Pune District Education Association's

Anantrao Pawar College, Pirangut, Tal.-Mulshi, Dist. - Pune

(Academic year 2019-2020)

Criterion- II: Teaching Learning and Evaluation

2.6 Student Performance and Learning Outcomes
2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution. (to provide the weblink)

Program Outcomes, Program Specific Outcomes and Course Outcomes

Department of English: Program and course specified learning outcomes

Department of English	After competition of three-year degree program in English, a student should be able to:
Program outcomes	
Program outcomes	PO-1: Reading is a basic skill of language learning and Students have become accomplished, active readers to appreciate ambiguity and complexity in literature. PO-2: Students have been enabled to write effectively for a variety of professional and social settings. PO-3: Students developed an appreciation of how the formal elements of language and genre shape meaning. PO-4: Students gained knowledge of the major traditions of literatures written in English, and an appreciation for the diversity of literary and social voices. PO-5: Students have developed the ability to read works of literary, rhetorical and cultural criticism and deploy ideas from these texts in their own reading and writing. PO-6: Students were enabled to identify topics and formulate questions for productive inquiry. PO-7: Students are able to prepare, organize, and deliver and engaging oral presentation.
Program Specific outcomes	1. PSO-1Students have been enabled to read the texts closely and understood the value of close reading in the study of literature. 2. PSO-2 Students have been enabled to explicate texts written in variety of forms, styles, structures and modes 3. PSO-3 Students have been enabled to respond imaginatively to style of author 4. PSO-4Students have been enabled to develop and carry out research projects within methodical frameworks 5. PSO-5 Increased exchange of ideas with faculty and students
Course Outcome English	

Course	Outcomes: After completion of these courses, students should be able to;
ENG- 11011 & 11012 **F.Y.B.A.** **English Compulsory**	CO-1. Students have been exposed to the best examples of prose and poetry. CO-2. They learnt the communicative power of English and sensed the finer aspect of English language. CO-3. Their ability of appreciating ideas and thinking critically has been enhanced. CO-4. By developing the linguistic competence and communicative skills their employability has been fostered. CO-5. By developing their sensitivity and cultivating their sensibility, their progression to higher studies (P.G.) has been enabled.
ENG – 11331 & 11332 **F.Y.B.A.** **Optional English- GI:**	CO-1. Students have been exposed to the basics of literature and language. CO-2. An integrated view about language and literature has been developed among them. CO-3. They have been acquainted them with minor forms of literature so as to appreciate the creative use of language in literature CO -4 By introducing them to the basics of Phonology of English they have been enabled to pronounce better and speak English acceptably. CO-5. They have been groomed for the next level of study. CO -6. Their job potential has been enhanced through language skills
ENG – 111 & 121 **F.Y.B.Com.** **Compulsory English:**	CO-1. Students have been exposed to the contemporary socio-economic and cultural issues through prose and poetry. CO-2. Their awareness of the communicative power of English has been increased. CO-3. Their linguistic competence has been developed in terms of LSRW. CO-4 They have been groomed for progression to higher studies and employment.

	CO-5 They have been introduced to practical application through various types of practical work.
ENG – 117 A & 127 A **F.Y.B.Com. Additional English:**	CO-1 Students have been exposed to various literary extracts and themes. CO-2 They have been introduced informative content, communicative power of English. CO-3 They have been enlightened to the aesthetic beauty of English. CO-4 Their awareness of the importance of cultural values has been increased. CO-5 Their abilities in written and oral communication have been developed.
ENG – 2017 **S. Y. B. A.** **Compulsory English:**	CO-1 Competence among the students was developed for self-learning CO-2 Students got familiar with excellent pieces of prose and poetry in English CO-3 Students' interest in reading literary pieces was developed CO-4 Students were exposed to native cultural experiences and situations in order to develop human values and social awareness CO-5An overall linguistic competence and communicative skills of the Students were developed
ENG – 2337 **S. Y. B. A.** **General English (G-2)**	CO-1 Students were exposed to the basics of short story, one of the literary forms. CO-2. Different types of short stories in English were introduced. CO-3 The literary merit, beauty and creative use of language were explained CO-4 Some advanced units of language were introduced so that they become aware of the technical aspects and their practical usage CO-5 Students were exposed to go for detailed study and understanding of literature and language CO-6 An integrated view about language and literature was developed in them
ENG – 2338 **S. Y. B. A.**	CO-1) The students were acquainted with the terminology in Drama Criticism

Special Paper-I (S-1)	CO-2) Students were encouraged to make a detailed study of a few masterpieces CO-3) Interest was developed among the students to appreciate and analyse drama independently CO-4) Students' awareness in the aesthetics of Drama was enhanced
ENG – 2339 **S. Y. B. A** **Special Paper-II (S-2)**	CO-1) Students were acquainted with the terminology in poetry criticism CO-2) Students were encouraged to make a detailed study of a few masterpieces of English poetry CO-3) Students awareness in the aesthetics of poetry was enhanced
ENG – 3017 **T. Y. B. A.** **Compulsory English**	CO-1) Students were introduced to the best uses of language in literature CO-2) Students were familiarised with the communicative power of English CO-3) Students were enabled to become competent users of English in real life situations. CO-4) Students were exposed to varied cultural experiences through literature. CO-5) Their overall personality development was assured by improving their communicative and soft skills.
ENG – 3337 **T. Y. B. A.** **General English (G-3)**	CO-1) Students were exposed to some of the best samples of Indian English Poetry. CO-2) Students were made to perceive Indian English poetry expresses the ethos and culture of India. CO-3) They were enabled to understand creative uses of language in Indian English Poetry. CO-4) Students were introduced to some advanced areas of language study. CO-5) Students were groomed for detailed study and understanding of literature and language. CO-6) An integrated view about language and literature was developed among the students.

ENG – 3338 **T.Y.B.A.** **Special Paper III (S-3)**	CO-1) Students were introduced to the basics of novel as a literary form CO-2) Students were exposed to the historical development and nature of the novel form CO-3) Students awareness of different types and aspects of novel was developed CO-4) To develop literary sensibility and sense of cultural diversity in students CO-5) Students were exposed to some of the best examples of novel.
ENG – 3339 **T.Y.B.A.** **Special Paper IV(S-4)**	CO-1) Students were introduced to the basics of literary criticism CO-2) They were made aware of the nature and historical development of criticism CO-3) They were made familiar with the significant critical approaches and terms CO-4) Students were encouraged to interpret literary works in the light of the critical approaches CO-5) Aptitudes for critical analysis was developed.

Department of political science

DEPARTMENT OF POLITICAL SCIENCE	After successfully completing B.A. Politics Program students will have
Program Outcomes :	PO1: Knowledge: In-depth knowledge of Indian Political system, Political thinkers, administrative system. PO2: Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives. PO3: Collaborative and organization skills: Skills of working collaboratively in teams and plan as well as manage their workload. PO4: Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology. PO5: Personality development: Awareness of personal strengths and weaknesses. Will have self-reflection and discipline. PO6: Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in-group settings. PO7: Effective Citizenship: Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering. PO8: Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them. PO9: Environment and Sustainability: Understand the issues of environmental contexts and sustainable development PO10: Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context

	socio-technological change. Program Specific Outcomes After completing.
B. A. Politics students will have	PSO 1: Ability to discuss about Indian Constitution and Political process. PSO 2: Ability to discuss Political thinking in western world. PSO 3: Ability to describe Administrative Process and thinking in western thinking, as well as Indian context PSO4: Capacity to analyses Political Theory and its contemporary impact on civilization Course Outcomes
F.Y.B.A. Introduction to Indian Constitution 1167 :	Introduction to Indian Constitution After successfully completing this course, students will be able to: CO1: Recognize background and features of Indian constitution; CO2: Explain Fundamental Rights, Duties and Directive principle of State Policy; CO3: Describe Federal Structure of India and Issues related to federal system; CO4: Discuss structure of Central governmental bodies with examples; CO5: Discuss structure of State governmental bodies with examples; CO6: Interpret Party System and Elections in India; CO7: Discuss role of caste and religion in Indian politics; CO8**:** Interpret issues of regionalism and developments in India.
SYBA: Political Ideology G-II:	After successfully completing this course, students will be able to:
Political Ideology :	CO1: State Origin, Meaning, Definition, Nature and Scope of Ideology; CO2:Discuss Meaning, Definitions and Elements Nationalism, Progressive and Reactionary Nationalism, Internationalism; CO3:Describe Meaning, Nature and Features, Achievements and Limitations Democratic Socialism, Types of Fabianism, Syndicalism, Guild Socialism; CO4:State Factors responsible for the rise of Fascism, Principles of Fascism, and Concept of Corporate State; CO5:Discuss meaning Marxism, Concept of Historical Materialism, Theory of Surplus Value and Marxian State;

	CO6:Discuss thoughts of Phule and Ambedkar on Equality, Religion, Democracy CO7:Discuss meaning of Gandhism, Truth and Non-Violence, Theory of Satyagraha, Gram Swaraj; CO8: Discuss Meaning and Nature Feminism, Liberal Feminism, Feminism in India, Caste, Patriarchy, and Women's Representation Course.
2168: Western Political Thoughts S I	After successfully completing this course, students will be able to: CO1: Plato`s thinking, like Ideal State & Philosopher King, Education and Justice; CO2:Interpret Aristotle`s thought on State, Property, Slavery &Revolution; CO3: Describe Machiavelli`s views on Human Nature, Religion, Morality & Statecraft; CO4:Explain J.S. Mil`s views on Utilitarianism, Liberty and Representative Government; CO5: Describe Karl Marks theorisation on Historical Materialism, Class & Struggle, State & Revolution; CO6: Discuss Hobbes Sate of Nature, Theory of Class & Struggle, and theory of Social Contract; CO7: Describe John Locke`s theory of Social Contract, Views on Natural Rights, Views on Civil Society & State; CO8: Interpret Rousseau`s State of Nature, Views on human Nature, Theory of General Will, Theory of Social Contract.
Course : Political journalism S II:	**Objectives:** This course is designed to acquaint students with the – 1. Complex relationship between the communication, media and power politics. 2. Critical appraisal of practices of political image management, campaigns, propaganda and censorship. 3. Indian context of political Journalism After successfully completing this course, students will be able to: CO1: Collecting Information regarding political events incidence and campions. CO2: Analyasing political information from journalistic point of view CO3: Serrulation information to the stockholders ;

	CO4: Conducting serve interface and feedback companion over political issue; CO5**:** Keeping vigil over the policy makers for protection democratic setup and the civile right ;
TYBA: Politics Course	After successfully completing this course, students will be able to:
3167: Political Ideology :	CO1:State Origin, Meaning, Definition, Nature and Scope of Ideology; CO2:Discuss Meaning, Definitions and Elements Nationalism, Progressive and Reactionary Nationalism, Internationalism; CO3:Describe Meaning, Nature and Features, Achievements and Limitations Democratic Socialism, Types of Fabianism, Syndicalism, Guild Socialism; CO4:State Factors responsible for the rise of Fascism, Principles of Fascism, and Concept of Corporate State; CO5:Discuss meaning Marxism, Concept of Historical Materialism, Theory of Surplus Value and Marxian State; CO6:Discuss thoughts of Phule and Ambedkar on Equality, Religion, Democracy CO7: Discuss meaning of Gandhism, Truth and Non-Violence, Theory of Satyagraha, Gram Swaraj; CO8:Discuss Meaning and Nature Feminism, Liberal Feminism, Feminism in India, Caste, Patriarchy, Women's Representation Course
3168: Public Administration	After successfully completing this course, students will be able to: CO1: Discuss meaning, Nature, Scope and Significance of Public Administration CO2: Explain evolution, salient features & Goals of New Public Administration CO3: Discribe Approaches to Public Administration CO4: Explain concept of Good Governance, E-Governance CO5: Describe meaning and definations Bureaucracy; Administrative reforms in Bureaucracy CO6: Explain Recruitment, training and promotions in Personnel Administration

	CO7: Define meaning and types of Budget; budgetary process in India CO8: Explain administrative accountability; Legislature & Judicial Control over Public Administration Course
3169: International Politics	After successfully completing this course, students will be able to: CO1: Discuss Nature and Scope International Politics; Theories of Idealism and Realism. CO2: Describe Power Approach, Decision Making Approach & System Approach to study International Relations CO3: Explain the Meaning & Elements of Power; Changing Nature of the National Power CO4: Discuss the Meaning and Nature, Characteristics, Changing Nature of the Balance of Power; CO5: Discuss Meaning and definition of Security; Regional Security; Collective Security; CO6: Interpret Diplomacy; Meaning & Types of Diplomacy; Challenges to Diplomacy CO7: Discuss Meaning and Nature of Disarmament; Types of Disarmament; Issues and Challenges; CO8: Discuss the Human Rights –Its variations and Measures; Terrorism – Causes and Consciousness.
M. A. Politics :	
Program Outcomes :	After successfully completing M.A. Politics Program, students will have
	PO1: Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives. PO2: Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

	PO3: Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in-group settings. PO4: Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering. PO5: Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them. PO6: Environment and Sustainability: Understand the issues of environmental contexts and sustainable development PO7: Self-directed: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological change PO8: Life-long Learning: this course provides ability life-long learning in the broadest context socio-technological change PO9: Build National Awareness: this course build national awareness and patriarchy in students. PO10: Build Social Awareness: this course provide social introduction of India build social awareness in students
Program Specific Outcomes	After successfully completing M.A. Politics Program, students will have PSO1: Brief understanding of Political Theory, Ideologies, and Concept. PSO2: Brief understanding Political thinking, traditional thoughts and Modern Indian thinking. PSO3: Brief understanding Administrative Process and thinking in western thinking, as well as Indian context as Indian Administrative process. PSO3: Evaluate Indian Political System and Major factors that influence Policy Making process. PSO5**:** Comparatively understanding different political systems in worldwide. Course Outcomes.
M.A. Part I :	

Course POC 1: Traditions of Political Thought	After successfully completing this course, students will be able to: CO1: Discuss ancient thinking reference to Plato and his thinking on various factors. CO2: Describe Medieval Era thinking in Abu Nasr al-Farabi, and Thomas Aquinas thoughts. CO3: Evaluate Niccolo Machiavelli and John Locke thoughts in contemporary World. CO4**:** Analyse Jean-Jacques Rousseau Human nature, G. W. F. Hegel materialism CO5: Briefly Describe John Stuart Mill thoughts on contemporary world. CO6: Discuss on thoughts of M. K. Gandhi and Frantz Fanon CO7: Describe Marx thoughts on contemporary world. CO8: Describe importance of John Locke's thoughts in contemporary World.
Course POC2: Public Administration	After successfully completing this course, students will be able to: CO1: Explain Nature and Scope Public Administration; CO2: Discuss the Evolution of Public Administration; Classical, Neo-classical, New Public Administration; Development Administration. CO3: Describe Major Approaches to the Study of Public Administration; CO4: Explain Concept of Governance, Good Governance Practices and Reforms. CO5: Analyse Administrative and Financial Accountability and Control of Public Administration. CO6: Discuss Contemporary trends in Public Administration CO7: Describe New Public Management meaning and change in Public Administration. CO8: Analyse the Ethics in Public Administration, what ought to be and what is ethics in public administration.
Course POC 3 : Political Institution in India	After successfully completing this course, students will be able to: CO1: Discuss electoral politics in India since 1951 to 2009. CO2: Describe Nature of Party system in India.

	CO3: Evaluate politics of regionalism in reference to language, autonomy and disputes. CO4: Analyse role of caste in Indian politics with reference to Dalit Politics. CO5: Briefly Describe Political economy, economic reforms; issue of redistribution. CO6: Discuss politics of mass mobilization refer to Naxalite. CO7: Analyse role of caste in Indian politics with reference to OBC Politics. CO8: Discuss politics of Farmer movement in India
Course POO 4: Party System in India	After successfully completing this course, students will be able to: CO1: Discuss early phase of party politics refer to nationalist movement in India. CO2: Define the party system and party politics up to 1950. CO3: Discuss congress party dominance in early phase of party politics. CO4: Describe rezone decline of Congress party and resurgence. CO5: Evaluate rise of BJP and BJP's stagnation post 1999. CO6: Analyse other parties rise and performance. CO7: Briefly describe roll of state parties before 1980 and rise of regional parties after 1980. CO8: Discuss changing behavior of Indian party system one party dominance to convergence.
Course POC 5: Comparative Political Analysis :	After successfully completing this course, students will be able to: CO1: Explain Approaches to the Study of Comparative Politics. CO2: Discuss on Constitutions and Constitutionalism, Unitary State, Federations and Confederations & Non-democratic systems CO3: Compare and define various countries Legislatures and Constitutionalism. CO4: Compare various countries Judiciary system with features CO5: Compare and define various countries Bureaucracy and Military, Judiciary CO6: Compare various countries Electoral Systems and Elections

	CO7: Describe majors of Political Development in various political Systems. CO8: Analyse Social movements in various Political Systems.
Course POC 6: Theory of InternationalPolitices :	After successfully completing this course, students will be able to: CO1: Recognize the end of the Cold war, the Classical tradition and International Change. CO2: Discuss theories of Realism, Liberalism and Marxism to study I.R. CO3: Explain meaning of Behaviourism in International Relations. CO4: Describe the importance Geopolitical and Conflict Theories in I.R. CO5: Describe Positivist debates in International Relations CO6: Explain new issues like environment, in International Relations CO7: Describe Post Positivist debates in International Relations CO8: Define Systemic explanations in International Relations.
Course POC 7: Public Policy	After successfully completing this course, students will be able to: CO1: Explain Concept, Nature and Scope, Evolution of Public Policy, CO2: Discuss Approaches to the Study of Public Policy. CO3: Describe the Public Policy Making. CO4: Critisize Public Policy Implementation and Evaluation. CO5: Analyze Globalization and Public Policy. CO6: Discuss making of Agenda, Policy Formulation and Adoption of Public policy. CO7: Analyze Education Policy- Right to Education in India CO8: Analyses Health Policy- National Rural Health Mission (NRHM) in India.
Course POC 8:Political Thoughts in Modern Maharashtra	After successfully completing this course, students will be able to: CO1: Define Mahatma Phule thinking, like equity, Education and Sarvajanik Satyadharma; CO2: Interpret Bal Gnagadgar Tilak's thought on nationalism, Swadeshi, boycott, Swaraj, CO3: Describe Dr. Babasaheb Ambedkar`s views on Nation And Nationalism, constitution of India, Dalit Rights movement

	CO4: Explain V.D.Savarkar's views on Hindu nationalism, Social Reforms, Militarization; CO5: Describe Vitthal Ramji Shinde theorisation on Untouchability, Bahujan Politics, Social Reforms CO6: Discuss Vinoba Bhave's views on Satyagraha, Sarvoday, Bhudan Movements

Department of Economics

Department of Economics	**After successfully completing B.A. Economics Program students will be able to:**
Program Outcomes	PO1: Technical knowledge: use various tools for economic analysis and apply knowledge of the Micro and Macro approach for the personal benefit and for the benefit of national and the global economy. PO2: Problem analysis: recognize formulate and study the problems of various sectors of the Indian economy, regional economy and the global economy with the help of the economic ways of thinking, theories, concepts and laws PO3: Design/development of solutions: Design policies and solutions for the economic problems of India and the global economy at large. PO4:Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern IT tools for economic analysis PO5The student and society: Apply the knowledge of economic concepts, laws and theories, for a better economic environment for the society at large. PO6: Environment and sustainability: develop an economic way of thinking leading to the economic growth, protecting environment with sustainable development. PO7: Ethics: inculcate ethical values in the business and the government sector and define responsibilities and norms in the business environment and the policies of the government in the context of the welfare of the society. PO8: Individual and team work: work efficiently as an individual, and as a

	part or leader of a team, having interdisciplinary approach PO9: Communication: Communicate effectively on the economic activities with the community and the society through the acquiring knowledge of the national and the global economy
Program Specific Outcomes	PSO: Explain the basic concepts, laws and theories related to the economic behavior of the human being. PSO: Inculcate the economic way of thinking. PSO: Apply economic analysis in practice.

F.Y.B.A. Economics (Credit Semester System 2019 pattern)

Course	**Outcomes** After completion of these courses students should be able to;
Indian Economic Enviourment (G1)	CO1: Describe status of the Indian economic Environment as a developing economy in comparison with world economy Population, Agriculture & Service Center. CO2: Describe status of agricultural and industrial sector of the Indian economy with special regional reference to the economy of Maharashtra. CO3: Explain Role of Industry in Indian Economic Development. CO4: Examine flagship Program of the Indian government and 12th plan of five year economic planning in India CO5: Describe Challenge to Indian Industry Labor & Employment ,Regional Imbalance ,Finance, technology CO6: Recent Trends In Indian Industry –Indian Multinational New Policy CO7: Role of the small and medium Enterprises. CO8: Describe specific areas of economy of the Maharashtra like cooperative movement, regional imbalance and water management. CO9: Challenge to Indian service Sector – Business Based & Knowledge –Based sector, Tourism, Banking. CO10: Describe Banking Definition, Functions, Changing Structure

	of Banking in India. CO11: To help the student to prepare for varied competitive examinations.
Modern Banking (G2)	CO1: Descried evolution of modern banking in the west and in India. CO2: Describe functioning and working of the commercial and cooperative banks. CO3: Explain functions and working of the central bank of country and Reserve Bank of India. CO4: Explain principles of commercial banks, different types of accounts and customers of various types of these banks. CO5: Examine supply of money in economy and its control by the Reserve Bank of India. CO6: Analyse functioning and usage of various types of negotiable instruments used in financial sector of the economy CO7: Evaluate developments and challenges in the sector of the cooperative banking India CO8: Describe new applications of technology evolved in the banking sector.

S.Y.B.A. Economics(Credit Semester System 2019 Pattern)	
Course	**Outcomes** After completion of these courses students should be able to;
MICRO ECONOMICS (S1)	CO1: Describe basic economic problems and look towards the economy with the microeconomic approaches. CO2: Explain division of market from consumer and supply of the products from the producers. CO3: Interpret concepts related to utility, demand and supply in market. CO4: Analyse process of production in economy, laws and variables related to the production function. CO5: Demonstrate various forms of market and price determination concept of firm. CO6: Describe factors of production involved in process of production and theories related to their pricing

	CO7: Describe welfare economics, and variables involved in the welfare function and thoughts of the welfare economists. CO8: Apply the tools used for economic analysis.
MACRO ECONOMICS S2	CO1: Illustrate a macroeconomic approach towards economy in contrast with the microeconomic approach CO2: Make a detailed enquiry into generation, calculation and measurement of national income CO3 Describe way of money facilitates exchanges and develop Market and the economy. CO4: Explain human behavior creating effective demand which determines level of output and employment in economy. CO5: Analyse approaches towards value of money and price level in economy. CO6:Interpret causes and controlling measures of cyclical fluctuations in economy CO7: Assess macro policies-monetary and fiscal and its applications in the functioning of the economy. CO8: Evaluate developments in theory of employment of economics.

T.Y.B.A. Economics

Course	**Outcomes** After completion of these courses students should be able to;
Economics of Development and Planning (G3)	CO1: Describe concepts of Development and Growth of economies. CO2: Describe characteristics of developed or developing economies. CO3: Analyse constraints of process of development of various countries. CO4: Evaluate theories and ways of development of economies. CO5: Illustrate role of foreign capital in development of the economies. CO6: Appraise approaches towards process of development take place in an economy.

	Assess instruments of macroeconomic policies, monetary and along with their role in controlling cyclical fluctuations in an economy. Explain overview of economic planning in India and inclusive approach towards growth of the Indian economy.
S3 International Economics	CO1: Describe international economics of open economies and international trade flows among various countries. CO2: Evaluate theories related to international trade for profit maximization. CO3: Analyse process of gains from trade and determination of terms of trade. CO4: Describe concept of balance of payments and measures to correct deficit in balance of payments. CO5: Assess trade policy and concepts related to trade policy like quotas tariffs and exchange rates. CO6: Interpret India's foreign trade, policy and its participation in international trade organisations like World Trade Organisation. CO7: Demonstrate measures to promote export and regulation of foreign trade in India. CO8: Analyse nature and functions of organizations related to international and regional cooperation in trade.
S4 Public Finance	CO1: Describe role of Government in an economy and way of maximum social advantage in view of Dr. Dalton. CO2: Describe sources of income, types and principles of expenditure of government and general importance of public finance. CO3: Analyse public expenditure in India and effects of current trend of growth in public expenditure. CO4: Analyse concepts and principles related to public revenue, taxation and status of Indian taxation. CO5: Examine external and internal debts of government and ways

	to repay public debts. CO6: Illustrate concepts of budgeting and Indian budgeting with special reference to gender budget. CO7: Describe purpose and process of deficit financing in economy and trends in deficit financing in India. CO8: Describe federal finance in India and problems related to centre and state financial relationships.
B.Com	
Program Outcomes	PO1: Students will able to learn depth knowledge of commerce. PO2: Develop the skill of applying concepts and techniques used in Commerce for real life problems. PO3: Students will develop reading, writing, speaking skills and Business correspondence. PO4: Creates awareness among society about Law and Legislations related to commerce and business. PO5: Students will use effectively recent Trends in Business, Organizations and Industries. PO6:Students will communicate effectively about Economic Environment of Country as well as world. PO7: Students will learn effectively use practical skills in real life related to banking and corporate world. PO8: Students will be able to develop knowledge level and awareness about Recent Trends of commercial World. PO9: Students will be aware and use technologies effectively to communicate ideas in the area of commerce. PO10: Students will critically conduct research and evaluate research findings in area of commerce. PO11: Students will learn group synergy and to work in group. PO12: Students will Recognize and understand individual and organizations ethical issues and its application in society.
Program Specific Outcome	PSO1: Students will be able to apply basic skills learnt in commce necessary for analysis of various problems in accounting, marketing, business Economic Finance PSO2: Students will demonstrate progressive affective domain development of values, the role of accounting in society and business. PSO3: Students will able to demonstrate quantitative and qualitative

	knowledge in key areas of organization behavior. PSO4: Students will able to evaluate national and international issue and discussion on economic, commercial and business related topics.
	F.Y.B.Com
Course: (103) Business Economics (Micro)	CO1: Define concepts of microeconomics, difference between Micro and Macro, tools for analysis, goals of firms. CO2: Describe demand analysis with elasticity of demand, and its types. CO3: Describe consumer behavior of demand, demand forecasting and methods of demand estimation. CO4: Explain production function with law of variable proportion, law of returns to scale, economies and dis- economies of scale. CO5: Explain concept of cost analysis and types of costs. CO6: Describe concept of revenue, total, average, marginal revenue and its relationship of firm. CO7: Describe pricing under various marketing conditions and types of market. CO8: Describe factor pricing with theory of Interest, Rent, Profit and wages.
(105-B) Fundamentals of Banking	CO1: Describe Evolution of Banking in Europe, USA, Asia, India and structure of Indian banking system. CO2: Describe primary and secondary functions of bank. CO3: Describe procedure of opening and operating of deposit account in bank. CO 4: Explain methods of remittances and types of money transfer of bank. CO 5: Describe lending principles, credit creation and balance sheets of commercial bank. CO6: Describe negotiable instruments, types of cheques and crossing of bank. CO 7: Describe endorsement to accept responsibility for paying from

	Bank. CO8: Describe new advancements and use of electronic technologies in banking system.
	S.Y.B.Com
203) Business Economics (Macro)	CO1: Explain nature, scope, importance and limitations of Macro Economics. CO2: Describe concepts and measurements of National Income of India. CO3: Describe functions of Money and control of credit by RBI in Indian economy. . CO4: Explain concept of value Money and theories of value of Money. CO5: Analyse causes and its effects of Inflation and Deflation in Indian economy. CO6: Explain features and phases of trade cycle of Economy. CO7: Describe theories of output and employment in economy. CO8: Describe nature and scope of public finance and concept of public finance in Indian economy.
(206 –B) Indian Banking System (Banking-I)	CO1: Explain the structure and role of Indian Banking system. CO2: Explain progress and performance of private sector banks in India. CO3: Describe arguments for and against nationalization of bank. CO4: Describe functions of SBI. CO5: Explain reasons for establishments of regional rural banks (RRBs) and functions of NABARD. CO 6: Explain structure of co- operative credit system of cooperative banks. CO7: Describe functions of RBI. CO8: Describe Reforms of Banking Sector due to Recommendations of Narasimham
	T.Y.B.Com After successfully completing this course, students will be able to:

(305-B) Financial Markets and Institutions in India (Banking-II)	CO1: Define concepts of Financial System in India. CO2: Describe meaning, scope, structure, institutions, and deficiencies in Indian money market. CO3: Describe meaning, scope, characteristics and participants of Indian capital market. CO4: Explain concepts and segments of foreign exchange market in Indian economy. CO5: Explain meaning and functions of non- banking financial institutions. (NBFIs) CO6: Illustrate working and progress of development of financial institutions. (BFIs) CO7: Illustrate working, organizations and functions of investment institutions in India. CO8: Describe organizations, functions and working of regulatory institutions in India.
(306-B) Banking Law and Practices of India (Banking-III)	CO1: Explain provisions of Act, 1949 with respect to definition, liquid Assets, Profit and loss accounts, balance sheets, powers of the RBI, Compulsory ambulation and liquidation. CO2: Describe Banking Regulation Act as Applicable to Cooperative Bank -1966. CO3: Describe types of Negotiable Instrument Act – 1881. CO4: Illustrate duties and rights of paying bankers and Return of cheque. CO5: Describe precautions in collecting customer's cheque and duties and rights of collecting bankers. CO6: Explain the relationship between banker and customer. CO7: Describe precautions to be taken by the bankers while advancing agai nst customer. CO8: Explain mortgages and types of the mortgages in loan system of bank. CO9: Explain step in project appraisal and loan recovery of the customer.

(303-B) International Economics	CO1: To have a holistic view of international economies. CO2: To study the theories of International Trade. CO3: To highlight the trends and challenges faced by nations in a challenging global environment. CO4: To understand the tends in India's external sector. CO5: Explain Terms of Trades. CO6: Explain Trades policy and Exchange Rate.
	M.Com After successfully completing this course, student will be able to -
Advanced Banking & Finance Paper I **Legal Framework of Banking Course Code – 115**	CO 1: To acquaint the students with legal framework in which the Indian banking is working today. CO2: To make the students aware about the latest developments in the field of banking law. CO3: To enable the students to understand modern banking practices. CO4: To enable the students to establish a link between the legal provisions and the practical aspects of banking.
Advanced Banking & Finance Special Paper II Central Banking Course Code – 116	CO 1: To acquaint the students with RBI's various functions. CO 2: To make the students aware about the latest developments in the field of Para banking and NBFCs in India. CO 3: To enable the students to understand the role of central banking especially in India. CO 4: To enable the students to acquire sound knowledge of working and techniques of central bank.
(202): Industrial Economics	CO1: Explain concepts of industrial economics. CO2: Describe relationship between industrial and economic development. CO3: Classify factors influencing industrial location. CO4: Explain major factors affecting industrial efficiency. CO5: Compare private and public industrial profile and their problems. CO6: Describe structure of Indian industries. CO7: Explain role of Micro, Small and Medium Enterprises.

	CO8: Summarize concept of industrial imbalance.
BANKING – LAW & PRACTICE **(215)**	CO1: To develop a robust knowledge base pertaining to significant facets of Banking Sector among those students who wish to pursue a career in Banking Sector. CO2: Preparation of Vouchers, cash receipt and payment entries, clearing inward and outward entries.
Monetary policy (216)	CO1: Price stability, Generation of employment, Exchange rate stability, Balanced growth etc., conflict between objectives. CO2: A review of monetary policy of the Reserve Bank of India in the last five years- Recent policy changes announced by the R.B.I.
Recent Advanced Banking and Finance (415)	CO1: To enable students understand new developments in banking industry. CO2: To keep the students abreast with the innovative practices introduced in day to day banking.
Project Work/Case Studies **(416)**	CO1: The objective of the project work is to gain knowledge by the student through exposure to Commercial activities and practices CO2: The objective of the project work is to introduce students to research methodology in the subject and prepare them for pursuing research in theoretical or experimental or computational areas of the subject. CO3: The project work is to be undertaken under guidance of a teacher allotted to a student by the department.
Industrial Economic Environment (402)	CO1: Define concept of industrial finance. CO2: Explain new industrial policy 1991. CO3: Demonstrate effects of new industrial policy on industry. CO4: Illustrate industrial development & environmental problems. CO5: Explain different issues in information technology. CO6: Describe present position of IT industries in India. CO7: Interpret concept of industrial relations. CO8: Assess causes of industrial disputes.
	M.A Economics

Program Outcome	PO1: Aware the internal and external effects in developing market strategy. PO2: Express an understanding of the tools and techniques necessary for research in Economics. PO3: Train the students' well-acquainted regarding current market structure. PO4: Versatile the nature of micro and macroeconomic study of linkage between demand and price. PO5: Inculcate students to acquire sound knowledge, concept and structure of capital market and International trade. PO6: Develop competence with their usage in Industrial decision making and Growth of Economic. PO7: Identify the role of Demography and indicators of Rural India. PO8: Illustrate the implications of various Economic policies in decision making. PO9: Correlate the market structure and welfare economy in developing India. PO10: Criticize the public debt policy and Budget of India. PO11: Gain ability to solve problems relating to Balance of payment, Foreign exchange and special types of Economics. PO12: Equip with the advanced knowledge of techniques and methods of planning and executing the Indian Economy.
Program Specific Outcome	PSO1: In depth study of micro and macro economics PSO2: Ability to analyses international trade, economic policies for government decisions PSO3: Knowledge of Auditing Principles & techniques. PSO4: Ability to compute public policies and welfare economics
	M. A. Economics: **M.A. Semester I**

(EC 1001) Micro Economic Analysis-	CO1: Explain concept of micro and macro problems of economics. CO2: Explain the concept of market and price mechanism of economy. CO3: Explain consumer theories with utility, demand, income and price. CO4: Explain concept of elasticity and consumer surplus of market. CO5: Elaborate production theory with production function and producer's equilibrium. CO6: Describe supply side of economics with revenue and producer's surplus. CO7: Describe concepts of equilibrium as partial and general in competitive market. CO8: Demonstrate concept of externality in relation with social welfare.
(EC- 1002) Public Economics	CO1: Describe role of government in planning and development in organised societies. CO2: Analyse comparatively private goods, public goods and merit goods. CO3: Explain models regarding to rational for public policies. CO4: Illustrate provision of public goods in regards with allocation of resources. CO5: Explain theories and criteria's regarding to public expenditure and investment. CO6: Explain reforms and concepts in expenditure budgeting. CO7: Explain theories and principles of taxation. CO8: Describe problems and shifting of Tax burden in economy.
(EC-1003) International Trade	CO1: Describe the concept of comparative cost theory and Ricardo. CO2: Describe new theories of trade with respect economies of scale and competitions in market. CO3: Explain concepts of gross and net barter terms of trade. CO4: Explain relations between terms of trade and economic development. CO5: Illustrate difference between free trade and

	controlled trade. CO6: Explain effects of tariffs and non- tariffs on trade equilibrium. CO7: Describe role of international trade agreements and institutions on trade. CO8: Describe growth of trade in services in developing countries in global trade.
(EC-1004) Agriculture Economics	CO1: Ability to analyze and Evaluate the subject with reference to various aspects of agrarian economics. CO2: Ability to develop an understanding of agriculture with its intricacies and imperfections and to be able to construct intellectual dialogue on the challenges of agriculture.
	M.A.I Semester II
(EC 2001) Micro Economic Analysis- II	CO1: Describe concept of classification of market in economy. CO2: Explain type of competition of market as perfect competition with respect to short run and long run equilibrium. CO3: Explain type of competition of market as monopoly with respect to short run and long run equilibrium. CO4: Analyse comparison of monopoly and perfect competitive market conditions. CO5: Illustrate type of imperfect competitions and models of monopolistic and oligopoly market. CO6: Describe basic concepts of dominant strategy equilibrium and Nash equilibrium. CO7: Describe alternative theories of firms with sales revenue maximisation. CO8: Describe theories of distribution with marginal productivity and product exhaustion.
(EC- 2002)Public Economics II	CO1: Define concepts of Public Debt of Indian economy CO2: Describe fiscal policy and monetary policy of Indian economy. CO3: Describe concept of Indian budget with components,

	presentation, types, execution and budget multiplier. CO4: Describe trends in expenditure of Union, state and local bodies' science1991. CO5: Explain Indian fiscal federalism with horizontal and vertical imbalance and sources of revenue. CO6: Describe constitutional provisions, finance commission and planning commission. CO7: Describe centre, state, local bodies and financial relations in India. CO8: Describe Indian public finances with of tax its types, non-tax revenue, budget management and kelkar committee recommendations. **M.A.I Semester II**
(EC- 2003) International Finance	CO1: Describe concept of balance of trade and balance of payment with equilibrium and disequilibrium. CO2: Illustrate fiscal and monetary policies for internal external balance of payment. CO3: Describe functions and transitions in foreign exchange market. CO4: Explain exchange rate systems under foreign exchange management. CO5: Explain classification of international capital flows and foreign aid. CO6: Explain importance and role of foreign capital in international capital movement. CO7: Describe international banking growth and expansion of non-banking financial companies. CO8: Explain evolution and progression of international economic organizations.
(EC-2004) Labour Economics	CO1: Ability to Analyze and evaluate the subject with reference to various Aspects of labour economics. CO2: Ability to develop an understanding of the labour with its

	intricacies and Imperfections and to be able to construct intellectual dialogue on the Challenge of labour w.r.t the Indian Economy

Department of Marathi

मराठी विभाग –Program outcome २०१९-२०

प्रथम वर्ष कला :

विद्यार्थ्यांना विविध साहित्य प्रकारांची ओळख झाली.

विद्यार्थी कथा आणि एकांकिका या साहित्य प्रकारचे विशेष आकलन करू लागला.

विद्यार्थ्यास कथा आणि एकांकिका या साहित्य प्रकाराचे स्वरूप आणि व्याप्तीचा आवाका ज्ञात झाला.

विद्यार्थ्यास कथा आणि एकांकिका या साहित्य प्रकाराची परंपरा ज्ञात झाली.

विद्यार्थी कथेचे आणि एकांकिकेचे प्रकट वाचन करू लागला.

विद्यार्थी कथेचे आणि एकांकिकेचे वाङ:यीन मूल्यमापन करू लागला.

विद्यार्थ्यांच्या विविध भाषिक कौशल्यांचा विकास झाला.

नैसर्गिकपणे श्रवण करताना विद्यार्थ्यांची आकलनशक्ती वृद्धिंगत झाली.

विद्यार्थ्याने संभाषण, वाचन, लेखन, इ-संवाद, कौशल्ये प्राप्त केली.

विद्यार्थ्याने आत्मसात केलेल्या ज्ञानकौशल्यातून तो सारांश लेखन, सारग्रहण, कल्पनाविस्तार, घोषवाक्य लेखन, भाषांतर आदी विविध घटकांचे कौशल्यपूर्ण लेखन करू लागला.

प्रथम वर्ष वाणिज्य

विद्यार्थी विविध क्षेत्रातील भाषा व्यवहाराचे स्वरूप समजावून घेऊ लागला.

विद्यार्थी विविध क्षेत्रामध्ये भाषा व्यवहार करू लागला.

विद्यार्थ्याने विविध क्षेत्रीय भाषा व्यवहाराची कौशल्ये आत्मसात केली.

विद्यार्थ्याने आत्मसात केलेल्या विविध क्षेत्रातील व्यवहार कौशल्यांच्या साहाय्याने तो लेखन करू लागला.

विद्यार्थ्यास विविध कर्तृत्ववान व्यक्तींच्या कार्याची आणि विचारांची ओळख झाली.

विद्यार्थ्याने नैतिक, व्यावसायिक व वैचारिक मूल्ये आत्मसात केली.

विद्यार्थी प्रशासकीय लेखन करू लागला.

द्वितीय वर्ष कला :

विद्यार्थ्यास शुद्धलेखन विषयक नियमांचा परिचय झाला.

विद्यार्थ्यांना पारिभाषिक संज्ञा ज्ञात झाल्या.

विद्यार्थी चरित्र आणि आत्मचरित्र या साहित्यप्रकारांच्या तात्विक घटकांचे आकलनकरू लागला.

विशेष स्तर : एक : मराठी साहित्यातील विविध प्रकार :

विद्यार्थ्यास विविध साहित्यप्रकारांच्या तात्विक घटकाचे ज्ञान मिळाले.

वेगवेगळ्या कालखंडातील मराठीतील अभिजात साहित्यकृतींचा परिचय झाला.

साहित्याविषयी अभिरुची निर्माण झाली.

विद्यार्थी साहित्यकृतीचे आकलन, आस्वाद आणि मूल्यमापन करू लागला.

विशेष स्तर : दोन: आधुनिक मराठी वाड:याचा इतिहास (१८१८-१९६०)

मराठी साहित्याची ऐतिहासिक परंपरा माहीत झाली.

विविध कालखंडातील साहित्यामागील प्रेरणा, प्रवृत्तींचे ज्ञान प्राप्त झाले.

साहित्यप्रकारांची विकासशील परंपरा ज्ञात झाली.

द्वितीय वर्ष विज्ञान :

विद्यार्थ्यांना विज्ञान साहित्याविषयी आवड निर्माण झाली.

विद्यार्थ्यांमध्ये वैज्ञानिक जाणीव निर्माण झाली.

विद्यार्थ्यांमध्ये लेखन, वाचन, आकलन आणि संभाषण ही भाषिक कौशल्ये विकसित झाली.

विद्यार्थी विविध भाषिक कौशल्यांचा आविष्कार करू लागला.

विद्यार्थी वैज्ञानिक, कार्यालयीन, व्यावसायिक आदी कामकाजात मराठीचा वापर करू लागला.

तृतीय वर्ष कला :

आधुनिक मराठी साहित्यातील विविध साहित्य प्रकारांच्या काल्कृतीची आस्वाद क्षमता वाढली.

भाषेचे आकलन करून विद्यार्थी दैनंदिन जीवनात उपयोजन करू लागला.

विद्यार्थी विविध साहित्य प्रकारांतील नवग्रंथांचे परीक्षण करू लागला.

विशेष सत्र : तीन : साहित्यविचार

विद्यार्थी बहुविध अंगांनी साहित्याचे स्वरूप आणि प्रयोजन ठरवू लागला.

साहित्याची निर्मिती प्रक्रिया माहीत झाली.

विद्यार्थ्यास काव्यातत्त्वाविषयी असणाऱ्या मतमतांतरांची जाणीव झाली.

विद्यार्थ्यास साहित्यातील रसनिष्पत्ती प्रक्रिया माहीत झाली.

विद्यार्थी काव्यानंद मीमांसेच्या विविध उपपत्तीचे स्वरूप स्पष्ट करू लागला.

विद्यार्थ्यास साहित्यातील वामनाचा रीतीविचार समजू लागला.

साहित्यविषयक मूलभूत सिद्धांतांचे ज्ञान मिळाले.

विद्यार्थ्यास साहित्य आणि समाजाचा सहसंबंध ज्ञात झाला.

विद्यार्थ्याची प्रतिभाशक्ती जागृत झाली.

विशेष स्तर : चार : भाषाविज्ञान

विद्यार्थी भाषाकूल संकल्पना ज्ञात करून घेऊन भाषा उत्पत्ती प्रक्रियेचा अभ्यास करू लागला.

विद्यार्थी भाषिक स्थित्यंतरांचा आढावा घेऊ लागला.

विद्यार्थी गत शतकातील भाषेची स्थिती गती समजावून घेऊ लागला.

विद्यार्थी भाषा म्हणून मराठीच्या वाटचालीचा ऐतिहासिक आढावा घेऊ लागला.

विद्यार्थ्यास भाषेचे स्वरूप, कार्ये, अभ्यासाचे महत्त्व, भाषाभ्यासाची प्रमुख अंगे माहीत झाली.

विद्यार्थ्यास स्वन विज्ञान, स्वनिम संकल्पना आणि मराठीची स्वनिम व्यवस्था, रुपिम व्यवस्था, वाक्यविन्यास व अर्थविन्यास या भाषा वैज्ञानिक संकल्पनांचा परिचय झाला.

Department of Hindi

PROGRAM OUTCOME

-F.Y.B.A.

1.**छात्रों को पाठ्यक्रम द्वारा गद्य की अन्य विधाओं का परिचय देने हेतू गद्य विधाओं में पाँच पाठ का चयन किया हैं-जैसे सरजू भैया (रेखचित्र),रामवृक्ष बेनीपुरी भय (निबंध)रामचंद्र शुक्ल एक बूंद सहसा उछली (यात्रा वर्णन) अज्ञेय अकबरी लोटा (व्यंग्य) अन्नपूर्णानंद वर्मा,प्रतिशोध (एकांकी) आदि।**

2.**पाठ्यक्रम द्वार मानवी मूल्यों को समझाया गया है।**

3.**इस पाठ्यक्रम द्वारा बालसुलभ मानसिकता को दिखाया गया है।**

4.**इस पाठ्यक्रम द्वारा मानवीय संबंधों पर प्रकाश डाला है।**

5.**इस पाठ्यक्रम में युद्ध की भयावहता एवं आम लोगों की मानसिकता को समझाने का प्रयास किया है।**

6.**इस पाठ्यक्रम द्वारा किसी भी पडोसी देशों में युद्ध नहीं होने चाहिए, उसे रोकना चाहिए,इसी भाव को समझाने हेतु कुछ कहानी सकारात्मक मानसिकता बना तो है।**

7.**इस पाठ्यक्रम के माध्यम से छात्र हिंदी संगणक कौशल अवगत करेगे। इससे रोजगार के कई क्षेत्र खुल जाएगे।**

ा म द्वारा हिंदी में किए जानेवाले रोजगार परक व्यवहार का ज्ञान प्राप्त होगा।

8.इस पाठ्यक्रम द्वारा हिंदी कम्प्यूटिंग,इंटरनेट की सामान्य जानकारी तथा हिंदी सॉफ्टवेअर की जानकरी की जानकारी रखी हैं।

9.हिंदी हिंदुस्तान की संपर्क भाषा है इसलिए छात्रों में हिंदी भाषा तथा व्यवहार कौशल विकसित करने हेतु संवाद कौशल,सूत्र संचालन ,समूह चर्चा,लेखन कौशल,स्ववृत्त लेखन,निबंध लेखन विज्ञापन लेखन तथा वाक्य शुद्धिकरण से संबंधित पाठ्यांश रखा गया हैं।

10.इस पाठ्यक्रम से छात्रों को एक संवेदनशील भारतीय नागरिक बनाना तथा उनमें रोजगार परक कौशल्य का निर्माण करना हैं।

S.Y.B.A.

1.इस पाठ्यक्रम द्वारा साहित्य में अभिव्यक्त मानवीय मूल्यों को समझाया जा सकता है।

2. इस पाठ्यक्रम से सहजीवन के मूल्यों को और पाठकों को समझाया जाता हैं।

3. इस पाठ्यक्रम से भाषा-व्यवहार से अवगत किया जाता है।

4.हिंदी साहित्य - अध्येताओं को कविता ,कहानी और साहित्येतर पाठांशों द्वारा हिंदी साहित्य भेदों से परिचित किया जा सकता है।

5.हिंदी का व्यवस्थित स्वरूप समझाना।

6.शब्द-युग्म का प्रत्यक्ष वाक्य-व्यवहार को समझाया जाता है।

7. इस पाठ्यक्रम से संक्षेपण,पल्लवन विधि कौशल सिखाना,साक्षात्कार कला से अवगत किया जाता है ।

8..इस में भाषा संबंधी भिन्न-भिन्न उपयोगी ॲप्स का ज्ञान दिया जाता है।

9. इस पाठ्यक्रम से साहित्य सृजन कौशल का विकास किया जाता है।

10.मानक हिंदी भाषा को अवगत किया जा सकता है।

Department of History
F.Y.B.A (Choice Based Credit System) 2019 Pattern
PROGRAM OUTCOME; Social Science and Humanities HISTORY

Department of History	After successful completion of three year degree program in History a student should be able to.
PROGRAM OUTCOME	PO.1. Appreciate the history and culture of India since time immemorial PO.2. Appreciate and learn about the rich heritage of heroic struggle for independence undertaken by our forefathers PO.3. Shall be able to create a career in the field of teaching/tourism and allied Fields. PO.4. Shall be able to undertake research and add on to the knowledge of the society PO.5. Study the origin of different social systems and revolutions that exist today in the modern world. PO.6. Appreciate the changes brought about by different revolutions that occurred all over the world. E.g. Russian ir American Revolution
Program Specific Outcomes	PO-1. Paleolithic, Mesolithic, Neolithic and Chalcoithic culture A Brief Review PO-2. Geographical Extent, Town planning, Trade, Religious practices. PO-3. The Growth of the Magadha Empire. and mauryan administration, Economy, Decline and significance.

Course Outcome of History
Semester-II (S.Y.B.A and T.Y.B.A)

Course	**Outcome** After successful completion of three year degree program in History a student should be able to.
Post Mauryan Age to the Rashtrakutas History	PO.1. Gain the knowledge of subject of History through theory, reading and Learning processes. PO.2. Inculcate within themselves, the spirit of enquiry and shall develop the habit of asking meaningful questions which can help in the generation of knowledge. PO.3. To learn about the history and come out with solutions to some of the pro lens. That our Society is facing since a long time. PO.4. The subject of history can prove essential and helpful while crying out a career through competitive examinations

	PO.5. The knowledge of the subject of history provides concrete base for a career in almost all fields as history/knowledge of that particular subject is important beyond any doubt.

Department of Geography PSO/CO

Program Outcome	1. To impart higher education in Geography and giving education in Environmental Studies to the students to produce sensitive ideal citizens towards nature. 2. To motivate the students to get up-to-date Geographical knowledge and to cultivate interest about Earth Science. 3. To make aware the students with the recent trends in Geography and other related disciplines. 4. To develop skills of study in Travel Tourism and Natural Hazards among the students. 5. To create respect for Environment.
Course Outcome Savitribai Phule Pune University F.Y.B.A. Gg- 110 -Elements of Geomorphology (G-1)	Objectives: 1. Introduce the basic concepts in Geomorphology to students. 2. To introduce latest concept in Geomorphology 3. III. To acquaint the students with the utility and application of Geomorphology in different regions and environment. 4. To make the students aware of the need of protection and conservation of different landforms
S.Y.B.A. Gg. 210: Elements of Climatology and Oceanography (G2)	Objectives: 1. To introduce the students to the basic principles and concepts in Climatology and Oceanography. 2. To acquaint the students with the applications of Climatology and Oceanography in different areas and environment. 3. To make the students aware of the Planet Earth and thereby to enrich the student's knowledge
T.Y.B.A Gg.: 310 Regional	Objectives 1. To acquaint the students with geography of our Nation.

Geography of India (G-3)	2. To make the student aware of the magnitude of problems and prospects National level. 3. To help the students to understand the inter relationship between the subject and the society. 4. To help the students to understand the recent trends in regional studies

F.Y.B.A.
Choice Based Credit System (CBCS) 2019
General Paper
Subject -: Geography Course Code- 110-b
Paper Name:-Human Geography
Semester II
Course Credit- 4

Program Outcome (POs)-:

PO 1	To introduce the students to basic concepts of Human Geography
PO 2	To introduce latest concept in Human Geography
PO 3	To acquaint the students with utility and application of Human Geography in different regions and environment
PO 4	To make students aware about Human resource

Program Specific Outcome (PSOs)-:

PSO 1	Understand basic concept of human Geography
PSO 2	Ability to develop & Understanding of the knowledge.
PSO 3	To able to analyze Geographical way of thinking.
PSO 4	To Provide the students with the background of the human Geography with focus on Human environment.
PSO 5	To help the students to prepare for varied competitive examination.
PSO 6	To enable students to understand and comprehend the current Knowledge of Human resource.
PSO 7	Students will be able to effectively communicate and identify Human resource development

Course Outcome (COs) -:

CO1. To familiarize the students with the recent developments in the Human Geography.

CO2. Students will understand various issues and challenges facing in Human Geography

CO3. To Compare Human Geography with other social sciences.

CO4. To understand the role of cultural factors on Earth.

Course Specific Outcomes -:

Unit No	Unit title	Contents	Course Specific Outcomes
1	**Introduction to Human Geography**	1) Meaning and definition of Human Geography. 2) Nature and scope of Human Geography 3) Branches of Human Geography	To understand about Human environment and comparison of various branches of Geography.
2	**Population**	1) Factors affecting on distribution of population 2) Theory of demographic transition 3) Composition of Indian population.	To know about Human resource and various concepts related to population
3	**Settlements**	1) Types and patterns of rural settlements 2) Urbanization in India 3) Urbanization in Maharasthra	To know about Human shelters and problems of urbanization
4	**Agriculture**	1)Types of Agriculture 2)Factors affecting on agricultural activities 3)Problems of Indian Agricultural	To know about Agriculture and related problems

Evaluation Methods: Diagnostic evaluation test to identify slow learner and advanced learner.

Bridge course for admitted student according to other faculty (Science &MCVC) to basic knowledge of subject.

Formative and Summative Evaluation

Formative Evaluation : Knowledge, Understanding and Skills.

Summative Evaluation: (PPT (Oral or Poster)/ Project Work/ Assignment), Mid Sem. Examination and University Examination.

Attainment of Physical Geography

Course Outcomes (Co 110)

Learning Outcomes	Teaching learning Strategies/ Activities	Assessment task/ tools
CO 110.1 To familiarizes the students with the recent developments in the Human Geography.	Lecture method,	Assignments
CO 110.2. Students will understand various issues and challenges facing in Human Geography	Lecture method, Question Answer Interaction Information by Poster	Test Exam

CO 110.3 To Compare Human Geography with other social sciences.	Lecture method, Question Answer Interaction Illustration Information by Poster	Test Assignments
CO 110.4 .To understand the role of cultural factors on Earth.	Lecture method, Question Answer Interaction Information by Poster	Test Exam

Table 1:-

Course Outcome#	Course Outcome
CO 110.1	To familiarize the students with the recent developments in the Human Geography.
CO 110.2	Students will understand various issues and challenges facing in Human Geography
CO 110.3	To Compare Human Geography with other social sciences .
CO 110.4	To understand the role of cultural factors on Earth.

DEPARTMENT OF COMMERCE
PROGRAMME OUTCOMES: B. COM

Department Of Commerce	**Upon completion of B.Com Degree Programme the graduates will be able to**
Programme Outcomes	PO-1 understands the role of business and its implications on society. PO-2 understand the conceptual knowledge of accounting and acquire skills of maintaining accounts PO-3 acquire entrepreneurial, legal and managerial skills PO-4 develop the skills and techniques of communication to be successful in business and personal life PO-5 identify the avenues of marketing and banking both traditional and modern PO-6 improve competency to make eligible and employable in the job market PO-7 recognizes different value systems and ethics, understand the moral dimensions and accept responsibility.
Programme specific outcomes	PSO-1 apply different concepts in starting and managing business and realize the social responsibilities, social realities and inculcate an essential value system PSO-2 solve problems related to employer, employee, investors and consumers with legal protection PSO-3 prepare financial statements of business using accounting principles, concepts ,conventions and provisions PSO-4 implement traditional and modern strategies and practices of costing, banking, economics, marketing, management, auditing and taxation PSO-5 develop necessary professional knowledge and skills in finance and taxation PSO-6 practice different techniques of communication and apply it in business and profession PSO-7 use mathematical and statistical tools in academics, business and research PSO-8 develop competency in students to make them employable in the global market PSO-9 develop the skills of students to equip themselves as successful entrepreneurs PSO-10 enhances practical knowledge to prepare various accounts in order to meet the national requirements.

Course Outcomes F. Y. B. Com	
Course	**Outcomes**
Financial Accounting	CO-1 Understand the accounting principles, concepts and convention and to identify various subsidiary books in accountancy. CO-2 Analyze what bank reconciliation statement is and understand about rectification of errors and suspense account CO-3 Analyze the essentials of bill of exchange and its accounting treatment. CO-4 Understand the various methods of calculating depreciation CO-5 Understand the methods of calculating profits under single entry System.
Marketing and Salesmanship	CO-1 Understand the Modern marketing concepts CO-2 Providing knowledge about marketing mix, segmentation, targeting and positioning. CO-3 Get clear idea of product planning, Diversification, Elimination and pricing strategies. CO-4 Summarize marketing of consumer goods, channels of distribution.
Mathematics and Statistics	CO-1 Develop an idea about number systems and equations CO-2 Familiarize with the laws of indices and logarithm and their application CO-3 Know the various concepts like distance, slope, equation of straight line and their application in business CO-4 Have a clear idea about matrices properties and solve problems CO-5 Understand the concepts of simple interest, compound interest, discount, depreciation and their application in real life situations

Course Outcomes: S. Y. B. Com	
Course	**Outcomes**
Business Communication	CO-1 Develop communication skills and use of electronic media in business communication. CO-2 Learn the way to overcome communication barriers CO-3 Practice modern forms of communication CO-4 Formulate job related communication and resume preparation CO- 5 Attend interview and participate in Group discussion with confidence CO-6 To extend business communication skills through the application and exercises.

Corporate Accounting	CO-1 Understand the procedures for the issue of shares. CO-2 Prepare Financial Statements of Companies CO-3 Prepare liquidators' final statement of account CO-4 Prepare consolidated Balance Sheet CO-5 Student's skills about accounting standards will be developed. CO-6 To make aware the students about the valuation of shares. CO-7 To impart knowledge about holding company accounts, amalgamation, absorption and reconstruction of company.
Elements of Company Law	CO-1 Understand company formation and capital subscription CO-2 Describe company management, Duties, Rights and Liabilities. CO-3 Appraise the Essentials of valid meeting CO-4 Analyze various kinds of meeting and statutory Report CO-5 Analyze and Evaluation of Directors meeting CO-6 Provide understanding about kinds of companies and create awareness about multinational companies. CO-7 To impart students with the knowledge of fundamentals of Company Law and provisions of the Companies Act of 2013.
Business Management	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 To understand the concept of leadership and its types. CO-4 This course enables the students to have overall knowledge of business management i.e. how to use resources at optimum level. CO-5 To understand the challenges of business in the post LPG policy.
Marketing Management-I	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 To develop employability skills among the students.

	CO-5 This subject gives in depth knowledge about customer Relationship Management, Rural market and urban market and different strategies for enter these markets
Cost & Works Accounting-I	CO-1 Understand the importance of costing in companies CO-2 Gain knowledge about cost sheet. CO-3 Learn about the overheads and absorption of overheads. CO-4 Providing knowledge about difference between financial accounting and cost accounting. CO-5 Ascertainment of Material and Labor Cost. CO-6 Student's Capability to apply theoretical knowledge in practical situation will be increased.

Course Outcomes: T. Y. B. Com	
Course	**Outcomes**
Business Regulatory Framework	CO-1 The student will well verse in basic provisions regarding legal frame work governing the business world. CO-2 To know the students with the basic concepts, terms & provisions of Mercantile and Business Laws. CO-3 To develop the awareness among the students regarding these laws affecting trade business, and commerce. CO-4 Understand the law and procedure of the contracts CO-5 Summarize sale of goods and rights and duties of buyer and seller
Advanced Accounting	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 software package and by learning various accounts.
Auditing and Taxation	CO-1 Gain knowledge about auditing, audit programmes, working papers and preliminaries before audit. CO-2 Analyze about implementing internal check and internal control in concerns. CO-3 Understand the various aspects of vouching. CO-4 Learn how to verify and value various assets and liabilities CO-5 Evaluate the traits of Company Auditor and how to draft Auditors Report. CO-6 Understand income under the head other sources and solve problems

	CO-7 Compute set-off and carry forward of losses and aggregation of income CO-8 Identify long term and short term capital gain and calculate taxable capital gain CO-9 Identify the deductions from Gross Total Income and understand returns, filing of return of income, due date, kinds of assessment and assessment procedure CO-10 Compute income tax liability of individuals CO-11 To give knowledge about preparation of Audit report, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961.
Marketing Management-II	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 To understand the concept of advertising and how this effect buying habits of consumers. CO-5 To understand how to promote sale. CO-6 Identify the major basis of market segmentation.
Marketing Management-II	CO-1 Students can identify how consumer behaves differently. CO-2 Able to understand how a product possessed from different stages. CO-3 Able to understand the difference between trademark and branding. CO-4 Able to describe the customer segmentation, target marketing and positioning. CO-5 Understand different methods of sale promotion. CO-6 To understand the concept of advertising and how this effect buying habits of consumers.
Cost and Works Accounting-II	CO-1 To keep the students conversant with the ever – enlarging frontiers of Cost Accounting knowledge. CO-2 Students can get knowledge of different methods and techniques of cost accounting. CO-3 To impart Knowledge about the concepts and principles application of Overheads. CO-4 To impart Knowledge about activity based.
Cost and Works Accounting-III	CO-1 Understand the importance of costing in companies CO-2 Gain knowledge about losses in process costing CO-3 Learn about the applications in Marginal Costing CO-4 Learn about the applications in Contract Costing

	CO-5 To provide knowledge regarding costing techniques. CO-6 To give training as regards concepts, procedures and legal Provisions of cost audit.

PROGRAMME OUTCOMES: M. COM

Department Of Commerce	**Upon completion of B.Com Degree Programme the graduates will be able to**
Programme Outcomes	PO-1 understands the basic concepts of business and its role in society. PO-2 understand financial and marketing both local and international issues and responsibilities of a business organization. PO-3 gain knowledge on legal and ethical issues in a business organization. PO-4 identifies reason for profit or loss and give solutions for economic viability of a business. PO-5 acquires practical skill in accounting by having an opportunity of summer internship Programme. PO-6 use current techniques and skills necessary for business and costing. PO-7 serve as a human resource needed for industry, consultancy, education, service, research, public administration, insurance and management.
Programme specific outcomes	PSO-1 prepares financial statements of business organizations using accounting principles. PSO-2 discusses the various provisions relating to business law, indirect taxes and income tax. PSO-3 undertakes socially relevant projects. PSO-4 acquires knowledge on international business and principles of management. PSO-5 analyses the concepts of marketing, costing, tourism, business ethics, consumerism and MSMEs (Micro Small and Medium Enterprises.) PSO-6 gain knowledge on Indian Financial System and electronic payment techniques. PSO-7 plan for project financing and appraisal. PSO-8 recognizes the need and importance of communication and to develop the personality. PSO-9 develops the competency in students to pursue higher level programmes in commerce and management. PSO-10 generates and initiates innovative business ideas.

Course Outcomes: M. Com-I	
Course	**Outcomes**
Management Accounting	CO-1 To develop an understanding of the conceptual framework of the Management Accounting. CO-2 To provide the knowledge in the Management Accounting Techniques in business decision making. CO-3 To develop the understanding of accounting tools and information and their uses in Decision making CO-4 To study the financial statement analysis CO-5 To familiarize fund flow cash flow statement
Strategic Management	CO-1 To provide understanding of the Tasks, Functions and Skills of strategic management and latest developments. CO-2 To aware the students about principles and functions of strategic management. CO-3 Students will be able to describe major theories, background work, concepts and research output in the field of strategic management. CO-4 Students will demonstrate a clear understanding of the concepts, tools & techniques used by executives in developing and executing strategies and will appreciate its integrative and interdisciplinary nature. CO-5 Students will be able to demonstrate effective application of concepts, tools & techniques to practical situations for diagnosing and solving organizational problems. CO-6 Students will be able to demonstrate capability of making their own decisions in dynamic business landscape.
Advanced Cost Accounting	CO-1 Apply the techniques of costing in pricing of products and services. CO-2 Analyze cost and financial statements to reconcile costing and financial profits. CO-3 Evaluate different methods of costing in the process of decision making. CO-4 Understand various concepts and elements of costing.
Costing Technique Examination s and Responsibility Accounting	CO-1 To equip the students for designing and implementing cost control, cost reduction Programme and different cost system. CO-2 Relevant Cost Accounting Standard is to be studied CO-3 Level of knowledge –Advanced Techniques of Costing
Financial Analysis and Control	CO-1 facilitate students to acquire sound knowledge of concepts, methods and techniques of management accounting CO-2 To aware the students develop competence with their usage in managerial decision making and control. CO-3 To acquire sound knowledge of concepts, methods and techniques of management accounting CO-4 To make the students develop competence with their usage in managerial decision making and control.
Application Cost	CO-1 Analyze Cost Control and Reduction

Accounting	CO-2 Understand Costing Methods CO-3 Determine the Budgeting Control methods CO-4 Apply Cost Volume Profit analysis CO-5 To provide knowledge on advanced cost accounting practices. CO-6 Relevant Cost Accounting Standard is to be studied.
Cost Control & Cost System	CO-1 To equip the students for designing and implementing cost control, cost reduction Programme and different cost systems. CO-2 Relevant Cost Accounting Standards are to be studied. CO-3 Differentiate cost control and cost reduction tools and techniques.

Course Outcomes: M. Com-II	
Course	**Outcomes**
Business Finance	CO-1 To familiarize the students to acquire sound knowledge of concepts, structure and nature of business finance. CO-2 To impart knowledge regarding strategic financial planning. CO-3 To enable students to acquire sound knowledge of concepts, nature and structure of business finance.
Research Methodology for Business	CO-1 To explain the students with the areas of Business Research Activities. CO-2 To enhance capabilities of students to conduct the research in the field of social sciences and business. CO-3 To facilitate students, in developing the most appropriate methodology for their research studies. CO-4 To enhance capabilities of students to conduct the research in the field of business and social sciences. CO-5 To enable students, in developing the most appropriate methodology for their research studies. CO-6 To enhance capabilities of students to conduct the research in the field of business and social sciences.
Cost Audit	CO-1 To provide adequate knowledge on Cost Audit Practices. CO-2 Students can prepare final accounts of Company, working on Cost & process accounting, Job & contract accounting and carrying out Cost audit. CO-3 Describe cost audit and reporting types, techniques and cost audit programme.
Management Audit	CO-1 To equip the students with the knowledge of the techniques and methods of planning and executing the Management Audit. CO-2 To help the students to know how the management audits helps in decision making areas such as make or buy, closing down of an unit, acquisition of a business, etc. CO-3 It also helps in assessing the efficiency of the executives. .

	CO-4 Management audit suggests ways to utilize the resources of the organization effectively.
Capital Market and Financial Services	CO-1 To make aware students about to acquire sound knowledge, concept and structure of financial services and capital market. CO-2 To impart knowledge of SEBI, Foreign capital, listing regulation. CO-3 To know students the introduction to global financial markets. CO-4 To know the role of financial market in economic development of a country. CO-5 To know the segments of capital market and risk management in secondary market. CO-6 To make aware of role of various financial services.
Recent Advances in Cost Auditing and Cost System	CO-1 To provide knowledge on recent advances in cost accounting and cost systems. CO-2 Assess contemporary Issues and recent developments in cost accounting CO-3 Understanding the role of cost auditor, CO-4 To know cost audit planning and execution. CO-5 To know cost accounting standards.
Project Work/Case Studies	CO-1 Understand Meaning of Research and research design. CO-2 Create Hypothesis and testing CO-3 Identify Methods of Data collection and pilot study CO-4 Develop Processing and Analysis of data and SPSS packaging CO-5 Apply Report writing and drafting of report

Department of Physics

PROGRAM OUTCOMES: B. Sc. PHYSICS

Department of Physics	After successful completion of three year degree program in physics a student should be able to;
Program Outcomes	PO-1. Demonstrate, solve and an understanding of major concepts in all disciplines of physics. PO-2. Solve the problem and also think methodically, independently and draw a logical conclusion. PO-3. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of Physics experiments. PO-4. Create an awareness of the impact of Physics on the society, and development outside the scientific community. PO-5 To inculcate the scientific temperament in the students and outside the scientific community. PO-6. Use modern techniques, decent equipments in Physics, Biophysics and Medical Electronics.
Program Specific Outcomes	PSO-1.Gain the knowledge of Physics through theory and practical's PSO-2. Understand good laboratory practices and safety. PSO-3. Develop research oriented skills. PSO-4. Make aware and handle the instruments/equipments. PSO-5. To enrich knowledge through problem solving, minor/major projects, seminars, tutorials, review of research articles/papers, participation in scientific events, study visits, etc. PSO-6. To foster scientific attitude, provide in-depth knowledge of scientific and technological concepts of Physics. PSO-7. To train students in skills related to research, education, industry, and market. PSO-8. To help students to build-up a progressive and successful career in Physics.
Course Outcomes F. Y. B. Sc Physics	

Semester-I	
Course	**Outcomes** After completion of these courses students should be able to;
PHY-111 Mechanics and Properties of Matter	CO-1. To understand the concepts of motion and Newton's laws and its real life applications. CO-2. To understand the concept of work and energy. CO-3. To understand the concept of fluid mechanics and its applications. CO-4. To understand concepts of surface tension and its applications. CO-5. To understand elasticity and its applications. CO-6. Demonstrate quantitative problem solving skills in all the topics covered.
PHY-112 Physics Principles and Applications	CO-1.To understands the general structure of atom, spectrum of hydrogen atom. CO-2. To understand the atomic excitation and LASER principles. CO-3. To understand the bonding mechanism and its different types. CO-4. To demonstrate an understanding of electromagnetic waves and its spectrum. CO-5. Understand the types and sources of electromagnetic waves and applications. CO-6. To demonstrate quantitative problem solving skills in all the topics covered.
PHY-121 Heat and Thermodynamics	CO-1. To know the basic laws of Thermodynamics and Thermodynamic processes. CO-2. To understand the concept of conversion of heat into work CO-3.To knows the fundamental of heat transfer mechanism. CO-4. To know the fundamentals of heat and temperature. CO-5. To understand different temperature measuring instruments and its applications. CO-5. To demonstrate quantitative problem solving skills in all the topics covered.

PHY-122 Electricity and Magnetism	CO-1. To understand the concept of the electric force, electric field and electric potential for stationary charges. CO-2. To calculate electrostatic field and potential of charge distributions using Coulomb's law and Gauss's law. CO-3. To understand the dielectric phenomenon and effects of electric field on dielectric. CO-4. To Study magnetic field for steady currents using Biot-Savart law, Ampere's Circuital law and its applications. CO- 5. To study different magnetic materials and its properties. CO- 6. To demonstrate quantitative problems solving skills in all the topics covered.

Course Outcomes S. Y. B. Sc **Physics** **Semester-I**	
Course	**Outcomes** After completion of these courses students should be able to;
PH211: MATHEMATICAL MEHODS IN PHYSICS	CO-1. Understand the complex algebra useful in physics courses CO-2. Understand the concept of partial differentiation CO-3. Understand the role of partial differential equations in physics CO-4. Understand vector algebra useful in mathematics and physics CO-5. Understand the singular points of differential equation. CO-6. Demonstrate quantitative problem solving skills in all the topics covered
PH212: ELECTRONICS	CO-1. Apply laws of electrical circuits to different circuits. CO-2. Understand the relations in electricity CO-3. Understand the properties and working of transistors. CO-4. Understand the functions of operational amplifiers. CO-5. Design circuits using transistors and operational amplifiers CO-6. Understand the Boolean algebra and logic circuits.
PH221: OSCILLATIONS , WAVES AND SOUND	CO-1.Understand the physics and mathematics of oscillations CO-2. Solve the equations of motion for simple harmonic, damped, and forced oscillators. CO-3 Formulate these equations and understand their physical content in a variety of applications, CO-4 . Describe oscillatory motion with graphs and equations, and use

	these descriptions to solve problems of oscillatory motion CO-5. Explain oscillation in terms of energy exchange, giving various examples CO-6. Solve problems relating to undamped, damped and force oscillators and superposition of oscillations. CO-7 Understand the mathematical description of travelling and standing waves. CO-8 Recognise the one-dimensional classical wave equation and solutions to it. CO-9 Calculate the phase velocity of a travelling wave. CO-10 Explain the Doppler effect, and predict in qualitative terms the frequency change that will occur for a stationary and a moving observer. CO-11 Define the decibel scales qualitatively, and give examples of sounds at various levels. CO-12 Explain in qualitative terms how frequency, amplitude, and wave shape affect the pitch, intensity, and quality of tones produced by musical instruments.
PH222: OPTICS	CO-1. Acquire the basic concepts of wave optics CO-2 Describe how light can constructively and destructively interfere, CO -3 Explain why a light beam spreads out after passing through an aperture CO-4 summarize the polarization characteristics of electromagnetic waves CO-5 appreciate the operation of many modern optical devices that utilize wave optics CO-6 Understand optical phenomena such as polarisation, birefringence, interference and diffraction in terms of the wave model. CO-7 Analyse simple examples of interference and diffraction phenomena. CO-8 Be familiar with a range of equipment used in modern optics.

PRACTICAL COURSE	CO-1 After completing of these practical course students will be able to Use various instruments and equipment. CO-2 Design experiments to test a hypothesis and/or determine the value of an unknown quantity. CO-3 Investigate the theoretical background to an experiment. CO-4 Set up experimental equipment to implement an experimental approach. CO-5 Analyse data, plot appropriate graphs and reach conclusions from your data analysis. CO-6 Work in a group to plan, implement and report on a project/experiment. CO-7 Keep a well-maintained and instructive laboratory logbook.

Course Outcomes B. Sc Physics

Semester-III

Course	**Outcomes** After completion of these courses students should be able to;
PH-331: Mathematical Methods in Physics II	CO-1. Know the Cartesian, spherical polar and cylindrical co-ordinate systems. CO-2. To understand the Special Theory of Relativity. CO-3. Discuss the Michelson- Morley Experiment. CO-4 To obtain the series solution by Frobenius method . CO-5 Study the Generating functions for Legendre, Hermite polynomials.
PH 332: Solid State Physics	CO-1. Know the principles of structures determination by diffraction. CO-2. To understand the principles and techniques of X-rays diffraction. CO-3. Know the fundamental principles of semiconductors and be able to estimate the charge carrier mobility and density CO-4. To give an extended knowledge about magnetic properties

	like diamagnetic, paramagnetic, ferromagnetic, ferrites and superconductors.
PH-333: Classical Mechanics	CO-Understand Newton's Laws of motion and their applications such as projectile and rocket motion CO-2. Gain the knowledge of motion in central force field CO-3. Classify elastic and inelastic scattering CO-4. Know the difference between Laboratory and centre of mass system CO-5. Understands Lagrangian and Hamiltonian formulation. CO-6 Solve the problems using Lagrangian and Hamiltonian formulation CO-7 Get knowledge of canonical trans formation and Poission‟s bracket
PH-334: Atomic and Molecular Physics	CO-1. To know the Rutherford Experiment of atom. CO-2. To understand molecular spectra of atom. CO-3. To study the Raman spectra. CO-4. To study the Zeeman Effect. CO-5. To understand the Quantum Numbers.
PH-335: Computational Physics	CO-1. Write algorithm and flow chart for c-programming language. CO-2. To use of iterative, decision making and the jump statement. CO-3. Understand the concept of arrays and pointers. CO-4. Study of user defined functions and program structures. CO-5. Able to use the concept graphics in c language.

PH-336 D: Biophysics	CO-1. To study Basic concepts of Cell, DNA , RNA and its Applications CO-2. Discuss the Different types of Biopotentials, Transducers, Resting Potentials, Bioelectrodes. CO-3. Understanding of Bioinstruments such as Colorimetres, spectrophotometrers, ECG,SEM and TEM. CO-4. To study the radiation Biophysics, X-Ray, NMR, radioimmunoassay etc. CO-05 To study the Biometry and Biostastistics .
Course Outcomes B. Sc Physics **Semester-IV**	
PH-341 Classical Electrodynamics	CO-1.Understand Mechanics of system of particles. CO-2.Know the Motion in Central Force Field. CO-3 Elastic and inelastic scattering. CO-4.Solve Langrangian and Hamiltonian formulation. CO-5. Learn Canonical Transformation and Poisson‟s Bracket.
PH-342: Quantum Mechanics	CO-1.Understand De-Broglie hypothesis and Uncertainty principle CO2-Derive Schrödinger's time dependent and independent equations. CO-3. Solve the problems using Schrödinger‟s steady state equation. CO-4. Get knowledge of rigid rotator. CO-5. Understand different operators in Quantum Mechanics
PH-343: Thermodynamics and Statistical Physics	CO-1.Tostudy kinetic theory of Gases. CO-2. To study Maxwell Relations and Application. CO-3. Know the elementary concept of statistics. CO-4. Understand statistical distribution of system of particles. CO-5.To study statistical ensembles. CO-6.To study Quantum statistics.

PH-344: Nuclear Physics	CO-1. Know the properties of nucleus likes binding energy, magnetic dipole moment and electric quadruple moment CO-2. To understand the concept of radioactivity and decays law CO-3. To study achievement of Nuclear Models of Physics and its limitations. CO-4. To give an extended knowledge about nuclear reactions such as nuclear fission and fusion CO-5. To understand the basic concept of Particle Physics
PH-345: Electronics	CO-1. Know the special purpose Diode. CO-2. To study the Transistor Amplifier. CO-3. To understand the FET, JFET, MOSFET. CO-4. To study the Operational Amplifier and their types. CO-5. To know the Timer IC- 555 and its classification. CO-6. To study the Regulated Power supply. CO-7. To understand the Sequential Logic Circuits.
PH-346 G: Medical Electronics	CO-1. To study the terminology of Medical instruments, Bioelectrics Signals CO-2. Understand the Basic Concepts of Biopotentials Electrodes and Sensors, EOG, ECG, EMG. CO-3. To study the different types of Amplifiers and Signal Processing. CO-4. To study the clinical laboratory instruments such as Spectrophotometry, calorimetry and calorimeter.

Department of Chemistry
Program Outcomes: B. Sc. Chemistry

Department of Chemistry	After successful completion of three year degree program in Chemistry a student should be able to;
Program Outcomes	PO-1. Demonstrate, solve and an understanding of major concepts in all disciplines of chemistry. PO-2. Solve the problem and also think methodically, independently and draw a logical conclusion. PO-3. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions. PO-4. Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community. PO-5. Find out the green route for chemical reaction for sustainable development. PO-6. To inculcate the scientific temperament in the students and outside the scientific community. PO-7. Use modern techniques, decent equipments and Chemistry software"s
Program Specific Outcomes	Ledge of Chemistry through theory and practical's. PSO-1. To explain nomenclature, stereochemistry, structures, reactivity, and mechanism of the chemical reactions. PSO-2. Identify chemical formulae and solve numerical problems. PSO-3. Use modern chemical tools, Models, Chem-draw, Charts and Equipments. PSO-4. Know structure-activity relationship. PSO-5. Understand good laboratory practices and safety. PSO-7. Develop research oriented skills. PSO-6.Make aware and handle the sophisticated instruments/ equipment's.

Course Outcomes B. Sc Chemistry Semester-I	
Course Outcomes	After completion of these courses students should be able to;
CH- 101: Physical Chemistry	CO-1. After completing the course work learner will be acquired with knowledge of chemical energetic, Chemical equilibrium and ionic equilibria.
CH- 102: Organic Chemistry	CO-2. Students will learn Fundamentals of organic chemistry, stereochemistry (Conformations, configurations and nomenclatures) and functional group approach for aliphatic hydrocarbons.
CH- 103: Chemistry Practical Course I	CO-1. The practical course is in relevance to the theory courses to improve the Understanding of the concepts. CO-2. It would help in development of practical skills of the students. CO-3. Use of microscale techniques wherever required.
Semester-II	
CH-201: Inorganic Chemistry	CO-1. Students will learn quantum mechanical approach to atomic structure, Periodicity of elements, various theories for chemical bonding.
CH- 202: Analytical Chemistry	CO-2. Students will know about basics of analytical chemistry, some techniques of analysis and able to do calculations essential for analysis.
CH- 203: Chemistry Practical –II	CO-4. The practical course is in relevance to the theory courses to improve the Understanding of the concepts. CO-5. It would help in development of practical skills of the students. CO-6. Use of micro scale techniques wherever required.

Semester-III	
CH-331 Physical Chemistry	CO-1. Write an expression for rate constant K for third order reaction CO-2. Solve the numerical problems based on Rate constant CO-3.Understand the term specific volume, molar volume and molar refraction CO-4. Know the meaning of phase, component and degree of freedom CO-5. Derive the expression for rotational spectra for the transition from J to J+1

CH-332 Inorganic Chemistry	CO-1. Know the meaning of various terms involved in co-ordination chemistry CO-2. To understand Werner's formulation of complexes and identify the types of valences CO-3. Know the limitations of VBT CO-4. Know the shapes of d-orbital's and degeneracy of d-orbital's CO-5. Draw the geometrical and optical isomerism of complexes
CH-333 Organic Chemistry	CO-1. Define organic acids and bases. CO-2. Distinguish between geometrical and optical isomerism. CO-3. Discuss kinetics, mechanism and stereochemistry of SN^1 and SN^2 reactions. CO-4. Compare between E_1 and E_2reactions. CO-5. Understand the evidences, reactivity and mechanism of various elimination and substitution reactions.
CH-334 Analytical Chemistry	CO-1. Know the principles of common ion effect and solubility product. CO-2. Study the methods of thermo-gravimetric analysis. CO-3. Understand the principles of Spectro-photometric analysis and properties of electromagnetic radiations. CO-4. Study the Voltammetry and Polarography as an analytical tool. CO-5. Measure the absorbance of atoms by AAS.
CH-335 Industrial Chemistry	CO-1. Know the importance of chemical industry. CO-2. Classify various insecticides. CO-3. Study the nutritive aspects of food constituents. CO-4. Understand the characteristics of some food starches. CO-5. Study the manufacture of cement, dyes, Glass, Soap and Detergents by modern methods.

CH-336-E **Agriculture Chemistry**	CO-1. Know the role of agriculture chemistry and its potential CO-2. Understand the basic concept of soil, properties of soil & its classification on the basis of pH. CO-3. Know the different plant nutrients, their functions and deficiency symptoms. CO-4. Identify the problematic soil and recommend a method for their reclamation. CO-5. Have the knowledge of various pesticides, insecticides, fungicides and herbicides.
Course Outcomes B. Sc Chemistry **Semester-IV**	
CH-341 Physical Chemistry	CO-1.Understand Mechanics of system of particles. CO-2.Know the Redox reaction. CO-3 Study the Crystal Field Theory. CO-4.Solve the cell reaction and calculate EMF. CO-5. Calculate inter planar distance. CO-6.Understand De-Broglie hypothesis and Uncertainty principle CO-7. Derive Schrödinger's time dependent and independent equations
CH-342 Inorganic Chemistry	CO-1 Study the electronic configuration of lanthanides and actinides. CO-2. Get knowledge of Crystalline solid. CO-3. Understand different operation in stoichiometric molecule. CO-4. Study the Bio-inorganic chemistry. CO-5. Understand the p-type semiconductor and n-type semiconductor.
CH-343 Organic Chemistry	CO-1.To study UV, IR and NMR spectroscopy. CO-2. Discuss different types of rearrangement reactions. CO-3. Determine structure of compound by spectroscopic methods. CO-4. Understand the difference between carbocation and carbanion. CO-5.To study alkaloids, Ephedrine, citral molecule with their properties and application.

CH-344 Analytical Chemistry	CO-1. Know the different analytical techniques. CO-2. To understand different types of separation techniques. CO-3. To study principle, construction and working of GC and HPLC. CO-4.To gives an extended knowledge about chromatographic Techniques used for separation of amino acids. CO-5. Discuss the problem based on distribution coefficient and extraction techniques.
CH-345 Industrial Chemistry	CO-1. Know the various pharmaceutical drugs, their application and synthesis. CO-2. To study the waste management. CO-3. To understand the function of dyes, paints and pigments. CO-4. To study the various type of surfactants. CO-5. To know about molasses and bagasse. CO-6. To study the different types of polymer.
CH-346(E) Dairy Chemistry	CO-1. Know the market of milk in different breeds. CO-2. Understand the basic principle of sterilization, homogenization, and standardization of milk. CO-3. Study the flow sheet diagram of shrikh and powder, whey powder, and ice-cream. CO-4. Study the different nutrient value in milk.
CH-347 Physical chemistry practical‟s	CO-1. Calculate molar and normal solution of various concentrations. CO-2. Determine specific rotations and percentage of to optically active substances by polorimetrically. CO-3. Study the energy of activation and second order reaction. CO-4. Study the stability of complex ion and stranded free energy change and equilibrium constant by potentiometry. CO-5. Find out the acidity, Basicity and PKa Value on pH meter.
CH-348 Inorganic Chemistry Practical‟s	CO-1. Study the gravimetric and volumetric analysis of ores and alloy. CO-2. Prepare a various inorganic complexes and determine its % purity. CO-3. To study binary mixture with removal of borate and phosphate. CO-4. To understand the chromatographic techniques

CH-349 Organic Chemistry Practical‟s	CO-1. Perform the Binary mixtures. CO-2. Preparation of organic compounds, their purifications and run TLC. CO-3. Determination of physical constant: Melting point, Boiling point. CO-4. Different separation techniques.

Course - M. Sc Organic Chemistry

Program Outcomes	After successful completion of two year degree program in chemistry a student should be able to;
Program Outcomes	PO-1. Determine molecular structure by using UV, IR and NMR. PO-2. Study of medicinal chemistry for lead compound. PO-3. Improve the Skill of student in organic research area. PO-4. Synthesis of Natural products and drugs by using proper mechanisms. PO-5. Study of Asymmetric synthesis. PO-6. Determine the aromaticity of different compounds. PO-7. Solve the reaction mechanisms and assign the final product.
Program Specific Outcomes	PSO-1. Know the structure and bonding in molecules/ ions and predict the Structure of molecule/ions. PSO-2. Understand the various type of aliphatic, aromatic, nucleophilic substitution reaction. PSO-3. Understand and apply principles of Organic Chemistry for understanding the scientific phenomenon in Reaction mechanisms. PSO-4. Learn the Familiar name reactions and their reaction mechanisms. PSO-5. Understand good laboratory practices and safety. PSO-6. Study of organometallic reactions. PSO-7. Study of free radical, bycyclic compound, conjugate addition of Enolates and pericyclic reactions. PSO-8. Study of biological mechanisms using amino acids.
Course Outcomes M. Sc Organic Chemistry **Semester-I**	
Course	**Outcomes** After completion of these courses students should be able to;

CCTP-1: CHP-110, Physical Chemistry- I	CO-1. Realize the terms ionic strength, activity coefficient, DHO equation. CO-2. Know the Eigen function, Eigen value, operator and postulates of quantum mechanics. CO-3. Learn two and three dimensional box, mechanics of particle. CO-4. Understand the adsorption of gases by solid type of isotherms CO-5. Recognized the Fricke and cerricsulphate Dosimeter. CO-6. Learn parent-daughter relationship, application of radioactivity, NAA, IDA. Effect of radiation and units of radiation.
CCTP-2: CHI-130 Inorganic Chemistry- I	CO-1. Student should visualize/ imagine molecules in 3dimensions. CO-2. To understand the concept of symmetry and able to pass various symmetry elements through the molecule. CO-3. Understand the concept and point group and apply it to molecules. CO-4. To understand product of symmetry operations. CO-5. Student should understand the detail chemistry of S and P block elements w.r.t. their compounds, their reactions and applications. CO-6. To learn the advance chemistry of boranes, fullerene, zeolites, polymers etc. CO-7. Organometallic chemistry of some important elements from the main groups and their applications.

CCTP-3 CHO-150 **Organic Chemistry-I**	CO-1. To understand some fundamental aspects of organic chemistry, to learn the concept aromaticity, to understand the various types of aromaticity CO-2. To study heterocyclic compound containing one and two hetero atoms with their structure, synthesis and reactions. CO-3. To know stereochemistry of organic compounds; able to do inter conversion of Fischer to Newmann, Newmann to Sawhorse and vice versa, Able to assign R and S to given molecules; understand stereoselective and stereospecific reactions; acquire knowledge on topicity. CO-4. To study structure, formation, stability and related name reaction of intermediates like Carbocation, Carbanion, Free Radical, Carbenes and nitrenes; Recognize neighboring group participation CO-5. To study rearrangement reaction with specific mechanism and migratory aptitude of different groups. CO-6. To study Ylides and their reaction. CO-7.Tounderstandsthebasisofredoxreaction;acquireknowledgeabout the reagents which causes selective oxidation / reduction in various compounds; learn the basic mechanism of oxidation/reduction in organic compounds.
CBOP-1 CHG-190 **General Chemistry-I and General Chemistry Practical**	CO-1. Bonding in solids – band theory. CO-2. Electronic conductivity CO-3. Semiconductors, photoconductivity CO-4. Non-stoichiometry, defects and types of defects in solids CO-5. Ionic conductivity and their applications CO-6. Superconductivity and theory of superconductivity
CCPP-1 CHP-107 **Basic Practical Chemistry-I**	CO-1. Calculate molar and normal solution of various concentrations. CO-2. Determine specific rotations and percentage of to optically active substances by polorimetrically. CO-3. Study the energy of activation and second order reaction. CO-4. Study the stability of complex ion and stranded free energy change and equilibrium constant by potentiometry. CO-5. Find out the acidity, Basicity and PKa Value on pH meter.

Semester-II	
CCTP-4 CHP-210 **Physical Chemistry - II**	CO-1. Learn the thermodynamic description of exact, inexact differential and state function. CO-2. Know the qualitative properties of solution, the depression in freezing point, elevation in boiling point and osmotic pressure. CO-3. Know the statistical thermodynamics and various partition functions. CO-4. Study the steady state approximation michaelis- menten mechanism, lindemann-hinshelwood mechanism, chain reaction, Rate determining stapes and consecutive elementary reactions. CO-5. Learn the molecular spectroscopy, R.Raman, Electronic and Mossbauer and its application.
CCTP-5 CHI-230 **Inorganic Chemistry - II**	CO-1. Understand the mechanism in transition metal complexes, Born Haber cycle to calculate lattices energy. CO-2. Learn the use of catalyst, radius ratio rule of coordination number 3, 4. CO-3. Study the structure of atom, Hunds rule, term symbol, calculation of microstate and selection rule. CO-4. Understand the metal complexes in biological system.
CCTP-6:CHO – 250, Organic Chemistry-II	CO-1. MOT and will be able to extend this in predicting reaction mechanism and stereochemistry of electrocyclic reactions. CO-2. The concepts in free radical reactions, mechanism and the stereo chemical outcomes. CO-3. The basic principle of spectroscopic methods and their applications in structure elucidation of organic compounds using given spectroscopic data or spectra.
CBOP-2 CHG-290 General Chemistry-II	CO-1. Valence electron count, back bonding in organometallics, spectral characterization of organometallic compounds. CO-2. Catalytic reaction involving organometallic compounds and mechanism of these reactions CO-3. Types of reaction involving organometallic compounds CO-4. Types of reactions in coordination compounds, inert and labile complexes, substitution reactions in coordination complexes and their mechanism, stereochemistry of reaction, kinetics of reactions.

	CO-5. Learn distillation, solvent extraction, crystallization, and other Separation techniques.
CCPP-2 CHP-227 Basic Practical Chemistry-II	CO-1. Students are trained to different purification techniques in organic chemistry like recrystallization, distillation, steam distillation and extraction. CO-2. Students are made aware of safety techniques and handling of chemicals. CO-3. Students are made aware of carrying out different types of reactions and their workup methods. CO-4. This practical course is designed to make student aware of green chemistry and role of green chemistry in pollution reduction
Semester-III	
CHO-350 Organic reaction mechanism	CO-1. Study of carbanion-formation, stability and related name reaction, enemies and its applications. CO-2. Understand the NGP. CO-3. Learn the carbines and nitrenes. CO-4. Study of free radicals: generation of radicals, Nucleophilic electrophilic radicals, inter and intra molecular C-C bond formation via mercuric hydride. CO-5. Study of oxidative coupling and SNAr reaction.
CHO-351 Spectroscopic methods in structure determination.	CO-1. Study ^{1}H NMR Spectroscopy: Chemical Shift, deshielding, correlation for protons bonded to carbon and other nuclei. CO-2. Study of ^{13}C NMR spectroscopy: FT- NMR, type of ^{13}C NMR spectra, proton decoupled , off resonance, APT, INEPT, DEPT, Chemical shift, nuclear and hetero nuclear coupling constant CO-3. 2D NMR techniques: COSY, homo and hetero nuclear 2D resorts spectroscopy, NOESY and the applications. CO-4. Study of mass spectrometry: Instrumentation, various methods of ionization, SIMS, FAB, MALDI. Different detectors rules of fragmentations of different functional groups.

CHO-352 Organic stereochemistry	CO-1. Study of stereochemistry of six member ring. CO-2. Learn the stereochemistry of rings other than six members. CO-3. Understand fused bridge and Caged rings. CO-4. Learn resolution of racemic modification, stereochemistry of organic compound using NMR. CO-5. Determine geometrical isomerism and stereochemistry of olefins.
CHO-353 Photochemistry, Pericyclic reaction and heterocyclic chemistry.	CO-1. Study of photochemistry: Carbonyl compounds, alkenes, dienes, polyenes and aromatic compounds. CO-2. Study photo rearrangement Barton reaction, application of photochemical reaction. CO-3. Learn Pericyclic reaction: Electro cyclic, Cycloaddition, and Ene Reaction, analysis by correlation diagram, FMO approach and ATS concept. CO-4. Study of heterocyclic chemistry: Five and six member heterocyclic with one or two hetero atoms. CO-5. Understand condensed five and six member's heterocyclic. CO-6. Study the synthesis, reactivity, aromatic character and importance of heterocyclic compounds.
Semester-IV	
CHO-450 Chemistry of natural product	CO-1. Study structure and stereochemistry of hardwickiic acid, camptothecin and podothyllotoxin. CO-2. Study the synthesis of taxol, estorne and mefepristone, fredericamycin A.CO-3. Learn biogenesis terpenoides, alkaloids and shikimmte pathway.
CHO-451	CO-1.Study of transition metal complexes in organic synthesis.
Advance synthetic organic chemistry.	CO-2. Learn C=C formation reaction, multi compound reaction, ring formation reaction. CO-3. Study of sharplessazides Cycloaddition, use of boron and silicon in organic synthesis.

CHO-452 Carbohydrate and chiral approach, chiral drugs and medicinal chemistry.	CO-1. Study of carbohydrates: Introduction of sugar, structure of triose tetrosa, panctose, hexoes, stereochemistry of glucose. CO-2. Understand the chiral approach, concept of chiral templates, and utilization of the basic concept for reterosynthetic strategy. CO-3. Study of chiral drug. CO-4. Learn medicinal chemistry, the action and discovery. CO-5. Study the structure activity and drug targets. CO-6. Study of antimicrobial drugs, antibacterial, antifungal, antiviral, antimalerial etc.
CHO-453 Designingorganic synthesis and asymmetric synthesis.	CO-1. Study the design of organic synthesis, protection deprotation of hydroxyl, amino carboxyl, ketones and aldehyde. CO-2. Learn retrosynthesis. CO-3. Understand the principle and application of asymmetric synthesis. CO-4. Study of cram‟s rule, felkin-Anh rule, Cram‟s chelate model asymmetric synthesis using chiral reagent.
CH-O-347 Single stage Preperation	CO-1. Spectral analysis best on instrumental techniques. CO-2. Preparation of organic compounds, their purifications and run TLC. CO-3. Determination of physical constant: Melting point, Boiling point. CO-4. Different separation techniques.
CH-O-447 Two stage preparation	CO-1. Spectral analysis best on instrumental techniques CO-2. Preparation of organic compounds, their purifications and run TLC. CO-3. Determination of physical constant: Melting point, Boiling point. CO-4. Different separation techniques.
CH-O-448 Single stage preparations by	CO-1. Spectral analysis best on instrumental techniques. CO-2. Preparation of organic compounds, their purifications and run TLC. CO-3. Determination of physical constant: Melting point, Boiling point.
Green synthesis.	CO-4. Different separation techniques.

Program Outcomes: M. Sc Analytical Chemistry

Department of Chemistry	After successful completion of two year degree Program in chemistry a student should be able to;

Program Outcomes	PO-1.Demonstrate, solve and an understanding of major concepts in all disciplines of Chemistry. PO-2. Solve the problem and also think methodically, independently and draw a logical conclusion. PO-3. Create an awareness of the impact of chemistry on the society, and development outside the scientific community. PO-4. Become professionally trained in the area of Industry, material science, lasers and Nano-Technology. PO-5. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of Chemistry experiments. PO-6. To inculcate the scientific temperament in the students and outside the scientific community. PO-7. Apply modern methods of analysis to chemical systems in a laboratory setting.
Program Specific Outcomes	PSO-1. Learn about the potential uses of analytical industrial chemistry. PSO-2. Carry out experiments in the area of organic analysis, estimation, separation, derivation process, conduct metric and potentiometric analysis. PSO-3. Learn the classical status of thermodynamics. PSO-4. Gathers attention about the physical aspects of atomic structure, various energy transformation, molecular assembly in nanolevel and significance of electrochemistry. PSO-5. Understand good laboratory practices and safety. PSO-6. Introduce advanced techniques and ideas required in developing area of Chemistry. PSO-7. Make aware and handle the sophisticated instruments/equipments. PSO-8. Enhance students‟ ability to develop mathematical models for Physical systems.

Course Outcomes M. Sc Analytical Chemistry **Semester-I**	
Course	**Outcomes** After completion of these courses students should be able to;

CCTP-1: CHP-110, Physical Chemistry-I	CO-1. Realize the terms ionic strength, activity coefficient, DHO equation. CO-2. Know the Eigen function, Eigen value, operator and postulates of quantum mechanics. CO-3. Learn two and three dimensional box, mechanics of particle. CO-4. Understand the adsorption of gases by solid type of isotherms CO-5. Recognized the Fricke and cerricsulphate Dosimeter. CO-6. Learn parent-daughter relationship, application of radioactivity, NAA, IDA. Effect of radiation and units of radiation.
CCTP-2: CHI-130 Inorganic Chemistry-I	CO-1. Student should visualize/ imagine molecules in 3 dimensions. CO-2. To understand the concept of symmetry and able to pass various symmetry elements through the molecule. CO-3. Understand the concept and point group and apply it to molecules. CO-4. To understand product of symmetry operations. CO-5. Student should understand the detail chemistry of S and P block elements w.r.t. their compounds, their reactions and applications. CO-6. To learn the advance chemistry of boranes, fullerene, zeolites, polymersetc. CO-7.Organometallicchemistryofsomeimportantelementsfromthemain groups and their applications.

CCTP-3 CHO-150 Organic Chemistry-I	CO-1. To understand some fundamental aspects of organic chemistry, to learn the concept aromaticity, to understand the various types of aromaticity CO-2. To study heterocyclic compound containing one and two hetero atoms with their structure, synthesis and reactions. CO-3. To know stereochemistry of organic compounds; able to do interconversion of Fischer to Newmann, Newmann to Sawhorse and vice versa, Able to assign R and S to given molecules; understand stereoselective and stereospecific reactions; acquire knowledge on topicity. CO-4.To study structure, formation, stability and related name reaction of intermediates like Carbocation, Carbanion, Free Radical,Carbenes and nitrenes; Recognize neighboring group participation CO-5. To study rearrangement reaction with specific mechanism and migratory aptitude of different groups. CO-6. To study Ylides and their reaction. CO-7. To understands the basis of redox reaction; acquire knowledge about the reagents which causes selective oxidation / reduction in various compounds; learn the basic mechanism of oxidation / reduction in organic compounds.
CBOP-1 CHG-190 General Chemistry-I and General Chemistry Practical	CO-1. Bonding in solids – band theory CO-2. Electronic conductivity CO-3. Semiconductors, photoconductivity CO-4. Non-stoichiometry, defects and types of defects in solids CO-5. Ionic conductivity and their applications CO-6. Superconductivity and theory of superconductivity.
CCPP-1 CHP-107 Basic Practical Chemistry-I	CO-1. Calculate molar and normal solution of various concentrations. CO-2. Determine specific rotations and percentage of to optically active substances by polorimetrically. CO-3. Study the energy of activation and second order reaction. CO-4. Study the stability of complex ion and stranded free energy change and equilibrium constant by potentiometry. CO-5. Find out the acidity, Basicity and PKa Value on pH meter.

Semester-II	
CCTP-4 CHP-210 **Physical Chemistry - II**	CO-1. Learn the thermodynamic description of exact, inexact differential and state function. CO-2. Know the qualitative properties of solution, the depression in freezing point, elevation in boiling point and osmotic pressure. CO-3. Know the statistical thermodynamics and various partition functions. CO-4. Study the steady state approximation michaelis- menten mechanism, lindemann-hinshel wood mechanism, chain reaction, Rate determining stapes and consecutive elementary reactions. CO-5. Learn the molecular spectroscopy, R.Raman, Electronic and Mossbauer and its application.
CCTP-5 CHI-230 Inorganic Chemistry - II	CO-1. Understand the mechanism in transition metal complexes, Born Haber cycle to calculate lattices energy. CO-2. Learn the use of catalyst, radius ratio rule of coordination number 3, 4. CO-3. Study the structure of atom, Hunds rule, term symbol, calculation of microstate and selection rule. CO-4. Understand the metal complexes in biological system.
CCTP-6:CHO – 250, Organic Chemistry- II	CO-1. MOT and will be able to extend this in predicting reaction mechanism and stereochemistry of electrocyclic reactions. CO-2. The concepts in free radical reactions, mechanism and the stereo chemical outcomes. CO-3. The basic principle of spectroscopic methods and their applications in structure elucidation of organic compounds using given spectroscopic data or spectra.
CBOP-2 CHG-290 General Chemistry-II	CO-1. Valence electron count, back bonding in organometallics, spectral characterization of organometallic compounds. CO-2. Catalytic reaction involving organometallic compounds and mechanism of these reactions CO-3. Types of reaction involving organometallic compounds CO-4. Types of reactions in coordination compounds, inert and labile complexes, substitution reactions in coordination complexes and their mechanism, stereochemistry of reaction, kinetics of reactions.

	CO-5. Learn distillation, solvent extraction, crystallization, and other Separation techniques.
CCPP-2 CHP-227 Basic Practical Chemistry-II	CO-1. Students are trained to different purification techniques in organic chemistry like recrystallization, distillation, steam distillation and extraction. CO-2. Students are made aware of safety techniques and handling of chemicals. CO-3. Students are made aware of carrying out different types of reactions and their workupmethods. CO-4. This practical course is designed to make student aware of green chemistry and role of green chemistry in pollution reduction
Semester-III	
CHA-390 Electro analytical and radio analytical methods of analysis.	CO-1. Study of colorimeter, Faraday 1st law, Faraday 2nd law. CO-2. Study of voltametry and paleographic method of analysis, CO-3. Heterodynamic voltametry, plus paleography and cyclic voltametry. CO-4. Study of ampherometry and their applications. CO-5. Learn radio analytical methods of analysis, activation analysis, isotope dilution analysis, radio metric titration.
	CO-5. Understand thermal methods of analysis TGA, DTA, DSC.
CHA-391 Pharmaceutical analysis.	CO-1. Study of apparatus for test and assay, cleaning of glassware, role of FDA in pharmaceutical industry. CO-2. Learn biological test and assay, microbiological test and assay, physical test, determination, limit test sterilization. CO-3. Analysis of vegetable drug, sources of impurities in pharmaceutical row materials and finished products. CO-4. Learn standardization and quality control of different row materials.
CHA-392 Advanced analytical techniques.	CO-1. Study the classical approach for aqueous extraction, solid phase extraction, micro extraction and SFE. CO-2. Learn: AAS, FES, ICPAES, and DCP. CO-3. Study atomic fluorescence, resonant ionization and LASER based enhanced ionization. CO-4. Study of different detectors and their applications.

CHA-380 Geochemical and alloy analysis and analytical method development and validation.	CO-1. To understand assay validation and inter laboratory transfer. CO-2. Study the statistical analysis and analytical figure. CO-3. Learn the analysis of geological materials and alloys. CO-4.Study the analysis of soil, sampling, chemical analysis as a measure of soil fertility
Semester-IV	
CHO-490 Analytical spectroscopy	CO-1. Study of ESCA, Detectors and their applications. CO-2. Learn X-ray method of analysis, numerical problems. CO-3. Understand an introduction to microscopy, its applications. CO-4. Study of chemiluminescences, Fluorescence and phosphorescence. CO-5. Study of NMR spectroscopy.
CHO-491 Analytical methods for analysis of fertilizer detergent, water and polymer,	CO-1. Study of analysis of fertilizer, sampling and sample preparation, kjeldal‟s method. CO-2. Understand the analysis of soap and detergents, UV-spectroscopic analysis of detergent. CO-3. Study of water pollution and analysis of polluted water
paint and pigments.	CO-4. Learn the polymer chemistry, analysis and testing of polymer, measurement of molecular weight and size. CO-5. Understand paint and pigment analysis.
CHA-492 Pollution monitoring and control and analysis of body fluid.	CO-1. Study of pollution monitoring, removal of heavy toxic metals Cr, Hg, Cd, Pb, As. CO-2. Learn the removal of particulate matters, SO_2 And NOx. CO-3. Study the collection of specimen blood, urine, faeces. CO-4. Learn the analysis of blood and urine, Vitamin in body fluid. CO-5. Study the liver function and kidney function test.
CHA-481 Analytical toxicology and food analysis..	CO-1. Study of acute poisoning, clinical toxicology. CO-2. Learn the isolation, identification and determination of narcotics, stimulants and depressants. CO-3. Study the classification function, analysis of carbohydrate, Protein, lipid. CO-4. Study the food preservatives, identification determination, and composition.

CH-A-387 Analysis of materials	CO-1. Study the gravimetric and volumetric analysis of ores and alloy CO-2. Prepare a various inorganic complexes and determine its % purity. CO-3. Preparation of nonmaterial. CO-4. To understand the chromatographic techniques. CO-5. Estimation of Iron By Various methods.
CH-A-487 Instrumental Analysis.	CO-1. Spectral analysis best on instrumental techniques CO-2. Photometric determination. CO-3. Study of Conductometer, FES, Polarography. CO-4. Analysis of riboflavin byphotoflurometry. CO-5. To Study the spectroscopic techniques. CO-6. To study the terbidometryandNeflometry.
CH-A-488 Single stage preparations by Green synthesis.	CO-1. Study the dissolution of tablet. CO-2. Learn the spectroscopic techniques. CO-3.Study Volumetric and gravimetric estimation. CO-4. Analysis of Quinine sulphate by photoflurometry. CO-5. Study of folin Wu method.

Department of Mathematics

Course outcomes F.Y.B.Sc. (Mathematics)Semester -I	
course	**outcomes**
MT-111 Algebra	CO-1 student will able to develop logical thinking CO-2 To understand number system CO-3 The students gain confidence in problem solving
MT-112 Calculus I	CO-1 Students will built foundation of Analysis CO-2 They will develop applied skills CO-3 Students will motivate towards research
MT-113 Practical	CO-1 Students will create interest In maxima software CO-2 To understand computations CO-3 They will understand practical approach of mathematics

Course outcomes F.Y.B.Sc.(Mathematics)Semester -II	
course	**outcomes**
MT-211 Geometry	CO-1 Students will develop their imagination CO-2 They will create interest in History of Mathematics CO-3 To gain confidence in problem solving
MT-212 Calculus II	CO-1 They will develop maturity in future courses CO-2 Students will able to gain confidence in problem solving CO-3 To develop theoretical skills
MT-213 Practical	CO-1 Students will create interest In maxima software CO-2 To understand computations CO-3 They will understand practical approach of mathematics

Course outcomes S.Y.B.Sc (Mathematics) Semester -I	
course	outcomes
MT-211 Multivariable calculus I	CO-1 Students will develop mathematical maturity CO-2 To develop computation skills CO-3 Develop mathematical analysis thinking
MT-212(A) Discrete mathematics	CO-1 To develop logic thinking CO-2 Students will able to command over counting CO-3 They will create interest in computer science
MT-213 Practical	CO-1 Students will create interest In maxima software CO-2 To understand computations CO-3 They will understand practical approach of mathematics

Course outcomes S.Y.B.Sc. (Mathematics)Semester -II	
course	outcomes
MT-221 Linear Algebra	CO-1 Students will deep into multidimensional spaces CO-2 They will understand interdisciplinary concept CO-3 Students will develop problem solving skills

MT-222(B) Numerical analysis	CO-1 Students will gain confidence in computations CO-2 Create interest in developing software CO- Foundation of Applied mathematics will build
MT-223 Practical	CO-1 Students will create interest In maxima software CO-2 To understand computations CO-3 They will understand practical approach of mathematics

Program Success: After completion of this program students will get various benefits. Their foundation of Mathematics will be very strong. They can develop research interest in future. They can make positive contribution in computer software. Different mathematical software can be handled by them. Due to logical thinking interdisciplinary approach will be created. Students will have confidence in developing new mathematical ideas.

Department of Zoology

Course Outcomes F. Y.B. Sc Zoology	
Semester I Course	**Outcomes** After completion of these courses students should be able to;
Zo-111 Animal Diversity I	CO. 1. The student will be able to understand classify and identify the diversity of Protozoa, Porifera. Cnidaria and Platyheminthes animals. CO 2. The student understands the importance of classification of animals and classifies them effectively using the six levels of classification. CO 3. The student understands the type study of *Paramoecium.* CO 4. The student knows his role in nature as a protector, preserver and promoter of life which he has achieved by learning, observing and understanding life.
ZY-112 Animal Ecology	CO 1. The learners will be able to identify and critically evaluate their own beliefs, values and actions in relation to professional and societal standards of ethics and its impact on ecosystem and biosphere due to the dynamics in population.

	CO 2. To understand anticipate, analyze and evaluate natural resource issues and act on a lifestyle that conserves nature. CO 3. The Learner understands and appreciates the diversity of ecosystems and applies beyond the syllabi to understand the local lifestyle and problems of the community. CO 4. The learner will be able to link the intricacies of food chains, food webs and link it with human life for its betterment and for non-exploitation of the biotic and abiotic components. Co 5. The working in nature to save environment will help development of leadership skills to promote betterment of environment.
ZY 113 Zoology Practicals	The learner will be able to CO1. First-hand knowledge about identification of non-chordate specimens (Preserved). CO2. Students are able to Understands types of spicules in sponges. CO3.- Understands Identification of museum specimen with help of taxonomic identification key. CO4. Understands Identification of museum specimen with help of taxonomic identification key. CO5- Visit to Zoological survey of India/ Museum/National Park. CO 6. Estimation of Dissolved oxygen/alkalinity/carbon dioxide from given water sample. CO 7 Estimation of water holding capacity of given soil sample. CO 8. Study of animal community structure by quadrate method (Field or Simulation). CO 9. Determination of density, frequency and abundance of species by quadrat method. CO 10 . Study of microscopic fauna of freshwater ecosystem (from pond). CO 11. Study of Eutrophication in lake/river.

Semester II **ZO 121Animal Diversity –II**	CO 1. The student will be able to understand classify and identify the diversity of Aschelminthes, Annelida, Mollusca, Arthropoda and Echinodermata . CO 2. The student understands the type study of Star fish. CO 3. The student knows his role in nature as a protector, preserver and promoter of life which he has achieved by learning, observing and understanding life.
ZO 122 Cell biology	CO 1. The learner will understand the importance of cell as a structural and functional unit of life. CO 2. The learner understands and compares between the prokaryotic and eukaryotic system and extrapolates the life to the aspect of development. CO 3. The dynamism of bio membranes indicates the dynamism of life. Its working mechanism and precision are responsible for our performance in life. CO 4. The cellular mechanisms and its functioning depend on endo-membranes and structures. They are best studied with microscopy.
ZO 123 **Zoology Practicals**	CO-1. Students are able to handle microscopes. CO-2. First-hand knowledge about identification of non-chordate and specimens (Preserved). CO-3. Students are able to identify the mouth parts of insects. CO-4. Students are able to study Preparation of temporary mount of human buccal epithelial cells and mitosis. CO-5. Field visits to vermicomposting unit/ field for insect pest collection and its identification

Course Outcomes S.Y. B. Sc Zoology **Semester-I**	
ZY-211 Animal Systematics and Diversity III	CO1- Knowledge of classification of class Reptilia, Aves and mammals with examples. CO2- Understanding of Bird adaptation and migration, Desert adaptations in animals. CO3-Knowledge of classification of Aquatic Mammals, Egg laying mammals with examples. CO4. Knowledge of type study of starfish
ZY-212 **Applied Zoology I**	CO1. Understands concepts of fisheries, fishing tools and site selection CO2. Aqua culture systems, induced breeding techniques, post harvesting techniques CO3. Understanding of fishes habits and habitats and culture practices. CO4. Understands concepts of Agricultural pest and their control methods. CO5. Students gain the knowledge of plant protection appliances. CO6.Understanding of concept of Integrated Pest Management, Health Hazards and antidotes.
Semester-II	
ZY-221 Animal Systematics and Diversity IV	CO1. Knowledge of classification of Phylum Arthropoda, Mollusca and Echinodermata with examples. CO2. Knowledge of torsion and detorsion process in Mollusca, Larval forms of Crustacea, Mollusca and Echinodermata. CO3. Knowledge of type study of *Scoliodon*.
ZY-222 **Applied Zoology II**	CO1. Gives knowledge of Apiculture, Bee bahaviour and Communication. CO2 Study of Pests, diseases and byproducts of Honey bees. CO3. Gives knowledge of silk worm rearing, Mulberry cultivation, Pests and diseases associated with silk worm.

	CO4. Knowledge of Various process involved in silk production (cocoons, defective cocoons, Reeling, Rereling polishing of silk). CO5. It is an agro based cottage industry in India that enables them to get self-employment.
ZY-223 **Zoology Practicals**	CO1. First-hand knowledge about identification of non-chordate and chordate specimen (Preserved). CO2. Students are able to Understands economic importance of fishes, life cycle of Honey Bee and silkworm. CO3.-Students are able to distinguish Poisonous and nonpoisonous snakes. CO4. Understands Identification, nature of damage, life cycle and control practices of insect pest. CO5-Students gain knowledge about various rearing instruments used in apiculture, sericulture and fishing equipments. CO6-Field visits to various ecological areas like sea- shore/ National parks/ research Institute/ Fish farm etc. allowed students to prepare reports on them.

Department of Botany

Program Outcomes

Knowledge outcomes:

After completing B.Sc. Botany Program, students will be able to:

PO1: Demonstrate and apply the fundamental knowledge of the basic principles of major fields of botany;

PO2: Apply knowledge to solve the issues related to plant sciences with the help of computer technology

PO3: Apply knowledge for conservation of endemic and endangered plant species

Skill outcomes:

After completing B.Sc. Botany Program students will be able to:

PO4: collaborate effectively on team-oriented projects in the field of life sciences.

PO5: communicate scientific information in a clear and concise manner both orally and in writing

PO6: explain Biodiversity, climate change and plant pathology, play key role in the conservation of plants using knowledge of Taxonomy.

PO7: apply Biotechnology, Ecology, Horticulture, Genetics and Plant breeding techniques in plant sciences

PO8: apply knowledge of Medicinal and Economic botany in day to day life.

PO9: apply the knowledge to develop sustainable and eco-friendly technology in utilization of plant resources.

Generic outcomes:

After completing B.Sc. Botany Program students will be able to:

PO10: Have developed their critical reasoning, judgment and communication skills.

PO11: Augment the recent developments in the field of Molecular and cell Biology, Biotechnology, Computational Botany and relevant fields of research and development.

PO12: Enhance the scientific temper among the students and to develop a research culture and Implementation the policies to tackle the burning issues at global and local level.

Program Specific Outcomes -

PSO1: Students get acquainted with techniques which are used in industrially and commercially important plant products.

PSO2: Students get conceptual knowledge of entrepreneurships in mushroom cultivation, Biofertilizers and Biopesticides production, plant tissue culture laboratories, Enzyme production, Fermentation, Single cell proteins etc.

PSO3: Understand the diversity of plants and structural organization of plants like monocots and Dicots.

PSO4: Understand plant structures in the context of physiological and biochemical functions of plants.

PSO5: Students will be well versed with various mechanisms of GMOs and molecular techniques.

Course Outcomes -

Class: F. Y. B.Sc. Botany

Semester-I:

Paper-I: BO-111: Plant life and Utilization - I

After successfully completing this course, students will be able to:

CO 1:Understand broad spectrum of plant diversity.

CO 2:Get knowledge ofalgae, fungi, lichens and bryophytes with respect to introduction, classification, life cycle and utilization.

Paper-II: BO-112: Plant Morphology and Anatomy

CO 1: Study morphology of vegetative and reproductive parts of plants.

CO 2: Will get knowledge of anatomy of Monocot and dicot plants.

CO 3: Explain types of plant tissues.

CO 4: Identify wood and authenticate the pharmacognostic characteristics of plant drugs.

Paper III:BO 113: Practicals based on BO 111 and BO 112.

After successfully completing this course, students will be able to:

CO 1: Study the life cycle of *Spirogyra, Agaricus, Riccia* and forms of lichens.

CO 2: Study the technique of Mushroom cultivation.

CO 3: Study the reproductive morphology with respect to inflorescence, flower and fruits.

CO 4: Study the internal structure of dicot and monocot root, stem and leaf.

SEMESTER-II:

Paper-I: BO-121: PLANT LIFE AND UTILIZATION-II

CO 1:Understand broad spectrum of Phanerogams.

CO 2:Get knowledge ofPteridophytes, gymnosperms and angiosperms with respect to introduction, classification, life cycle and utilization.

Paper-II: BO-122: PRINCIPLES OF PLANT SCIENCE

CO 1:Study the important physiological concepts and phenomena viz. Diffusion, Osmosis, Plasmolysis and plant growth.

CO 2:Study structure of prokaryotic and eukaryotic cell with reference to cell organelles viz. cell wall, chloroplast, chromosomes, RNA, DNA.

CO 3:Study cell cycle with reference to mitosis and meiosis.

CO 4:Study molecular biology with reference to terminology and concepts.

PAPER-III:BO 123: PRACTICALS BASED ON BO 121 & BO 122

After successfully completing this course, students will be able to:

CO 1: Study the life cycle of *Nephrolepis and Cycas*

CO 2: Knowledge of Natural Classification System of plants.

CO 3: Study the external morphological characters, utilization and economic importance of angiosperms.

CO 4: To observe characteristic features of prokaryotic and eukaryotic plant cell.

CO 5: Study of technique of preparation of nuclear stains and cell division stages of mitosis and meiosis.

CO 6: Estimation of chlorophyll-a and chlorophyll-b.

CO 7: Study of Plasmolysis and DPD

Course Outcomes -

Class: S. Y. B.Sc. Botany -

Semester-I:

BO 211: Taxonomy of Angiosperms and plant community -

After successfully completing this course, students will be able to:

CO1: Define plant taxonomy and taxonomy related terminologies.

CO2: Explain classification systems of angiosperms.

CO3: Use required data sources for classification of angiosperms.

CO4: Determine Botanical Nomenclature of angiosperms.

CO5: Recognize ecological plant groups with examples.

CO6: Explain plant families with examples.

CO7: Apply herbarium methods - collecting, mounting, and keeping records.

CO8: Execute computer knowledge in plant taxonomy and digital herbarium.

BO 212: Plant Physiology -

After successfully completing this course, students will be able to:

CO1: Define the terminologies: Plant water relations, Growth, Transpiration, Ascent of Sap, Plant growth regulators and Nitrogen metabolism.

CO2: Explain processes of mineral nutrition, absorption of water, ascent of sap, mechanisms of water loss from plants.

CO3: Demonstrate processes imbibition, Osmosis, Diffusion and Plasmolysis, measure growth by arc auxanometer.

CO4: Explain mechanisms, classification of plants based on type of photoperiodism and applications of photoperiodism

CO5: Explain Mechanism of vernalisation.

Semester-II:

BO 221: Plant Anatomy and Embryology -

After successfully completing this course, students will be able to:

CO1: Define terms related to plant Anatomy and Embryology.

CO2: Describe various tissue systems in plants.

CO3: Interpret the Principles involved in distribution of mechanical tissues.

CO4: Explain the process of normal and abnormal secondary growth in plants.

CO5: Understand the process of pollination and fertilization.

CO7: Discuss the Structure and process of development of male and female gametophyte.

CO8: Illustrate the types of microspore, ovules, embryo, seed and endosperm.

BO 222: Plant Biotechnology -

After successfully completing this course, students will be able to:

CO1: Define the terminologies related to plant biotechnology.

CO2: Describe the fermentation process.

CO3: Explain enzyme technology and its industrial production.

CO4: Understand the production of single cell proteins.

CO5: Illustrate the concept of phytoremediation.

CO6: Describe method of gene isolation from the plants and itsapplication.

CO7: Explain methods of gene transfer in plants.

CO8: Illustrate application of plant genetic engineering and nano-biotechnology in crop improvement.

Paper III: Practical -

After successfully completing this course, students will be able to:

CO1: Define the botanical terms to identify the plant families.

CO2: Identify the plant families.

CO3: Draw the floral diagram of plants belonging to specific families.

CO4: Demonstrate physiological experiments, fermentation and fermentation products.

CO5: Calculate water holding capacity, pH, plasmolysis, DPD, rate of transpiration.

CO6: Describe internal structure of plant organs.

CO7: Demonstrate the Electrophoresis and its use.

Course Outcomes -

Class :T. Y. B. Sc. Botany

Semester III -

BO 331: Cryptogamic Botany -

After successfully completing this course, students will be able to:

CO1: Define higher and lower cryptogams.

CO2: Identify the vegetative and reproductive structures in algae, fungi, bryophytes and pteridophytes.

CO3: Describe the Internal structure of thallus of the cryptogams.

CO4: Study life cycle of various fungal, algal, bryophyte and pteridophyte forms.

CO5: Classify algae, fungi,bryophyte and Pteridophytesupto their class level.

BO 332: Cell and Molecular Biology -

After successfully completing this course, students will be able to:

CO1: Understand terminologies and concepts of cell and molecular biology.

CO2: Identify localization and describe cell organelles in plant cell.

CO3: Discuss the dynamics of plant cell structure and function.

CO4: Describe Nucleus and chromosomes.

CO5: Describe DNA replication, Transcription and Translation.

CO6: Explain process and mechanisms of DNA damage and repair.

CO7: Explain structure, gene action and regulation of lac-operon.

CO8: Interpret genomic organization and its role in gene expression.

BO 333: Genetics and Evolution -

After successfully completing this course, students will be able to:

CO1: Define the terminologies of Genetics and evolution

CO2: Describe the concept of mendelism.

CO3: Discuss the interactions of genes.

CO4: Explain the concept, characters and examples of multiple alleles.

CO5: Describe the euploidy, aneuploidy and structural chromosomal aberrations.

CO6: Explain the process of Evolution and evolution theories.

CO7: Describe the sex linked inheritance, sex limited and sex influenced inheritance.

CO8: Determine Linkage, Crossing over and construction of linkage map.

BO 334: Spermatophyta and Palaeobotany -

After successfully completing this course, students will be able to:

CO1: Study general characters of gymnosperms and angiosperms.

CO2: Study morphology and anatomy of *Pinus* and *Gnetum*.

CO3: Classify different theories of origin of angiosperms.

CO4: Define fossil and fossil groups.

CO5:Study systems of classification of plants.

CO6: Study plant families according to Bentham and Hooker’s system of classification.

BO 335: Horticulture and Floriculture -

After successfully completing this course, students will be able to:

CO1: Define branches and understand scope of horticulture.

CO2: Explain economic importance of horticultural crops.

CO3: Discuss history of ornamental horticulture.

CO4: Explain special practices in horticulture and methods of plant propagation.

CO5: Demonstrate fruits and vegetables production technology.

CO6: Summarize techniques of making dry flowers and their preservation methods.

BO 336: Computational Botany -

After successfully completing this course, students will be able to:

CO1: Definition, scope and applications ofbiostatistics.

CO2: Collection and methods of representation of statistical data.

CO3: Apply measures of central tendency and dispersion of grouped and ungrouped data.

CO4: Definition and types of correlation and regression analysis.

CO5: Understand concept and types of probability distribution.

CO6: Computation tests of significance of mean.

CO3: Computation of seed testing and plant growth indices.

CO6: Analyze the data of vegetation studies.

Semester IV-

BO 341: Plant Physiology and Biochemistry -

After successfully completing this course, students will be able to:

CO1: Define the terms and concepts in plant physiology and biochemistry.

CO2: Explain of physiological processes like photosynthesis, respiration, translocation and stress physiology.

CO3: Define, classification, Properties, functions and synthesis of

Carbohydrates, lipids, amino acids and proteins.

CO4: Study nature of enzymes, active site, Classification and properties of enzymes, co-enzymes, Mechanism of enzyme action,Factors affecting enzyme activity, Enzymeinhibitors

CO5: Understand various physiological and metabolic pathways in plants.

CO6: Illustrate metabolic pool and biosynthesis of secondary metabolites.

BO 342: Plant Ecology and Biodiversity -

After successfully completing this course, students will be able to:

CO1: Define ecology, remote sensing, in-situ conservation and ex-situ conservation.

CO2: Summarize the characterization of biodiversity.

CO3: Explain environmental crisis

CO4: Evaluate Environmental Impact Assessment (EIA) and Environmental audit.

CO5: Explain data analysis of remote sensing technique.

CO6: Analyze inventorying and monitoring biodiversity.

CO7: Illustrate social approach to biodiversity conservation

BO 343: Plant pathology -

After successfully completing this course, students will be able to:

CO1: Define terminology related to plant pathology.

CO2: Discuss plant pathogen interaction.

CO3: Discuss economic importance of plant diseases.

CO4: Explain host-parasite interactions, resistance and major signaling pathways.

CO5: Able to categorize the plant diseases on the basis of pathogen.

CO6: Evaluate the disease cycle caused by fungi, bacteria, nematode, viruses.

CO7: Apply control measures for plant diseases.

BO 344: Medicinal and Economic Botany -

After successfully completing this course, students will be able to:

CO1: Define concept and scope of Pharmacognosy and economic botany.

CO2: Explain concept of Ayurvedic Pharmacy.

CO3: Discuss Ayurvedic principles and formulation.

CO4: Recognize drug adulteration, methods of extraction and evaluation.

CO5: Discuss the process of cultivation, collection and processing of herbal drugs.

CO6: Recognize medicinally important drugs.

CO7: Explain principles and scope of ethnic societies.

BO 345: Plant Biotechnology -

After successfully completing this course, students will be able to:

CO1: Define biotechnology, plant tissue culture, bioinformatics, genomics and proteomics.

CO2: Describe Plant Tissue Culture techniques.

CO3: Explain the concept and technique of germplasm and cryopreservation.

CO4: Describe the concept of Transgenic Plants as Bioreactors.

CO5: Explain applications of genomics, proteomics, transgenic plants, bioinformatics, germplasm and cryopreservation.

CO6: Evaluate recombinant therapeutic products.

CO7: Describe mechanism of biological nitrogen fixation.

BO 346: Plant Breeding and Seed Technology -

After successfully completing this course, students will be able to:

CO 1: Define plant breeding, hybridization, seeds, germination testing.

CO 2: Describe conventional techniques, methods and practices of breeding.

CO 3: Discuss mechanisms and genetic bases of resistance, stresses in plants.

CO 4: Analyze procedure of seed certification.

CO 5: Understand mechanisms of seed sampling, storage and packaging.

CO 6: Explain the seed testing and seed marketing.

CO 7: Evaluate plant breeding methods for crop improvement.

CO 8: Understand application of methods of plant breeding.

BO 347: Practical Paper I -

After successfully completing this course, students will be able to:

CO1: Studyalgae, fungi, bryophytes and pteridophytes with respect to systematic position, thallus structure and reproduction.

CO2: Understands cytological techniques as well as plant physiology practicals.

CO3: Perform the techniques related to plant tissue culture.

CO4: Determine DNA, RNA from plant cell.

CO5: Calculate TAN value, protein content, and chlorophyll content.

CO6: Compare bio-fertilizers and study their application.

CO7: Differentiate between transgenic and non-transgenic plants.

BO 348: Practical Paper II -

After successfully completing this course, students will be able to:

CO1: Study the fossil forms.

CO2: Describe the flowering plants in botanical terms.

CO3: Identify the plant families.

CO4: Draw the floral diagram of plants belonging to specific families.

CO5: Demonstrate hybridization techniques, seed sampling equipment's and Chlorophyll mutation.

CO6: Determine the genotypes and phenotypes.

CO7: Calculate gene mapping by three-point test cross.

CO8: Study life cycle of *Gnetum* and *Pinus*.

DEPARTMENT OF COMPUTER SCIENCE

B. Sc. (Computer Science)

Program Outcomes

After successfully completing **B. Sc. (Computer Science)** Program students will be able to:

PO1: Use creativity, critical thinking, and analysis and research skills to solve theoretical and real-world problems in computer science

PO2: Work effectively both individually and as member of team.

PO3: Discuss software development fundamentals, including programming, data structures, algorithms and complexity.

PO4: Illustrate the concepts of systems fundamentals, including architectures and organization, operating systems, networking and communication.

PO5: Gain the knowledge about software engineering fundamentals, including software analysis and design, evaluation and testing, and software engineering processes.

PO6: Communicate effectively for different purposes and in different situations.

PO7: Gain self-discipline in everyday aspects of life and work.

PO8: Describe mathematics fundamentals, including discrete structures, statistics and calculus.

PO9: Illustrate the concepts of Microprocessors and microcontrollers.

PO10: Make use of fundamentals of Application, including information management and **intelligent** applications.

Program Specific Outcomes

After successfully completing **B. Sc. (Computer Science)** Program students will

PSO1: Applyknowledgeofcomputingandmathematicsappropriatetothediscipline PSO2: Develop problem-solving abilities using computer.

PSO3: Design the application using programming languages.

PSO4: Ability to understand the principles and development methodologies of computer systems.

Course Outcomes

F. Y. B. Sc. (Computer Science) Semester I

Course (CS-101): Problem solving using Computer and C-Programming

After successfully completing this course, students will be able to:

CO1: Explore algorithmic approaches to problem solving.

CO2: Develop modular programs using control structures and arrays in 'C'.

Course (CS-102): Database Management Systems

After successfully completing this course, students will be able to:

CO1: Solve real world problems using appropriate set, function, and relation almodels.

CO2: Design E-R Model for given requirements and convert the same into database tables.

CO3: Use SQL.

Course (CS-103) : Practical course on Problem Solving using Computer and 'C' programming and Database Management Systems.

After successfully completing this course, students will be able to:

CO1: Devise pseudo codes and flowchart for computational problems.

CO2: Write, debug and execute simple programs in'C'.

CO3: Create database table's in postgre SQL.

CO4: Write and execute simple, nested queries.

F. Y. B. Sc. (Computer Science) Semester II

Course (CS-201) Advanced 'C' Programming

After successfully completing this course, students will be able to:

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

After successfully completing this course, students will be able to:

CO1: Design E-R Model for given requirements and convert the same into database tables.

CO2: Use database techniques such as SQL &PL/SQL.

CO3: Explain transaction Management in relational database System.

CO4:Use advanced database Programming concepts

Practical Course (CS-203) on Advanced 'C' Programming and Relational Database Management Systems

After successfully completing this course, students will be able to:

CO1: Write, debug and execute programs using advanced features in 'C'.

CO2: To use SQL &PL/SQL.

CO3: To perform advanced database operations.

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

Course (CS-211): Data Structures Using 'C'

After successfully completing this course, students will be able to:

CO1: Discuss fundamental concepts of Data Structure, abstract data type, and algorithm analysis;

CO2: Summarize different searching and sorting techniques using array;

CO3: Describe linear data structure Stack and its application;

CO4: Explain linear data structure Queue and its types (Linear Queue, Circular Queue, and Priority Queue);

CO5: Summarize different types of Linked List (singly linked list, doubly linked list, linear and circular linked list);

CO6: Discuss non-linear data structure Tree using operations like searching, insertion, deletion, and traversing mechanism;

CO7: Explain non-linear data structure Graph using operations like traversing mechanism;

Course (CS-221): Object Oriented Concepts using C++

After successfully completing this course, students will be able to:

CO1: depict the applications and need of Object Oriented Programming language; CO2: Discuss basic concepts of C++ programming language;

CO3: Describe the concepts of classes, objects, member function, constructors and destructor;

CO4: Explain the need of operator overloading, inheritance, polymorphism, and virtual functions;

CO5: Explain managing input- output, and file in C++; CO6: Explain exceptions handling and templates in C++.

Course (CS-223): Data structures Practical and C++ Practical (Lab Course- I)

After successfully completing this course, students will be able to:

CO1: Use different searching and sorting methods for basic data structures programs;

CO2: Solve simple mathematical problems using data structure;

CO3: Implement various data structures viz. Stack, Queues and Linked Lists; CO4:

Implement complex data structures like trees and graphs;

CO5: Demonstrate programs by using basic object oriented concepts in C++; CO6: Apply to overload functions and Operators in C++;

CO7: Illustrate programs by applying the object oriented concepts such as (Inheritance, Virtual Function.)

CO8: Apply of file handling in C++programs.

Course CS-212: Relational Database Management System

After successfully completing this course, students will be able to:

CO1: Recall the integrity constraints on a database using RDBMS;

CO2: Explain the concepts of stored procedures, stored functions, and cursors triggers in PL/PGSQL programming language;

CO3: Explain the concepts of transactions processing, concurrency control and recovery;

CO4: Interpret the concurrency control techniques;

CO5: Describe the concepts of crash recovery;

CO6: Discuss the data security methods for database protection; CO7: Summarize the knowledge about client server architecture.

Course CS-222: Software Engineering

After successfully completing this course, students will be able to:

CO1: Explain the characteristics of system, elements of system, and types of system;

CO2: Discuss software, its application domain and, software engineering principles;

CO3: Describe the activities of system development lifecycle;

CO4: Illustrate different software process models used in practice; CO5: Summarize the requirement engineering tasks;

CO6: Discuss the methods used to build structure analysis model.

Course CS-224: Database Practical's and Mini Project using Software Engineering Techniques (Lab Course- II)

After successfully completing this course, students will be able to:

CO1: Solve the simple and nested queries using PL/PGSQL;

CO2: Demonstrate stored functions, cursors, triggers and views;

CO3: Illustrate queries using loops and conditional statements;

CO4: Use error and exception handling methods;

CO5: Describe the software engineering processes such as gathering data and functional requirements in the software project;

CO6: Apply feasibility study techniques for the software project;

CO7: Discuss the existing system, and explain the proposed system;

CO8: Determine the entities, attributes and draw E-R diagram.

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

Course (CS-331): System Programming and Operating Systems-I

After successfully completing this course, students will be able to:

CO1: Describe the different types of Programming Environment, purpose of editors and types of editors;

CO2: Discuss the data structures of Assembler;

CO3: Explain Data Structures of Macro pre-processor;

CO4: Illustrate the concepts of Interpreter, Compiler Linker and Loader

CO5: Explain types of Debugger and demonstrate how to debug the program;

CO6: Describe the Operating system as system software and types of system calls.

Course (CS-341): System Programming and Operating Systems-II

After successfully completing this course, students will be able to:

CO1: Discuss the operating system structure and issues related to process management;

CO2: contrast the different CPU scheduling algorithms;

CO3: Explain the multithreading models and synchronization techniques;

CO4: Interpret the different strategies of deadlocks;

CO5: Describe the different issues related to memory management;

CO6: Discuss file access methods, directory structure and file allocation methods.

Course (CS-347): System Programming and Operating Systems Practical

After successfully completing this course, students will be able to: CO1: Perform the different Line editor commands;

CO2: Illustrate the SMACO program;

CO3: Demonstrate the concepts of Assembler and Macro;

CO4: Use concept DFA to check particular Language accepts or not; CO5: Illustrate different the shell commands;

CO6: Perform the different CPU scheduling algorithms;

CO7: Demonstrate deadlock avoidance algorithm to find the Safe Sequence;

CO8: Use the different page replacement algorithms to find page fault.

Course (CS-331): Theoretical Computer Science and Compiler Construction – I

After successfully completing this course, students will be able to:

CO1: Explain how to generate formal language & regular expressions;

CO2: Express concepts of finite automata;

CO3: Describe knowledge of regular languages;

CO4: Discuss context free languages & different types of grammar;

CO5: Explain concepts of pushdown automata;

CO6: Summarize concepts of Turing machine.

Course (CS-342): Theoretical Computer Science and Compiler Construction – II

After successfully completing this course, students will be able to:

CO1: Explain phases of compiler & Lexical analyzer;

CO2: Illustrate types of parsers;

CO3: Express use of YACC tool;

CO4: Describe Syntax Directed Definitions & its applications;

CO5: Discuss memory allocation in block structure languages, code optimization& code generation;

Course (CS-333): Computer networks –I

After successfully completing this course, students will be able to: CO1: Define goals and importance of computer networks;

CO2: Demonstrate network infrastructure according to various topologies and network type (LAN. WAN and MAN;

CO3: Describe OSI reference model and TCP/IP model;

CO4: Explain various hardware and software used in network design;

CO5: Discuss various terminologies and protocols used in physical layer;

CO6: Discuss various design issues and various protocols used in data link layer.

Course (CS-343): Computer networks –II

After successfully completing this course, students will be able to:

CO1: Define Wired LAN (Standard Ethernet MAC Layer);

CO2: Discuss standards of IEEE 802.11 architecture and Bluetooth architecture used in Wireless AN;

CO3: Explain IPV4 protocol used in the network layer;

CO4: Explain protocols- ARP, UDP and TCP;

CO5: Discuss WWW architecture, E-mail and HTTP

CO6: Illustrate Cryptography and firewall used in network security.

Course (CS-334): Internet Programming- I

After successfully completing this course, students will be able to:

CO1: Interpret fundamental concept of web techniques;

CO2: Discuss concept of user define function & predefine functions of strings;

CO3: Explain types of array & predefine function of array;

CO4: Illustrate object oriented concepts in PHP script;

CO5: Describe file & directory handling operation & predefine function of file & directory;

CO6: Explain the database enable WebPages.

Course (CS-344): Internet Programming-II

After successfully completing this course, students will be able to: CO1: Explain content used in web technology;

CO2: Discuss PHP framework & email handling using PHP;

CO3: Explain XML programs, its advantages & different XML parser; CO4: Interpret the concept of JavaScript for web designing;

CO5: Describe functioning of Ajax model.

Course (CS-348): Internet Programming, Networking Practical and Project

After successfully completing this course, students will be able to:

CO1: Illustrate a form to implement functions and predefine functions; CO2: Demonstrate the array concepts and it's predefine functions; CO3: Apply the predefine functions of files and directories;

CO4: Solve problems using object oriented concept;

CO5: Demonstrate database enabled web pages using Postgre SQL; CO6: Apply JavaScript in WebPages;

CO7: Demonstrate dynamic web pages by using Ajax;

CO8: Illustrate various concepts of web development in project; CO9: Demonstrate various networking commands in UNIX.

Course (CS-335): Programming in Java-I

After successfully completing this course, students will be able to:

CO1: Define simple java programs using data types, final variable and arrays; CO2: Explain classes using constructor and array of objects;

CO3: perform java programs using classes and objects; CO4: Illustrate the concept of inheritance and interfaces;

CO5: implements exception handling techniques in java programs;

CO6: Demonstrate GUI using Swing and AWT (Abstract Window Toolkit) methods;

CO7: Interpret basic applet using java.

Course (CS-345): Programming in Java-II

After successfully completing this course, students will be able to:

CO1: Explain programs using java collection API as well as java Standard Library;

CO2:Discuss GUI Applications with JDBC (Java Database Connectivity);

CO3: Define concept of Servlet;

CO4: Interpret simple Java Server Pages (JSP) Application;

CO5 Describe multithreading using java;

CO6: Demonstrate simple application for client and server communication;

CO7: Illustrate java concept for solving simple business problem.

Course (CS-348): Programming in Java Practical

After successfully completing this course, students will be able to:

CO1: Define simple classes using IDE –Eclipse;

CO2: Explain examples of classes using array of objects and packages;

CO3: implement inheritance and interfaces in java;

CO4: Solve problems using exception handling mechanism in java;

CO5: perform Input/output operations using console and files;

CO6: Apply AWT and Swing to create GUI in java;

CO7: Execute queries on tables using JDBC (Java Database Connectivity);

CO8: Define and execute simple servlet program;

CO9: Illustrate the JSP (Java Server Pages) programs;

CO10: Demonstrate multithreading using Java.

Course (CS-336): Object oriented software engineering

After successfully completing this course, students will be able to:

CO1: Recall fundamental principles underlying Object-Oriented software design like class, Object, Instance Polymorphism and inheritance;

CO2: Give the original examples of basic and advance structural modeling things like class, objects;

CO3: Explain basic behavioral things like use case diagram, interaction diagram and state

chart diagram;

CO4: Explain methods of object oriented analysis and object oriented designing;

CO5: Use architectural modelling like component and deployment diagram;

CO6: Define object oriented testing strategies.

Course (CS-346): Computer Graphics

After successfully completing this course, students will be able to:

CO1: Define computer graphics, components of computer graphics, and OpenGL,

CO2: List input and output devices, graphical user interfaces in Open GL, graphics presentation,

CO3: Explain raster scan graphics methods of line drawing algorithms, polygon filling algorithms, scan conversion,

CO4: Describe basic transformation and window to viewport co-ordinate transformation. Setting window and viewport in Open GL,

CO5: Use line clipping and polygon clipping algorithms,

CO6: Describe 3-D transformations hidden surface elimination methods

B.Voc. Mass Communication& Journalism the Students:

POs 1: Develop the ability to communicate while working in the Industry.

POs 2: Learn professional skills from the Media industry.

POs 3: Get the knowledge of different sectors which comes under Media Industry.

POs 4: Understand the ethics and unwritten rule of the journalism.

POs 5: Learn digital media skills to work in online media industry.

POs 6: Know the different Mass Communication theories and Communication models.

POs 7: Know the practical aspects of Mass Communication & Journalism.

POs 8: Learn the fundamentals of Print, television & radio Journalism

Program Specific Outcomes (PSOs).

PSOs 1: Understand the scope of Mass Communication & Journalism.

PSOs 2: Study theoretical and practical term which used in Mass Communication & Journalism industry.

PSOs 3: Publish the experimental newspaper & television bulletin.

PSOs 4: Study the practical aspect of online media & produce online content.

PSOs 5: Describe how media industry will help to solve our social as well the issues which are related to human being

B.Voc Mass Communication& Journalism

The objectives of the course are:

1) To hone the journalistic and research skills through practical work, assignments, project reports, seminars, and workshops and to acquaint students with advanced journalism and media practices.

2) To fully acquaint students with the need to maintain an even balance between practical, theoretical and conceptual aspects of media professions and lend them a critical understanding of the communication package as a whole.

3) To offer appropriate grounding in the issues, ideas and challenges of 21st century thereby broadening the world view of the future media practitioners.

4) To develop multi-tasking skills required in the dynamic multi-media and convergent environment.

•To create skilled manpower for industry requirements at various levels. The scheme provides for vertical mobility from short term certificate courses to full-fledged post graduate degree program, and further research in specialized areas.

•To formulate courses at graduate & postgraduate level keeping in mind the need of

1. Industry in specialized areas;
2. Instructional design, curriculum design and contents in the areas of Skills Development;
3. Pedagogy, assessment for skills development education and training;
4. Trained faculty in the areas of skill development; and
5. Entrepreneurship;

To work for coordination between the higher education system and industry to become a Centre of Excellence for skill development in specialized areas.

To act as finishing school by providing supplementary modular training programs so that a learner, irrespective of his/her training background, is made job ready with necessary work skills (soft, communication, ICT skills etc) and fill the gaps in the domain skills measured against QPs/NOSs.

To provide for Recognition of Prior Learning (RPL) framework for job roles at NSQF Level 4 onwards by conducting assessment and certification with respective Sector Skill Councils (SSCs) / Directorate General of Employment and Training (DGET).

To develop and aggregate curriculum, content and learning materials for skills development in different sectors.

Course Outcomes

F.Y.B.J. Semester- I

Course (B.J)101: INTRODUCTION TO MASS COMMUNICATION

CO1): effects of mass communication

CO2): social change and development,

CO3): Impact & Influence of Mass Media.

CO4): Is able to listen for and respond to sounds and patterns in speech,

CO5): stories and rhymes in context Is beginning to be able to listen for and respond to sounds

Course (B.J) 102: INTRODUCTION TO JOURNALISM

CO1): With support and guidance is beginning to view and listen to printed,

CO2): visual and multimedia texts Online Web magazines and respond with relevant gestures,

CO3) Role of Sub-editor need for editing,

CO4) Proof-reading, editing different copies, gate keeping, skills of editing,

CO5) Copy writing, style, writing lead, headline, deadlines.

Course (B.J) 103: LANGUAGE SKILLS FOR MEDIA

CO1) Types of writing skills Editorial comment and translations Magazine article,

CO2) TV, feature and documentary,

CO3) Radio bulletins, advertising copy,

CO4) press release in English, Hindi and Marathi),

CO5) Editorial comment and translations

Course (B.J) 104: BASICS OF COMPUTER FOR MEDIA

CO1): online newspaper, editing newspapers,

CO2): Networking in editing studios Importance of networks in a media organization,

CO3): Networking in editing studios, television networks, knowledge management,

CO4): Networking through satellites, transfer of footage through OB Vans.

CO5): Typography (fonts &typefaces, type of fonts), Observation & visualization

Course (B.J) 105-PAGE DESIGN & GRAPHICS

CO1): Often uses drawing/images and approximations of letters and words to convey meaning

CO2): Is beginning to drawing/images and approximations of letters and words to convey meaning

CO3): Currently with support and prompts is beginning to drawing/images

CO4): Approximations of letters and words to convey meaning all fonts used

CO5): logos, posters, stickers, greeting cards, visiting cards, etc.

Course (B.J) 106-TRANSLATION TECHNIQUES & MEDIA REVIEW

CO1): Tranleationjobe, use of dictionary, using online dictionary Theories of translation,

CO2): Translating Complex lengthy sentences precisely.

CO3): Interaction with professional translators.

CO4): Study of some famous translational works-Ignited Minds by Dr. A. P. J. Abdul Kalam,

CO5): maximum information in minimum words

F.Y.B.J. Semester-II

Course (B.J) 201-INDIAN CONSTITUTION & DEMOCRACY

CO1).Fundamental Rights and Fundamental duties Parliament – Functions and powers.

CO2). Indian Constitution: Salient Features & preamble

CO3). Fundamental Rights and Fundamental duties.

CO4). Directive Principles of state policy.

CO5). States and Union Territories & Centre-State Relations

Course (B.J) 202- INTRODUCTION TO PRINT MEDIA

CO1): Jobs of print media with other media Development of Marathi Press

CO2): Introduction to magazines

CO3): Brief history & development of magazines as media

CO4): Different types of magazines with their features and characteristics like women,

CO5): Political, Health, economic and children magazines

Course (B.J) 203-MEDIA LAWS & ETHICS

CO1): Significance of media law,

CO2): Difference between law and ethics,

CO3): Registration of news paper & book act 1867,

CO4): Working journalist act 1955, Law of defamation, Contempt of court,

CO5): Code of conduct for journalists.

Course (B.J) 204 -MEDIA WRITING SKILLS

CO1): Writing as craft art and skill,

CO2): Fundamentals of writing for media,

CO3): Target audience Feature writing,

CO4): Writing for specialized readers,

CO5): Market and readership, Niche journalism Magazines, journals writing,

Course (B.J) 205- NEW MEDIA & WEB JOURNALISM

CO1): Definition and Concept of new Media,

CO2): New Media as a medium of Communication,

CO3): Websites of major National/Regional/local Newspapers,

CO4): Magazines and Channels, Blogs, Blog sphere, Video Blogging,

CO5): Language and Style of Online Journalism, Writing for the Web.

S.Y.B.J. Semester- III

Course (B.J) 301 -NEWS REPORTING

CO1): Different elements of News and News values, Sources of News, 5W and 1H theory,

CO2): Principles of reporting, writing skills required for news items, Body of news,

CO3): Proof reading, Definition and Characteristics of Online-Journalism Blogs,

CO4): Features of Online Journalism – Hypertext, Multimedia

CO5): Characteristics of web news papers Preparation of web editions

Course (B.J) 302- NEWS EDITING

CO1): Process of editing- purpose, symbols, tools, lead, body,

CO2): Paragraphing and proof reading, Elements,

CO3): Values and needs of editing, Role of Sub editor, news editor,

CO4): Planning a page, page makeup, Pagination on computer,

CO5): Principles of photo editing.

Course (B.J)303-PHOTO JOURNALISM

CO1): History of Photography & Basic Principles of Photography,

CO2): Cameras &Output Formats,

CO3): Color Photography & Black & White Photography,

CO4): Concepts of Compositions & Camera Techniques,

CO5): Various aspects of Lighting, Movement in Art & Photography.

Course (B.J)304-FEATURE & ARTICLE WRITING

CO1): The concept and definition of feature,

CO2): Feature as journalistic writing,

CO3):The concept and definition of article and side article & columns,

CO4): Important types of feature human interest feature,

CO5):Historical feature, Problem oriented feature, biographic feature,

Course (B.J)305-BASICS OF CAMERA (PRACTICLES)

CO1): Camera functions & operations of camera,

CO2): Exposure: Mechanics of photography: apertures,

CO3): Shutter speeds, focus, and focal lengths,

CO4): Factors affecting Depth of field, Camera lens types,

CO5): Special lens, camera format, Lighting, composition,

Course (B.J)306- INTRODUCTION TO CREATIVE WRITING

CO1): A Brief Introduction to Creative Writing,

CO2): Formal structure of the short story,

CO3): Formal aspects of Poetry, Formal aspects of Drama,

CO4): Publication Aspects, Scripting, Screenplay, and dialogue writing focusing on,

CO5): Writing for the internet, with special reference to Suggested projects: Film Review.

S.Y.B.J. Semester-IV

Course (B.J) 401-TRENDS IN JOURNALISM

CO1): Beginning of the Press in India:

CO2): Technological development,

CO3): Invention of printing and movable type in Europe,

CO4): Early newspapers in England and America; the coming of printing press inIndia;

CO5): Early Anglo-Indian newspapers, Hicky’s Gazette, Buckingham’s Journal,

Course (B.J) 402- LANDMARK EVENTS IN 20TH CENTURY: HISTORY OF WORLD, INDIA & MAHARASHTRA

CO1): To acquaint the students with important ideas

CO2): Events that shaped 20th Century world with

CO3): Emphasis on India & Maharashtra.

CO4): Ideas & Ideologies That Shaped the World,

CO5): Causes and Consequences of the First and Second World Wars,

Course (B.J) 403- TRENDS IN SOCIAL MEDIA

CO1): The Social Media Mix: Making Business Case for Social Media,

CO2): Tallying the Bottom Line, Plotting Social Media Marketing Strategy,

CO3): Managing Cyber social Campaign

CO4):-Leveraging Search Engine Optimization (SEO) for Social Media,

CO5):-Using Social Bookmarks, News, and Share Buttons Cavalier Animation

Course (B.J) 404-TV JOURNALISM

CO1): Television Broadcasting: Characteristics as a medium of communication,

CO2): History of TV in India, Doordarshan and its expansion;

CO3): SITE and Kheda experiments; Entry and expansion of satellite TV;

CO4): Laws governing TV broadcasting, future trends, Color TV,

CO5): Cable and Satellite, Channel Distribution, TV on Mobile 3G & Notebook,

Course (B.J) 405-RADIO JOURNALISM

CO1): Invention and development,

CO2): Strengths and weaknesses of the medium,

CO3): Production and transmission technology.

CO4): Audio recording, editing software; transmission: AM, FM,

CO5): Medium wave, short wave; internet radio, webcasting podcasting.

Department of Multimedia and Animation

PROGRAMME OUTCOMES: B.Voc. (Multimedia and Animation)

Department of B.Voc.(Multimedia and Animation)	After successful completion of three year degree program in Multimedia and Animation a student should be able to;
Programme Outcomes	PO 1: Students will get expertise in the fields of 3D Modeling, Animation, and Visual Effects & Graphic designing for films, games and television industry. PO 2: Students will be highly trained to use their knowledge, skill, dedication and work ethics required to be a successful member of a production team. PO 3: Students will learn the ability to work in a team. PO 4: Students will communicate ideas, action and emotion effectively in visual, oral and written forms. PO 5: Students will acquire up-to-date knowledge and skills related to the rapidly changing industries. PO 6: Students will gain real time project experience and become effective and efficient industry leaders with the quality of entrepreneurship. PO 7: Students will demonstrate professionalism through creative and intellectual independence. PO 8: Students will succeed in life-long learning to remain accountable and thoughtful contributors to society.

Programme Specific Outcomes	PSO-1: **Animation & Multimedia:** After completing post-graduation, the students will be equipped with creative and technical skills in various domains of Animation, Gaming, VFX and multimedia. This will enable them to be employed globally. PSO-2: **Animation & Game Design** This specialization offered to the students enhanced their knowledge in the field of Animation & Game Designing. It will enhance their skills in both Creative and technical aspect. Students will become expert in the specific domain and will able to work in Films, Games and all other animation related fields. PSO-3: **VFX** This specialization offered to the students enhanced their knowledge in the field of VFX. Students will become expert in the specific domain of VFX and will be able to work in Films, Games and all other animation related fields. PSO-4: **Film and Graphics** This specialization offered to the students will enhance their knowledge in the field of Film and Graphics. It will enhance their skills in both Creative and technical aspect. Students will become expert in the specific domain and will be able to work in Films and Graphics fields.

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