errors using exception.

CO3: Understand the concepts of pointers in C++.

CO4: Understand the different aspects of hierarchy of classes and their extensibility.

CO5: Write generic programs using templates and STL.

COMP 213: Practical Course

CO1: Students are able to develop programs using C++ based on Object oriented concepts and write the ROBUST, EXTENSIBLE and EFFICIENT programs.

COMP 223: Practical Course

CO1: Students are able to develop programs using C++ based on object oriented concepts and write the ROBUST, EXTENSIBLE and EFFICIENT programs.

Chemistry

CH-241: Physical & Inorganic Chemistry

CO1: Various types of colligative properties

CO2: Different types of electrochemical cells

CO3: Physical and chemical properties of *d* & f block elements

CO4: Molecular orbital theory of CO_2 , NH_3 ,CO,NO etc.

CH-242: Organic & Analytical Chemistry

CO1: Stereoisomerism and types of Stereoisomerism, projection formulae, optical isomerism, geometrical isomerism and conformational isomerism.

CO2: Nomenclature, preparation and use of amine.

CO3: Nomenclature, preparation and use of organometallic compounds.

CO4: Importance, types of analytical chemistry, sampling.

CO5: Classification of volumetric analysis.

CO6: Definitions, classifications, nomenclature and aromatic characters of heterocyclic compound.

CO7: Use and preparation of synthetic reagents like AAE and, Malonic ester.

CO8: Elimination reactions.

CO9: All the types of gravimetric analysis.

CO10: Use of chromatography techniques.

CH-201/ 202Chemistry Practical

CO1: Determination of colligative properties.

CO2: Organic qualitative analysis.

CO3: Gravimetric analysis.

CO4: Organic and inorganic preparations

COURSE OUTCOMES

Bachelor of Science

T.Y.B.Sc.

Chemistry

CH-351 & 361: Physical Chemistry

CO1: Different type of electrochemical cell.

CO2: The type of radioactive decay & its applications

CO3: Different type of electrode & titrations

CO4: To systematic study of the molecular structure

CO5: Difference between photochemical reaction & thermochemical reaction & other reactions

CO6: The interpretation of wave functions

CH- 352: Inorganic Chemistry

CO1: Why element like Cu, Ag, Au are used as currency.

CO2: Detailed reaction in various type of solvent & different acid base concept.

CO3: Corrosion is nothing but the redox reaction in which metal is again converted in to its ore.

CO4: VSEPR Theory explains the shapes & hybridization of molecules.

CO5: Chemistry of transition & non transition elements.

CO6: Co-ordination compound &their stereochemistry.

CO7: Valance bond theory

CO8: Crustal field theory explains the magnetic properties their geometries like why some compounds are tetrahedral and some are octahedral.

CO9: Molecular orbital theory explains the magnetic properties and physical properties.

CH-353- Organic chemistry

CO1: The students able to learn/determine/analyze,

CO2: All the structural effects.

CO3: SN^1 , SN^2, SN^i mechanism and its stereochemistry.

CO4: Mechanism of E1, E2 and E1CB, and its stereochemistry.

CO5: Electrophilic addition to C = C, nucleophilic addition to C = O, aromatic substitution and its mechanism.

CO6: The structure of organic compounds by UV, IR & NMR Spectroscopy.

CO7: The designing of Mechanism of organic synthesis.

CO8: Stereochemistry of cyclohexane.

CH-354.: Analytical chemistry

CO1: The principles and working of various chromatographic methods.

CO2: Separation of component from its constituent mixture.

CO3: Deferent type of detectors and ion-exchange chromatography.

CO4: Instrumental methods to determine the concentration of solution.

CO5: Absorption and emission spectrometry

CH-355&365:- Industrial chemistry

CO1: The petroleum production.

CO2: Industrial organic synthesis of hydrocarbon from petroleum.

CO3: Manufacture of soaps and detergents.

CO4: Introduction to drugs and synthesis.

CO5: Classification of dyes, pigments and paints and synthesis.

CO6: General aspects of industrial chemistry.

CO7: Manufacture of sugar and refining.

CO8: Manufacture of alcohol.

CO9: Classification of fertilizer and uses.

CO10: Introduction to small scale industries.

CH-356B Environmental chemistry

CO1: Atmosphere and air pollution.

CO2: Hydrosphere and water pollution.

CO3: Water treatment and effluent management.

CO4: Some industrial method in environmental analysis.

CO5: Greenhouse effect and global warming.

CH-366: Polymer Chemistry

CO1: Basic history, definitions & classifications of Polymers & Monomers.

CO2: Different types Polymerization reactions & their kinetic study.

CO3: Experimental techniques used for Polymerization.

CO4: Properties & applications of Polymers.

CO5: Glass Transition temperature & its determination by using specific volume techniques

CH-349-Physical chemistry practical

CO1: The students are able to do instrumental analysis using.

CO2: Colorimeter/spectrophotometer, potentiometer, Refractometer, Turbidimeter, Conductivity meter, Polorimeter, flame photometer, PH meter.

CO3: The students are able to do Non-instrumental analysis like.

CO: Determination of molecular weight, how to draw graphs using MS-Excel.

CH-359 & 369: Organic Chemistry Practical

CO1: Preparation of organic compound or derivatives.

CO2: Individual separations of binary mixture.

CO3: To detect the elements, functional group, structure, of unknown organic compound.

CO4: Qualitative analysis of organic compound.

CH-368: **Inorganic chemistry experiments**

CO1: Gravimetric estimation of some metal complex.

CO2: Volumetric estimation.

CO3: Colorimetric analysis.

CO4: Inorganic preparations.

CO5: Paper chromatography technique.

CO6: Inorganic qualitative analysis.

CO7: Ore analysis.

CO8: Alloy analysis

Computer Science

UG-CS-311 System Programming

CO1: Get aware about system software and their tools like Editors and Debug Monitors.

CO2: Get familiar with language processing activities.

CO3: Understand detail working of Assembler, Macro and Macro Preprocessor, Compiler and linker & Loader.

UG-CS-312 Database Management System

CO1: Get aware of Describing & storing data.

CO2: Know about ER Model by overview of database design..

CO3: Get familiar with Conversion of ER to Relational mode

CO4: Know about functional dependency and Data Normalization.

CO5: Understand Database Implementations.

CO6: Make use of Concurrency control, Backup & recovery for large or huge of databases.

CO7: Get aware about handling huge databases.

UG-CS-313 Software Engineering

CO1: Get aware of evaluation of software and Software Development Life Cycle (SDLC).

CO2: Know about Software Development Model.3.Get knowledge of Requirement Analysis and Specification in software engineering.

CO3: Learn use of Fact finding Techniques, Types of Requirement Modeling and Data Modeling Concepts.

CO4: Get knowledge of Design Concepts in software engineering.

CO5: Know about Cohesion & Coupling, Decision Table & Decision Tree, and Data flow Diagram.

CO6: Know about Software Coding & Testing.

CO7: Get aware about Elements of Software Quality Assurance.

UG-CS-314 Computer Aided Graphics

CO1: Differentiate between interactive and non-interactive graphics.

CO2: Explore different line and circle drawing algorithms.

CO3: Perform 2D and 3D transformation on different images.

CO4: Know about detail working of image clipping and windowing.

CO5: Understand raster graphics and hidden surface elimination.

UG-CS-315 Programming in VB.NET

CO1: Get aware about .Net platform.

CO2: Understand looping structure, control flow statements and exception handling in VB.NET

CO3: Understand object oriented programming in VB.NET

CO4: Program using ADO.NET

Elective –B –UG –CS -316 B) JAVA Programming

CO1: Get knowledge JDK Environment.

CO2: Explore polymorphism using Function and Operator Overloading, overriding.

CO3: Understand the different aspects of hierarchy of classes and their extensibility.

CO4: Understand the concepts of streams and files.

CO5: Write programs for handling runtime errors using exception.

UG –CS-321 Operating System

CO1: Know about functions and services of operating system.

CO2: Aware about different CPU scheduling algorithms

CO3: Get familiar with different memory management techniques.

CO4: Understand different disk and drum scheduling algorithms as well as deadlock concepts.

CO5: Get introductory knowledge about android operating system.

UG -CS-322 MS SQL Server

CO1: Understand features and data types in SQL server.

CO2: Create and manipulate databases for various applications.

CO3: Use procedures and trigger for performing complex operation on databases.

CO4: Handle errors using exception handling concepts.

UG –CS -323 Internets Programming using PHP

CO1: Understand how PHP works with lexical structure of it.

CO2: Program for different applications using arrays, functions and strings.

CO3: Aware about different web techniques used in PHP.

CO4: Integrate PHP with MYSQL.

UG-CS-324 Theoretical Computer Science

CO1: Understand what is Push down Automata and its applications.

CO2: Understand concepts of Context free grammar and normalization of CFG.

CO3: Convert regular expression to Finite Automata.

CO4: Design Turing Machines for various applications like enumerator, function computer and universal Turing machine.

UG-CS-325 Computer Network

CO1: Understand applications of network, network structures and protocol hierarchy

CO2: Aware about details of physical, data link, network and transport layer of TCP/IP network model.

CO3: Understand about different aspects of network security like firewalls, IP security and VPNs.

CO4: Aware about attacks and Confidentiality used in cryptography.

326 B) JAVA Programming -II

CO1: Program using graphical user interface with Swing classes.

CO2: Handle different kinds of events generated while handling windows.

CO3: Create programs using menus and dialog boxes.

CO4: Program for websites using applets.

CO5: Understand advanced java concepts like JDBC and servlets.

UG -CS-Lab-301 Labs on System Programming

CO1: Able to develop system programs to provide basic applications for computing like line editor, interrupt handler, SMAC0 and lexical analyzer.

UG-CS-Lab-302 Lab on Programming in VB.NET, Computer Aided Graphics

CO1: To develop different programs for demonstrating different Computer graphics algorithms like circle, line drawing and clipping and filling as well as students can create dynamic web pages using VB.NET.

UG-CS-Lab-304 Lab on MS SQL Server

CO1: Database management system using features and services provided by MS SQL Server.

UG-CS-Lab-305 Lab on Internet Programming using PHP

CO1: On completion of the course, students are able to develop interactive static as well as dynamic websites.

Elective -B-UG-CS-Lab-303 B) Lab on JAVA Programming –I

CO1: On completion of the course, students are able to develop efficient programs which provides Graphical user interface for easy handling of computers using JAVA.

Labs on JAVA Programming II

CO1: On completion of the course, students are able to develop efficient programs which provides Graphical user interface for easy handling of computers using JAVA.

COURSE OUTCOMES

Master of Science

Organic Chemistry (Part-I)

CH-110 & 210: Physical Chemistry

CO1: Re-capitulations of quantum Chemistry.

CO2: Different application of radioactivity.

CO3: Types of adsorption isotherm.

CO4: The study of colligative property of solution & statistical thermodynamics.

CO5: The study of rate of reaction.

CO6: The study & introduction of IR, Raman Spectroscopy, Electronic Spectroscopy, Mossbauer Spectroscopy & its applications.

CH-130 & 230: Inorganic Chemistry

CO1: Molecular term symbol for homo-nuclear diatomic molecules.

CO2: Structure and reactivity of organometallic compound of transition elements.

CO3: Symmetry elements and operation.

CO4: Classification of point group and procedure to determine point group.

CO5: Preparation and properties of transition metal carbonyl.

CO6: Structure of ionic solid.

CO7: Reaction and mechanism in transition metal complex.

CO8: Spectra preparation and application of complex.

CH-150 & 250: Organic Chemistry

CO1: Stereochemistry of molecules.

CO2: Addition & Elimination reactions.

CO3: Some Nucleophilic & Electrophilic substitution reactions.

CO4: Different types of name reactions.

CO5: Different types of Oxidizing & Reducing agents.

CO6: Different types of Rearrangements.

CO7: Detection of UV, IR, PMR, CMR frequencies of molecules & can also predict the structure.

CH-290: General Chemistry

CO1: The study of instrumentation i.e. High Performance Liquid Chromatography, Gas Chromatography, Voltammetry, Potentiometry.

CO2: Introduced Fluorescence, Photoluminescent theory & analysis of Nonluminescing compound

CO3: Various types of Detectors.

CO4: Electrolytic separation of metals.

CH- I-1: Inorganic chemistry practical

CO1: Determine the composition of drug sample.

CO2: Determine the Percentage of particular element from ore.

CO3: Preparation of organo-metallic compounds.

CO4: Determination of composition and concentration by instrumental methods.

CH-P-I: Physical Chemistry Practical

CO1: Preparation of different concentrations of solutions.

CO2: Standardisation of different instruments.

CO3: Instrumental experiments such as P^H Meter, Potentiometer, Spectrophotometer, Polarimeter, Conductivity meter etcs are used.

CH-O-1 Organic Chemistry Practical

CO1: Formation of product by Green Method.

CO2: Oxidising & reducing agents used in organic synthesis.

CO3: Formation of product at single stage & also at two stage.

CO4: Different purification techniques such as: Steam Distillation, Column Chromatography, Solvent Extraction.

CO5: Completion of reaction and purification of products by monitoring TLC.

Organic Chemistry (Part-II)

CH-350: Organic Reaction Mechanism

CO1: Reaction intermediates**.**

CO2: Effects of solvents.

CO3: Free energy relationship.

CO4: Name reaction and reagents.

CH-351: Spectroscopic Methods in Structure Determination

CO1: The knowledge about Proton magnetic resonance.

CO2: About Mass spectroscopy

CO3: The knowledge about Carbon Magnetic resonance.

CH-352: Organic Stereochemistry

CO1: To know about principals of stereochemistry.

CO2: Asymmetric Synthesis and its applications

CO3: Stereochemistry of Six membered rings.

CO4: Stereochemistry of ring other than Six membered rings.

CO5: Stereochemistry of fused ring and bride rings.

CH-353: Pericylic Reactions

CO1: Formation, reactions, rearrangements of free radicals.

CO2: Photochemistry of alkenes, carbonyls & aromatic compounds.

CO3: Different types of pericyclic reactions of aromatic & non aromatic compounds.

CH-450: Natural Chemistry

CO1: Introduction to some secondary metabolites.

CO2: Chemistry of some important natural product and their synthesis.

CO3: Study of vitamins and their synthesis.

CO4: Study of Enzyme Catalysis.

CH-451: Synthetic Methods in Organic Chemistry

CO1: The application of various elements in organic synthesis.

CO2: Designing of organic synthesis.

CO3: Use of protecting groups in organic synthesis and advanced synthetic reactions.

CH-452: Heterocyclic chemistry, Chiron approach and medical chemistry

CO1: Synthesis and reaction of heterocyclic compounds

CO2: Medicinal chemistry.

CO3: Chiron Approach.

CO4: Pharmaceutical compounds.

CH-O-2: Ternary Mixture Separation

CO1: Individual Separation of ternary mixture

CO2: Individual analysis of each organic compound of given ternary mixture

CO3: Students are enable to isolate pure substance from given ternary mixture

CH-O-3: Three Stage Preparation

CO1: How to prepare a chemical compound in three stage preparation

CH-O-4: Short Research Project

COURSE OUTCOMES

Environmental studies

First Year

B.A/B.Com/B.Sc.

CO1: The expected Student Learning Outcomes for the Environmental Studies Department are:

CO2: The Environmental Studies major will be able to recognize the physical, chemical, and biological components of the earth's systems and how they function.

CO3: The Environmental Studies major will be able to critically examine all sides of environmental issues and apply understanding from science, law, history, and policy to create informed opinions about how to interact with the environment both personally and societally.

CO4: The Environmental Studies major will be able to understand probabilistic aspects of human interactions with the environment.

CO5: The Environmental Studies major will be able to do independent research on human interactions with the environment.

General Knowledge

Second Year
B.A/B.Com./ B.Sc.

CO1: Explain and compare social institutions, structures, and processes across a range of historical periods and cultures around the globe.

CO2: Understand the past and how it influences present world societies and contemporary problems.

CO3: Develop creative capabilities.

CO4: Understand and use the processes by which knowledge of the physical world is generated.

CO5: Identify the rights and responsibilities they have in their own communities and the broader society.

CO6: Recognize the ways in which they can exercise their rights and responsibilities.

CO7: Utilize knowledge from academic fields, making relevant connections to civic and political participation.

CO8: Recognize the needs of the communities to which they belong and understand how to address those needs.