



CH. BALLURAM GODARA GOVT. GIRLS COLLEGE, SRIGANGANAGAR (RAJASTHAN)

LEARNING OUTCOMES

PROGRAMME OUTCOMES (PO), PROGRAMME SPECIFIC OUTCOMES (PSO) AND COURSE OUTCOMES (CO)

- The College offers 4 Under Graduate Programmes and 15 Post Graduate Programmes. **The college adopts elective course system; the students pursuing graduation can choose their three courses/subjects from a wide range of 175 subject-combinations available in Arts with 15 courses/subjects (English Lit., Hindi Lit., History, Mathematics, Music, Philosophy, Political Science, Sanskrit, Sociology, Punjabi, Jain Vidya & Jeevan Vigyan (JVJV), Geography, Economics, Home Science) , 2 subject-combinations available in Commerce with four courses (ABST, EAFM, Bus. Mgmt. and Computer Application) and 2 subject-combinations in science with five courses (Chemistry, Botany, Zoology, Physics and Mathematics).** The four core subjects offered during the first year of graduation are Hindi, English, Elementary Computer Application and Environmental Studies. **The PG programmes also offer elective courses of contemporary significance.**
- The college is affiliated to Maharaja Ganga Singh University, **Bikaner, Rajasthan and follows the curriculum designed by the University. The curriculum is updated periodically by the respective board of studies of the affiliating university.**
- On completing the UG and PG Programmes which are offered by the college , the students shall be able to realize the following outcomes:

UG PROGRAMMES

❖ B.A. (BACHELOR OF ARTS)

Programme Outcomes: -

- To equip the students with critical thinking, problem solving and effective communication skills to take well informed decisions and actions for the betterment of society.
- To enable the students to engage in independent and life-long learning in the broadest context of rapidly changing socio-technological scenario.
- To foster social, political, historic, economic and literary consciousness and ethical values to enable the students to appreciate and follow healthy cultural practices.
- To prepare the students to present their original work/ideas through written, oral, and visual presentations at various forum.

Programme Specific Outcome:-

- To nurture the sensibility to discern the evolution of civilizations and cultures to think critically about the contemporary issues and analyze meticulously the strategies to face the challenges in their respective fields.

- To equip the students with essential cognitive and communication skills for effective social interaction to perform well in careers available in teaching and administrative services.
- To prepare the students for employment in tourism, media, hospitality, and other industries and for various competitive examinations conducted for public sector jobs.

Course Outcome:

- The B.A. programme is a combination of three elective courses opted over a wide range. Each course has been designed keeping in mind knowledge, skills, human values and social issues of relevance.
- The courses from Social Sciences group viz. Economics, Geography, History, Home Science, Political Science, Sociology, Jainology & Jeevan Vigyan (JVJV) enhance essential skills to enable students to understand the role of individuals and institutions within the context of society and understand the diversity of human experience and thought, individually and collectively. These courses equip the students for application of the acquired knowledge and skills to address the contemporary problems and issues.
- The courses like Philosophy, Music, languages and literature viz. English, Hindi, Sanskrit and Punjabi employ critical and analytical thinking. These courses introduce students to the diversity and creativity of human experience and develop critical and independent thinking about the surroundings.
- Literature and language courses enhance students' ability to communicate effectively. The students explore and get to know outstandingly influential works of eminent creative writers.

❖ B.COM. (BACHELOR OF COMMERCE):-

Programme Outcome:-

- To prepare well-trained professionals to meet the requirement of industries, insurance companies, banking sectors, financing companies etc.
- To provide thorough knowledge of the fundamentals of finance and commerce.
- To prepare the students for better professional opportunities in Accounting, Costing, Banking and Finance

Programme Specific Outcome:-

- To develop effective communication, decision making, innovations and problem solving skills to face the challenges in day-to-day business activities.
- To apprise the students with the fundamentals of banking through knowledge of banking operations.
- To make the students acquire fundamental knowledge and skills for the career options available in business, banking, accounts and tax consultations.

Course Outcome:-

- The course for ABST appraises the students with micro concepts of commercial and analytical skills. They will understand the financial accounting rule and procedures, rules of Direct and Indirect Taxes (Income tax and GST) in details.
- Business Management allows students to learn the management fundamentals and practices.
- Banking and Business Economics makes students aware about the banking and insurance sector workings and learn the fundamental principles of economics.
- The course on Computer Applications enables the students to acquire essential technical skills to keep pace with the changing world of trade and commerce.

❖ B.SC. (MEDICAL AND NON-MEDICAL) :-

Programme Outcome:-

- To develop an understanding of fundamental scientific concepts, theories, their practical applications and objective conclusions.
- To foster scientific attitude among students and enables them to apply fundamental knowledge in concepts of Biological/Physical Sciences and its application in research, industry and daily life.
- To critically evaluate and discuss scientific literature and key methodologies with regard to validity, reliability, and applicability, within the biological and physical sciences.
- To enable the students to evaluate the potentials and impact of scientific innovations on environment and find sustainable solution to issues pertaining to environment, public health and agriculture.
- To imbibe and demonstrate ethical practice in planning experiments, research designs and communicating the complex concepts to the scientific and non-scientific community.

Programme Specific Outcome:-

- The insistence is on skills in the laboratory, competence, understanding of phenomenon, sustainable development areas and interdisciplinary areas of science courses.
- To enhance both technical and soft skills to make the students qualify for a broad range of career options in research, industry, consultancy and education or for further education in a doctoral program.
- To enable the students to critically integrate knowledge and the analysis of complex phenomena, issues and situations related to research and development.

Course Outcome:-

- The course contents are designed to provide exposure to the core subjects and equip the students for higher education and further research in science stream .
- The students will develop a thorough understanding about natural and applied sciences.
- The Bachelor program in science consists of physical and life science. Physical sciences encompass Physics, Mathematics and Chemistry. Physical science courses are designed to understand the physical properties of the surroundings. Life Science includes Botany and Zoology. Botany and Zoology courses enable students to understand the various life processes and their applications.

❖ B.SC. HOME SCIENCE (BACHELOR OF HOME SCIENCE):-

Programme Outcomes:-

- To develop the ability to address the complexities and interface among self, societal and national priorities.
- To instill both generic and subject-specific skills to succeed in the employment market.
- To develop sensitivity, resourcefulness and competence to render service to families, communities, and the nation at large.
- To appreciate and benefit from the symbiotic relationship among the five core disciplines of Home Science – Resource Management, Food Science and Nutrition, Textiles and Clothing, Human Development and Family Studies and Extension and Communication

Programme Specific Outcomes:-

- To describe and analyze the discipline of Home Science as a holistic field of study covering multiple facets and requirements of human beings in day to day living, for example , need and use of family resources; access to adequate nutrition for wholesome development; clothing fundamentals etc.
- To demonstrate proactive networking in specific areas of study involving significant stakeholders including professionals, researchers, and public service personnel.
- To explore and decide upon viable avenues of self-employment and entrepreneurship plus career options in different facets of Home Science discipline.
- To demonstrate ethical values in scholarship and social applications.

Course Outcomes:-

- Home Science is a science-oriented, multidisciplinary subject which encompasses the multifarious activities that occur in families, households, and communities. Home Science is both multidisciplinary and interdisciplinary in its context encompassing the five major disciplines of Family Resource Management, Foods and Nutrition, Textiles and Clothing, Human Development, and Extension Education. Each discipline has one or more specific areas of specialization.
- The course on Food and Nutrition aims to enhance the core competency of students in the fields of public health nutrition, dietetics, and food science. The course endeavours to train a cadre of professionals who can create nutrition awareness for the promotion of a healthy lifestyle among the population. It aims to develop capacities of students in the areas of Human Nutrition, Food Science, Food Safety and Quality, Food Product Development and Public Health Nutrition.
- The courses on Family Resource Management , Human Development and Extension Education contributes towards providing the students a deep understanding of the well-being of individuals, families and the community at large across the life span in diverse contexts by generating knowledge, preparing for research, teaching, leadership, entrepreneurship, policy making and working as professionals in the related government and private fields.
- The course on Textiles and Clothing prepares the graduates to be skilful professionals in the field of fashion, apparel and textiles designing. It also aims at providing technical know-how to the students to meet the demands of the ever-growing fashion and textile industry.

P G PROGRAMMES

FACULTY OF ARTS

❖ M.A. Hindi Literature

Programme Outcomes:-

- To introduce the students with the origin and growth of language.
- To improve analytical and comprehension skills of students.
- To introduce different literary periods and trends of each of these periods.
- To introduce works on different themes- gender, racial and ethnic disparities, religion, metaphysics, social problems etc.
- To enhance linguistic competence of students by introducing them to the linguistic structure and style a wide variety of literary works.

Programme Specific Outcomes:-

- To enable the students to read and analyze literary works through theoretical frameworks.
- To inculcate a literary, aesthetic and critical awareness of diverse cultures of India and literary creations to identify a broader vision of the society.

- To sensitize the students to issues like marginalization and subjugation of women.
- To ensure an in-depth study of Rajasthani folklore through an in-depth study of indigenous Rajasthani literature
- To raise appreciation for glorious Indian History and culture through literature
- To prepare the students for successful career as teachers, translators and creative writers.

Course Outcomes:-

एम.ए. पूर्वाह्न – हिन्दी साहित्य

- प्रथम प्रश्न-पत्र – हिन्दी साहित्य का इतिहास

Course Outcomes:

- To introduce the historical background and analysis of literary texts
- To introduce various stages of growth of literature
- To study several genres of writing Hindi literature
- To compare and analyze texts of different ages critically

- द्वितीय प्रश्न-पत्र –साहित्य शास्त्र : भारतीय एवं पाश्चात्य

Course Outcomes:

- To study the concept of sounds and phonology
- To introduce the various genres of Hindi literature including poetry, novel, drama
- To study the theory of poetics.

- तृतीय प्रश्न-पत्र – प्राचीन काव्य

Course Outcomes:

- To study the ancient Hindi poetry as heritage literature
- To analyse the ancient texts in the light of socio-historical perspective
- To introduce the ideologies and philosophies like mysticism, Sufism, philosophy etc.

- चतुर्थ प्रश्न-पत्र –मध्यकालीन काव्य

Course Outcomes:

- To introduce the works of medieval poets and their works
- To comprehend the socio-cultural discourses through literary texts
- To study a variety of poets and writers to get an idea of the creative styles and genres.

एम.ए. उत्तराह्न – हिन्दी साहित्य

- प्रथम प्रश्न-पत्र –गद्य साहित्य

Course Outcomes:

- To introduce a variety of literary texts for comprehension and analysis
- To understand the techniques of prose, story writing and biography
- To study the socio-cultural concerns of the Indian society

- द्वितीय प्रश्न-पत्र –आधुनिक काव्य

Course Outcomes:

- To study the changing trends in literature
- To study a variety of texts to get the wider picture of social, cultural and political scene of the contemporary society
- To learn from the experiences and creative output of several authors

➤ तृतीय प्रश्न-पत्र भाषा विज्ञान एवं हिन्द भाषा

Course Outcomes:

- To study the etymology and root words of the Hindi language
- To study the phonology, word structures and sentence structures in Hindi language
- To introduce the various scripts used in Hindi language
- To study the historical evolution of the language through various phases.

➤ चतुर्थ प्रश्न-पत्र (क) –सूर

Course Outcomes:

- To introduce the significant texts of Surdas
- To analyse the literary texts in the context of their social and historical significance
- To study the universal appeal of Surdas through the thematic analysis of his works

➤ चतुर्थ प्रश्न-पत्र (ग) – तुलसीदास

Course Outcomes:

- To study the works of the iconic poet Tulsidas for its literary, historical and spiritual significance
- To relate to the universal appeal of the texts to the modern living
- To study the minute details of language and linguistics of these ancient writings

➤ पंचम प्रश्न-पत्र – साहित्यिक निबंध एवं परियोजना कार्य

Course Outcomes:

- To study the literature of Rajasthan in its variety
- To get the feel of the folklore, traditional culture and living through literature
- To understand several ideologies like realism, idealism, feminism, Marxism, Dalit literature etc. through literary works.

अथवा

➤ केस स्टडी/ परियोजना कार्य

Course Outcomes:

- To motivate students towards academic writing
- To develop a research environment and culture
- To attempt several techniques of research and communication like translation, interviews, book reviews for prophecy in language and literature

❖ **M. A. ENGLISH LITERATURE**

Programme Outcomes:-

- To introduce the students with the origin and growth of English Literature
- To improve analytical and comprehension skills of students.
- To introduce different literary periods and trends of each of these periods.
- To introduce works on different themes- gender, racial and ethnic disparities, religion, metaphysics, social problems etc.
- To enhance linguistic competence of students by introducing them to linguistic structure and style through a wide variety of literary works.

Programme Specific Outcomes:-

- To enable the students to interact with literary works critically in diverse contexts through diverse theoretical frameworks.
- To inculcate a literary, aesthetic and critical awareness of diverse cultures as presented in literary creations to identify a broader vision of the society.
- To familiarize the students with socio-cultural ambience and the discursive frameworks of various ages and develop a nuanced appreciation of the literary stalwarts of those ages.
- To sensitize the students to issues like marginalization and subjugation of women.
- To raise appreciation for Indian English literature
- To introduce a wide range of writing from India, British, American and Anglophone traditions
- To prepare the students for successful career as teachers, translators and creative writers.

Course Outcomes:-

M.A. (Previous) -English Literature

➤ **Paper-I-English Language and Documentation**

Course Outcomes:

- To apprise students with the lexical basis of language
- To critically read, comprehend and reproduce academic writing
- To understand the documentation process thoroughly for research
- To understand the speech mechanisms in order to learn correct pronunciation
- To be proficient in modes of communication like letter, CV, review etc.

➤ **Paper-II- Renaissance to Jacobean Age**

Course Outcomes:

- To acquaint students with literature and society of Renaissance Period
- To generate a broad vision of life by making the students understand universal problems and varied life situations through the prescribed literary texts .
- To enable the students to demonstrate their critical ability to review the prescribed texts against the background of the age.

➤ **Paper-III-Caroline to Neo-Classical Age**

Course Outcomes:

- To familiarize the students with literary trends and writers of Neo-classical and Pre- Romantic period.
- To introduce the finest poetry of the period and enable the students to evaluate the same in the light of changing patterns of life in contemporary society
- To introduce students with social, cultural and political movements of the period

➤ **Paper-IV The Romantic Age**

Course Outcomes:

- To understand the changing literary trends in 18th century
- To know the transition of literature from classical and Neo-classical to Romantic
- To study a wide range of finest literature of the British Romantic era

M.A. Final- English Literature

➤ **Paper V- Principles of Criticism**

Course Outcomes:

- To sharpen critical and analytical acumen by introducing various literary theories and approaches that develop skills in critical thinking and scholarly argumentation.
- To enable the students to review literary texts through the lens of socio-cultural and political contexts of the times.
- To apprise the students with the evolution of literary theories.
- To introduce a comparative study of ancient and contemporary literary criticism.

➤ **Paper VI- Nineteenth Century Literature**

Course Outcomes:

- To enable the students critically appreciate the selected poetry, fiction and drama of the age in the light of the understanding of the contemporary society
- To introduce students to different styles and genres of writing prevalent in nineteenth century English literature
- To understand the spirit and ideologies of the times through the selected literary works.

➤ **Paper VII Twentieth Century Literature**

Course Outcomes:

- To introduce students to the twentieth century literary and critical writings
- To familiarize with the post- world war literary scenario.
- To enable the students to analyze literary works from social, political and cultural perspectives

➤ **Paper-VIII (B) Women's Writing**

Course Outcomes:

- To introduce feminist and women writing
- To introduce works of popular female authors of the world
- To sensitize the students with gender issues and female voices
- To enable a comparative analysis in the changing social structure of world society
- To comprehend and evaluate the role of literature in bringing a change in society

➤ **Paper IX (A) Indian Writing**

Course Outcomes:

- To apprise the students with various ages and stages of Indian writing through selected works of distinguished Indian authors
- To enable the students to read texts in relation to their historical and cultural context in order to gain deep understanding of both the text and the context.
- To make the students analyze the growth of Indian Writing in English with reference to the historical, political, social and cultural milieu of Indian subcontinent.

❖ M.A.-SANSKRIT LITERATURE

Programme Outcomes:-

- To sensitize the students to the functioning of the language.
- To introduce students to a historical and cultural perspective of literary trends and movements in Sanskrit and in its literature.
- To enable students to consolidate their communication skills in both spoken and written Sanskrit.
- To acquire necessary skills and knowledge to pursue a career in teaching and research.
- To enable students to acquire a holistic development in language studies in Sanskrit.

Programme Specific Outcomes:-

- To acquaint the students with the knowledge of Indian Culture and civilization preserved in Sanskrit Literature. Moreover, the focus will be given on exploration of the social, political, religious and economic conditions of the Vedic and Puranic period.
- To Gain an understanding and appreciation of the literature of ancient as well modern languages based on the parameters accepted.
- To Understand and appreciate the aesthetical, social, political, cultural, etc., values expressed in various prescribed texts.
- To Foster an understanding of Traditional Sanskrit Methodologies which are discussed in various traditional sciences (Sastras), in different philosophies and the ability to construct basic theories used to explain ancient traditional knowledge.
- To develop the ability to Research, Analyze, and Evaluate the research works and the ability to use rare texts in Sanskrit literature.

एम.ए. (संस्कृत) पूर्वार्द्ध

- प्रथम प्रश्न-पत्र – वैदिक वाङ्मय

Course Outcomes:

- To introduce the students with Vedic texts for clear comprehension and minute analysis
- To study the socio-cultural concerns of the Indian society through glorious Vedic literature.

- द्वितीय प्रश्नपत्र – ललित-साहित्य तथा साहित्यशास्त्र

Course Outcomes:

- To introduce the various genres of literature including poetry and drama.
- To study the theory of Sanskrit poetics.

- तृतीय प्रश्नपत्र – भारतीय दर्शन

Course Outcomes:

- Enable the students to compare and analyse texts of different ages critically and philosophically.
- To provide a comprehensive introduction to ethics sermon.

- To address the questions of human morality by defining concepts such as good and bad, right and wrong, merit and demerit, justice and crime in the light of knowledge treasured in Bhagwat Gita.

➤ चतुर्थ प्रश्नपत्र – व्याकरण तथा भाषा विज्ञान

Course Outcomes:

- To study the etymology and root words of the language
- To study the phonology, word structures and sentence structures in language.

एम.ए. संस्कृत उत्तरार्द्ध

➤ पञ्चम प्रश्नपत्र – निबन्ध, व्याकरण एवम् अनुवाद

Course Outcomes:

- To give the knowledge of grammar to the students for the knowledge of pure language.

➤ षष्ठ प्रश्नपत्र (क) शास्त्रीय साहित्य एवं काव्य

Course Outcomes:

- To comprehend the socio-cultural discourses through literary texts
- To study eminent Sanskrit author to get an idea of the creative styles and genres.

अथवा

➤ षष्ठ प्रश्नपत्र (ख) आधुनिक साहित्य

Course Outcomes:

- To introduce students to the new literature
- To familiarize students with the changing trends in writing
- To evaluate contemporary poetry through social, cultural and political messages

➤ सप्तम प्रश्नपत्र – संस्कृत काव्यशास्त्र

Course Outcomes:

- To introduce the various genres of literature including poetry and drama
- To study the theory of poetics
- To instil in the student a deeper understanding of literature.

➤ अष्टम प्रश्नपत्र – नाटक एवं नाट्यशास्त्र

Course Outcomes:

- To discover the universal appeal in the writings of Bharatmuni
- To analyse the social and cultural environment of the contemporary times in the light of his works
- To evaluate his literature in style, language and simplicity
- To study and critically evaluate the composition of Sanskrit plays
- To make the students recognize the importance of theatre in Indian Aesthetics through Natya shashtra

➤ नवम प्रश्नपत्र – (क) प्राचीन काव्य

Course Outcomes:

- To study the ancient poetry as heritage literature
- To analyse the ancient texts in the light of socio-historical perspective
- To introduce the ideologies and philosophies.

अथवा

- नवम प्रश्नपत्र – (ख) विशेष कवि अध्ययन – भास

Course Outcomes:

- To introduce the significant texts of Bhash
- To analyse the literary texts in the context of their social and historical significance.
- To study the universal appeal of Bhas through the thematic analysis of his works

- नवम प्रश्नपत्र – (ग) विशेष कवि अध्ययन – कालिदास

Course Outcomes:

- To study the works of the iconic poet Kalidas for its literary, historical and spiritual significance
- To relate to the universal appeal of the texts to the modern living
- To study the minute details of language and linguistics of these ancient writings

❖ **M.A. ECONOMICS**

Programme Outcomes:-

- To provide in-depth knowledge in the frontier areas of Economic theory and methods.
- To equip the students to use their knowledge of economic theory to study real world economic problems

Programme Specific Outcomes:-

- To impart in depth knowledge to students about economic theory regarding utilization and allocation of resources including land labour, natural resources and capital etc.
- To develop students understanding about how market for goods and services function and how income is generated and distributed and also understanding role of investment, savings and capital in an economy
- To give students in depth knowledge into special fields of choice like financial market (money market and capital markets), industrial economics, agricultural economics, foreign trade policies and international trade, growth and development, rural and urban development, problems of poverty and unemployment, econometrics, mathematical economics etc.
- To make students familiar with economic theories and their relevance, statistics, quantitative techniques, econometrics and applied research in a wide variety of fields within economics.
- To apprise the students know how the economy is influenced by economic policies, technological advances and demographic conditions.

M A Previous- Economics

- **PAPER I-MICRO ECONOMIC THEORY**

Course Outcomes:

- To familiarize the students with the basic concepts of micro economics like as demand and supply, market system, law of returns and cost analysis distribution of income etc and other principles of Economics
- To explain the economic theories- origin, relevance and importance
- To illustrate the common concepts of demand and supply used in day-to-day lives of individuals
- To demonstrate knowledge of laws of supply and demand, elasticity of demand, supply and income, behaviour of consumer, behaviour of producer etc

➤ PAPER – II -MACRO ECONOMIC THEORY

Course Outcomes:

- To study the concept of macro Economics theories regarding national income, aggregate demand and supply, unemployment, poverty etc.
- To study the various schools, models and objectives of macro Economics
- To study the contemporary policies to be able to apply to the current economic problems

➤ PAPER – III-ECONOMIC STATISTICS AND MATHEMATICS

Course Outcomes:

- To acquaint the students with the common statistical techniques and terminologies used in the course and understand the concept of central tendency, dispersion, skewness index, frequency distribution, sampling etc. and able to summarize the distribution by diagrams and statistics.
- To study the theory of probability and its application in various field
- To explain the basic mathematical tools for data analysis

➤ PAPER – IV PUBLIC FINANCE

Course Outcomes:

- To study the concepts and theories of public finance, budget, revenue and expenditure
- To know the policies of the government concerning public finance
- To enable students to apply theories to contemporary economic issues of the day
- To help students recognize the role of ethics in economic decisions

M.A. FINAL ECONOMICS

➤ PAPER –V-DEVELOPMENTAL ECONOMICS AND INDIAN PLANNING

Course Outcomes:

- To help students develop an acumen for developmental planning
- To explore diverse dimension and measures of development, as well as the application of microeconomic analysis to issues of development in poor countries, including the study of household decisions and the analysis of institutions and norms influencing development.

➤ PAPER – VI-INTERNATIONAL ECONOMICS

Course Outcomes:

- To explain the intricacies of foreign trade ,terms and business
- To illustrate the law and policies of international business
- To Familiarize the students with with the international trade institutions
- To prepare for the international market as active analysts and economists

➤ PAPER VII-ADVANCE INDIAN ECONOMY

Course Outcomes

- To familiarize the students with recent trends in agriculture ,industrial and service sector growth
- To Prepare the students with the upcoming challenges in economic development
- To Update the students with trends in taxation and expenditures of government
- To Prepare the students with the intricacies and patterns of economic growth of India
- To Acquaint the students with economic reforms

➤ **PAPER VIII- Group A (I)- AGRICULTURE ECONOMICS**

Course Outcomes:

- To explain the Agriculture systems, structures and policies
- To enable the students to understand the functioning of the Indian agriculture finance system like kcc, Bhumi Vikas Bank etc
- To review the current and prospective systems of agricultural in India
- To study the global agriculture issues as agricultural subsidy and WTO.

➤ **PAPER VIII-GROUP B(ii)-ENVIRONMENTAL ECONOMICS**

Course Outcomes:

- To explain learn the basic concepts and theories of environmental economics
- To make the students aware of the urgency of environmental preservation
- To enable to Connect to the diverse views on sustainable development
- To Understand the issues and challenges of economic and environment development

❖ **M.A. POLITICAL SCIENCE**

Programme Outcomes:

- To help the students learn the evolution of politics over the centuries
- To enhances critical thinking of students
- To cultivate debating skills of students by introducing them to contradictory structures.
- To introduce different periods of world politics and trends of each of these periods.
- To prepare the students to understand foreign policies, theory and practice of Diplomacy, , Indian political thought, comparative politics, international politics, administrative principles and theories.

Programme Specific Outcomes

- To enable the students critically interact with works from different contexts: social, political, economic, historical and national as subjects conscious of their own socio-historic specificity and thus their level of critical thinking is enhanced.
- To equip the students to interpret and explore relationships from the points of view of different people.
- To approach and analyze the contemporary political problems and suggest solutions.
- To provide insight of the wide variety of positions and nurture analytical skills to understand civic social and environmental challenges.
- To enable the students to prepare for competitive exams like Civil Services, NET, SET and GATE.

M.A. PREVIOUS-POLITICAL SCIENCE

➤ **PAPER-1 - WESTERN POLITICAL THEORY (FROM PLATO TO MARX)**

Course Outcomes:

- To study the Western Political theory of ancient philosophers
- To study the various philosophies given by ancient thinkers
- To evaluate the relevance of ancient theories in today's context
- To analyze the effects of these theories on the world politics

➤ PAPER II - COMPARATIVE POLITICAL INSTITUTIONS

Course Outcomes:

- To analyse the major approaches in comparative politics
- To study the several forms of government to understand their history and relevance
- To study the theories of political representation to be able to associate with the contemporary political scene

➤ PAPER III - INTERNATIONAL POLITICS

Course Outcomes:

- To study the several theories and approaches to international politics
- To study the organization of the world politics over the years
- To study the significant issues in contemporary international politics
- To develop a critical acumen towards the continuous changing political scene of the world

➤ PAPER IV - THEORY AND PRACTICE OF PUBLIC ADMINISTRATION

Course Outcomes:

- To study the concept of public administration in detail
- To know the principles. Functions, theories of public administration
- To study the organizational structure of administration
- To study the financial administration and budget formation
- To analyze the administrative reforms and their effects on politics

M.A. FINAL-Political Science

➤ PAPER V: MODERN AND CONTEMPORARY POLITICAL THEORY

Course Outcomes:

- To study the several important theories of contemporary times
- To critically evaluate the political philosophies in the light of contemporary problems of the world
- To relate the political theories to the contemporary processes like globalization, environmentalism.

➤ PAPER VI - INDIAN GOVERNMENT AND POLITICS

Course Outcomes:

- To evaluate the complexity of the working of a government
- To study the background and working of the Indian Constitution
- To study the several hierarchies in the Indian government
- To study the policies undertaken for the smooth functioning and welfare

➤ Paper VII & VIII -Group B paper (III) FOREIGN POLITICS OF USA , RUSSIA, CHINA, INDIA AND NEIGHBOURING COUNTRIES

Course Outcomes:

- To develop an in-depth understanding of the fundamental and challenges of foreign policy making in India
- To study the foreign policies of the neighbouring countries in relation to Indian Foreign policy.

➤ **Group B- Paper VII & VIII (ii) THEORY AND PRACTICE OF DIPLOMACY**

Course Outcomes:

- To study the concept and role of diplomacy in politics and its evolution as a national power
- To analyse the role of diplomacy in international relations
- To evaluate the evolution of diplomacy as an essential part of politics in contemporary scenario

➤ **Paper IX (i) HUMAN RIGHTS AND DUTIES :THEORIES AND PRACTICE**

Course Outcomes:

- To understand the nature and basic concepts of Human rights and duties
- To study the historical growth of this concept to be able to comprehend the sources and causes
- To know about the various agencies involved in the implementation
- To study the Indian scenario, issues and organizational structure

❖ **M. A. HISTORY**

M.A. Previous -History

Paper-I : TWENTIETH CENTURY WORLD

Course Outcomes:

- To study the causes and consequences of First world war, second world war and other important events of the world
- To study the formation of significant organizations like UNO and their role in world peace.
- To study the rise and impact of globalization on economic and political fronts

Paper-II-CULTURAL PROFILE OF INDIA

Course Outcomes:

- To understand the concept of culture
- To trace the evolution of Indian culture and religions through Indus Valley Civilization
- To evaluate the literature of India through cultural and historical perspectives
- To familiarize with the evolution of architecture from cave to medieval and modern architecture
- To study the significant centres of learning in India
- To understand the diversity of culture in India, its causes and effects

Paper-III : WOMEN IN INDIAN HISTORY

Course Outcomes:

- To study the role and position of women in Indian society
- To learn about the representations of women in the culture and tradition of women through art,media and literature
- To study the legal status of women in ancient, medieval, colonial and post-independence India
- To study the role of women in religious movements
- To evaluate the study on the basis of primary and secondary sources
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➤ **Paper-IV- SOCIAL AND ECONOMIC HISTORY OF RAJASTHAN (7th CENTURY A.D. TO 1950 A.D.)**

Course Outcomes:

- To study the significant social and economic events of Rajasthan

- To familiarize with the socio-religious movements of Rajasthan in the given period
- To study the nature and structure of economy during the period

M.A. FINAL HISTORY

➤ **Paper-V (Compulsory Paper for all groups)-THEORY AND METHODS OF HISTORY**

Course Outcomes:

- To study historiography of India from ancient to modern times
- To understand the concept and approaches to History
- To initiate research in History with a formal methodology.

➤ **PAPER-VI :GROUP B-MEDIEVAL INDIAN HISTORY: MEDIEVAL INDIA AND ITS INSTITUTIONS (1200-1526 A.D.)**

Course Outcomes:

- To study the various rulers and activists of the medieval India
- To study the various struggles, conflicts and victories the country witnessed
- To study the organization and working of various dynasties

➤ **PAPER VII – MEDIEVAL INDIA AND INSTITUTIONS (1526-1656 A.D.)**

Course Outcomes:

- To study the invasions and conquests in the Indian context and evaluate the growth of India as a nation
- To study the complexity of relationships between different religious communities, dynasties and kingdoms.
- To study the historical sources of information for comparative and critical analysis.

➤ **PAPER VIII – MEDIEVAL INDIA AND INSTITUTIONS (1656-1761 A.D.)**

Course Outcomes:

- To study the medieval rulers, policies and conflicts of medieval India
- To understand the growth and evolution of the kinship and kingdoms of India
- To enable the students to compare the medieval society with the contemporary society.

➤ **PAPER-IX (a)-MEDIEVAL SOCIETY, RELIGION, ART AND ARCHITECTURE**

Course outcomes:

- To familiarize with the trade practices of the medieval times
- To know the religious movements and reforms of medieval India
- To know the art and architecture of the medieval India and compare it with the modern society
- To study the books and literature of the era and know the ideas and concepts

❖ M.A. GEOGRAPHY

M.A. PREVIOUS-Geography

➤ PAPER-I: EVOLUTION OF GEOGRAPHICAL THOUGHT

Course Outcomes:

- To study the nature, scope, concept and trends of Geography
- To study the evolution and development of Geography through the times
- To study the influence of several schools of thought
- To know the concepts and philosophies and relate them with the contemporary problems of society

➤ PAPER-II: STRUCTURAL AND DYNAMIC GEOMORPHOLOGY

Course Outcomes:

- To understand the concept of geomorphology with illustrations
- To study the principles and scientific theories of geology
- To study the important thinkers and scientists who have contributed through significant studies

➤ PAPER- III: PRINCIPLES & THEORY OF ECONOMIC GEOGRAPHY

Course Outcomes:

- To study the theoretical framework of economic geography
- To study the classifications of agriculture, energy and industries to correlate them with the existing geographical conditions
- To familiarize with the economic regionalization of India

➤ PAPER -IV: GEOGRAPHY OF ENVIRONMENT

Course Outcomes:

- To study the elements and components of environment and ecology
- To study the threats to environment, various hazards-causes and effects
- To study the man-environment relationship
- To feel the responsibility of preserving the gifts of human life.

M.A. FINAL- Geography

➤ PAPER-V: ADVANCED GEOGRAPHY OF INDIA

Course Outcomes:

- To explore the physiographical features of India
- To study the major resources available in India and their characteristics

➤ PAPER VI (A): URBAN GEOGRAPHY

Course Outcomes:

- To analyze the theories of urban evolution and growth, hierarchy of urban settlements
- To learn to analyze census data to measure urban growth
- To understand the patterns of urbanization in developed and developing countries

➤ PAPER VII (d.): GEOGRAPHY OF POPULATION AND SETTLEMENT

Course Outcomes:

- To study theories in population- techniques and results

- To study the technique and classifications of population census
- To familiarize with the important policies of the government for migration, urbanization, settlement etc.
- To study the recent changes in Indian population and settlement in comparison to the world

➤ **PAPER VIII (C): CLIMATOLOGY AND OCEANOGRAPHY**

Course Outcomes:

- To study the concepts and theories related to climatology and oceanography
- To know in detail about the field of oceanography
- To study the diverse climates of the world in detail

➤ **Dissertation/case study on Geographic Problem (in lieu of paper VI, VII, or VIII)**

PRACTICAL

Course Outcomes:

- To learn and practice the survey methods, techniques and tools
- To learn to use the various equipment associated with the surveys and experiments
- To experience camping and report preparation

❖ **M.A. SOCIOLOGY**

Programme Outcomes:

- To equip students to contribute actively for a developed society and understand social relation and social culture to study society in a scientific manner.
- To gain scientific knowledge about a complex human society is indeed in order to achieve progress in various field.
- To enable students to adjust themselves to the changing environment providing an in-depth understanding of changing patterns of understanding social life.

Programme Specific Outcomes:

- To develop an understanding of the student with industrial, political, sociology of religion, social anthropology
- To enable student to understand the scope, model and aspects of economic development along with socio economic planning in social management,
- To equip the students to develop their own personality in the society.
- To enable student to pursue career in social management government departments prepare the student for many competitive exams like RPSC, UPSC, NET ,SET ,GATE.

M.A. Previous- Sociology

➤ **PAPER-I- THEORETICAL PERSPECTIVE**

Course Outcome:-

- To introduce and develop theoretical perspective thinking through a sociological prospective to understand the situations of other and
- To have a deep understand of oppression, inequality and intersectionality prevalent in in society

➤ PAPER-II-METHODOLOGY OF SOCIAL RESEARCH

Course Outcome:-

- To provide a framework to guideline propose researcher to clearly define research questions hypothesis and objectives
- To identify the most appropriate research design sampling technique and data collection and analysis methods.

➤ PAPER-III-INDIAN SOCIAL SYSTEM

Course Outcome:-

- To understand Indian Social structure and value system

➤ PAPER-IV RURAL SOCIETY IN INDIA

Course Outcome:-

- To study the structure characteristic and function of rural social institutions.
- To study Rural social institutions comprise family, marriage, kinship, religion, caste,rural social studies.
- To understand the sociological significance of these institution in the rural context.

M.A. FINAL-Sociology

Course Outcomes:

- Paper V: Advance Sociological Theories
- Paper VI: Social Thinkers
- Paper VII: Sociology for India.
- Paper VIII (I): Industrial Sociology
- Paper IX (I): Dissertation (Optional)
- Paper IX (IV): Criminology

Course Outcomes:

- To develop 'sociological insight' for understanding behavior, social roles, interactions among and everyday life practices of human beings.
- To enable the students understand the interactions of human beings with the larger society.
- To equip the students to observe societies, their functioning (both one's own society and other societies) as an outsider that reduces biasness and helps to address issues effectively.
- To understand the principles and evolution of theories propounded by eminent social thinkers and their application in understanding the ways to make societies progress.
- To understand and compute basic statistical calculations necessary for social science, which in turn help students to analyses social phenomena.it inculcates critical thinking and analytical skills
- To enable the students to understand the scope, model and aspects of economic development along with socio economic planning in social management

❖ M.A. MUSIC (VOCAL & INSTRUMENTAL)

M.A.PREVIOUS-MUSIC (VOCAL&INSTRUMENTAL)

THEORY

➤ Paper I Principles of Music (Shastra)

Course Outcomes:-

- To study about the basic elements of Indian Music like Swara, Raga, Taal and Biographies of Musicians.
- To identify and learn about the forms of music Viz. Thumri, Tappa, Dadra ect. and Gharana Parampara of India
- To get knowledge regarding Theory of Indian Music and Study of ancient Granthas and Ragas

➤ Paper II History of Indian Music

Course Outcomes: -

- To gain knowledge about Ancient Granthas and Contribution of Musicologis.
- To get knowledge about the Granthas like Natyashashtra, Sangeet Ratnakar etc.
- To know about the various Medieval Granthas of Music and Notation System, life & contribution of Musicologist

PRACTICALS

➤ Paper III Main Practical

Course Outcomes: -

- To learn to perform vilambit, khayal, Drut-khayal and Practical, Hindustani Music.
- To know about performing different types of compositions in various Raga and Taals.
- To perform solo in any of the prescribed Raga and to recite Tala and playing technique of Tanpura.

➤ Paper IV Practical-cum-Viva-Voce

Course Outcomes: -

- To know about the various Raga compositions according to the notation system

➤ Paper V- Stage performance

Course Outcomes: -

- To learn to perform Raga techniques.

M.A. Final –Music – Vocal & Instrumental

THEORY

➤ Paper –VI- Voice Culture and Philosophy of Music

Course Outcomes: -

- To know about the various parts of Tanpura, Sitar Technique of tuning it.
- To learn presentation of vocal music and instrumental in Group.
- To understand to composing Music for jingle, PowerPoint Presentation on the life and contribution of great musician.

➤ **Paper VII (A)- Psychology of Music**

PRACTICALS

➤ **Paper VIII -Main Practical**

Course Outcomes:-

- To get knowledge of performing vilambit, khayal, Drut-khayal and to practise Hindustani Music.
- To know about to perform different types of compositions in various Raga and Taals.
- Students are able to perform solo in any of the prescribed Raga and ability to recite Talas and playing Technique of Tanpura.

➤ **Paper IX-Practical cum-Viva-Voce**

Course Outcomes:-

- To learn about the various compositions in prescribed Raga and its performing techniques.

➤ **Paper X Stage Performance**

Course Outcomes:-

- To learn to perform Raga techniques.

❖ **M.A. HOME SCIENCE**

Programme Outcomes:-

- To enable the students to understand and comprehend the basics in research methodology.
- To understand about Human nutrition & Community Nutrition.
- To analyze the developmental changes that occur during conception to old age and understand the needs of different stages of lifespan.
- To comprehend the management process, Motivating factors, management of family resources, Ergonomics, Work Simplification, role and responsibilities of consumer, marketer and government in the market place, consumer behaviour and management of human economic and environmental resources.

Programme Specific Outcomes: -

- To learn about food and personal hygiene ,food service industry, food production, personnel management, budget making as well as standardization of recipe and the various steps to set up their own food service unit.
- To explain history and concept of marriage, family and family; life cycle and child welfare.
- To Understand different approaches for the protection of children and Gain knowledge on the role of national and international agencies working for child and family welfare, exceptional child and counselling for family welfare.
- To understand textile fibres, fabric, quality of textiles, fashion cycle, clothing Budget , consumer problems related to textiles, new inventions in the textile sector ,textile industries and career opportunities in the textile sector entrepreneurship development in textiles.
- To understand about extension & communication, learning and motivation ,use of extension teaching methods, programme planning, entrepreneurship development , project formulation &formation of self-help groups.
- To understand the adaptation of a normal diet to a modified diet, about the causes, clinical symptoms and planning of diets for various diseases & during the different stages of lifespan.

- To comprehend curriculum models for different types of early childhood education institutions fostering creativity in preschoolers, organisation of early childhood care and education centres, formulation of child health & Nutrition programme & Set up their own institute. about awareness of challenges and new trends in early childhood care and education.
- To enable to use the study of Home Science as a teaching tool , a case study for Research project formation to engage students in research and reflective discussion ,encourages higher order thinking, facilitates creative problem solving and allows student to develop realistic solutions to complex problems

M.A. PREVIOUS - Home Science

➤ **Paper 1-Research Methodology**

Course Outcomes :-

- To enable the students to understand and comprehend the basics in research methodology
- To apply the basic principles of research methodology in research project work.

➤ **Paper 2- Human and Community Nutrition**

Course Outcomes:-

- To introduce and encourage to adopt healthy eating habits in order to promote wellness and prevent disease.

➤ **Paper 3- Human Development**

Course Outcomes :-

- To enable the students to analyse the developmental changes that occur during conception to old age
- To understand the needs of different stages of life span

➤ **Paper 4 -Resource Management and Consumer Economics**

Course Outcomes :-

- To comprehend the management process, motivating factors, management of family resources, Ergonomics, Work Simplification
- To introduce with responsibilities of consumer, marketer and government in the market place, consumer behaviour and management of human economic and environmental resources.

M. A. FINAL- Home Science

➤ Paper 5- Institution Management

Course Outcomes:

- To enable the Students to understand about food and personal hygiene ,food service industry ,food production, personnel management ,budget making as well as standardisation of recipe and the various steps to set up their own food service unit.

➤ Paper 6 -Family Relations and Family Welfare

Course Outcomes:-

- To introduce with the concept of marriage, family and family life cycle and child welfare.
- To understand different approaches for the protection of children.
- To Gain knowledge about the role of national and international agencies working for child and family welfare, exceptional child and counselling for family welfare.

➤ Paper 7- Textile and Clothing

Course Outcomes:-

- To help the Students to know about textile fibres, fabric, quality of textiles, fashion cycle,
- To introduce clothing Budget, consumer problems related to textiles, new inventions in the textile sector , textile industries and career opportunities in the textile sector entrepreneurship development in textiles.

➤ Paper 8- Extension Techniques and Programmes

Course Outcomes :-

- To enable the students to understand about extension & communication ,learning and motivation
- To learn the use of extension teaching methods, programme planning, entrepreneurship development , project formulation &formation of self help groups.

➤ Paper 9-A- Advance Nutrition and Dietetics

Course Outcomes:-

- To help the students to understand about the adaptation of a normal diet to a modified diet
- To introduce the causes, clinical symptoms and planning of diets for various diseases & during the different stages of life span.

➤ **Paper 9-B- Early Childhood Care and Education**

Course Outcomes :-

- To understand and comprehend about curriculum models for different types of early childhood education institutions fostering creativity in preschoolers, organisation of early childhood care and education centres, formulation of child health & Nutrition programme & Set up their own institute.
- To spread awareness about the challenges and new trends in early childhood care and education.

➤ **Paper -9-C- Case Study**

Course Outcomes :-

- To work on case study for research project formation.
- To engage students in research and reflective discussion
- To encourage higher order thinking and facilitate creative problem solving and allow the student to develop realistic solutions to complex problems

FACULTY OF SCIENCE

❖ M.Sc.- BOTANY

Programme outcomes :

- To enable the students to understand the basic characters of different plant groups.
- To understand Anatomy, Embryology plant disease, plant breeding, Physiology Taxonomy Economic Botany of plants.
- To familiarize with genetics evolution microbiology biotechnology

M.Sc. PREVIOUS -Botany

➤ **PAPER I : MICROBIOLOGY, PHYCOLOGY, MYCOLOGY AND**

PLANT PATHOLOGY

Course Outcomes: -

- To familiarize with microorganisms, their beneficial, pathogenic roles and their importance in day to day life.
- To enable students understand course & prevention of common plant diseases.

➤ **PAPER II : BRYOLOGY, PTERIDOLOGY And GYMNOSPERMS**

Course Outcomes:-

- To Introduce with the concept development evolution among plant groups and knowledge enhancement of different plant parts.

➤ **PAPER III: ECOLOGY, PHYTOGEOGRAPHY, ETHNOBOTANY AND ECONOMIC BOTANY**

Course Outcomes:-

- To recognize the environmental issues, conservation policies and use of plants as medicines.

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➤ **PAPER-IV: BIOCHEMISTRY AND PLANT PHYSIOLOGY**

Course Outcomes:-

- To Enable the students to understand the structure of biomolecules and plant processes

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M.Sc. FINAL –Botany

➤ **PAPER V: ANGIOSPERMS: TAXONOMY, MORPHOLOGY, ANATOMY & EMBRYOLOGY**

Course Outcomes:-

- To provide deep knowledge of modern day plants, their structure and development.

➤ **PAPER VI: MOLECULAR BIOLOGY, BIOTECHNOLOGY, GENETICS, PLANT BREEDING AND BIOMETRICS**

Course Outcomes:-

- To introduce students with various techniques and evolution knowledge biometrics provides analytical skills.

➤ **PAPER- PAPER VII : (B) ADVANCED PLANT ECOLOGY –I**

Course Outcomes:-

- To enable the students to know about types, distribution & adaptation of various plants.
- To study about plants to know their environment in a better way.

➤ **PAPER VIII : (B) ADVANCED PLANT ECOLOGY-II**

Course Outcomes:-

- To know about types, distribution & adaptation of various plants.
- To study about plants to know their environment in a better way.

❖ **M.A. -MATHEMATICS**

Program Outcomes :-

- To develop ethical, moral and social values to make good human being for society.
- Understand scientific thought for all aspect in social life.
- To develop the problem solving thinking with scientific knowledge.
- To demonstrate highest standards of Actuarial ethical conduct and Professional Actuarial behavior, critical, interpersonal and communication skills as well as a commitment to life-long learning.

- To develop various communication skills such as reading, listening, speaking, etc. which will help express ideas and views clearly and effectively.
- To develop entrepreneurship skill.

Program Specific Outcomes :-

- To be competent to success in various national exams as NET-JRF, GATE, NBHM etc. for higher education.
- To have a strong foundation in core areas of Mathematics, both pure and applied.
- To provide advanced knowledge on topics in pure mathematics, empowering the students to pursue higher degrees and apart from the research jobs, students can also To work or get jobs in marketing, business & other technical fields.
- To enable the students to use their knowledge to start new dimension in the interdisciplinary field of research or teaching.
- To communicate mathematical ideas with clarity and coherence, both written and verbally.
- To imbibe effective scientific and/or technical communication in both oral and writing.
- To continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences.

➤ **Details of Courses Offered under the programme M.A./M.Sc. Mathematics**

➤ **PAPER I-ADVANCED ABSTRACT ALGEBRA**

Course Outcomes:-

- To enable the students to define groups, rings and fields
- To enable the students to define solvability of groups and their relation with algebraic equations

➤ **PAPER II-ADVANCED COMPLEX ANALYSIS**

Course Outcomes:

- Understanding about analytic nature of a complex valued function
- Apply program solving using complex analysis techniques applied to diverse situations in physics, engineering and other mathematical contexts.
- To be aware the students about singularities and evaluation of integrals using Cauchy's theorem.

➤ **PAPER III-TENSOR ANALYSIS**

Course Outcomes:-

- Ideas of divergence, curl, and the Laplacian for tensors to represent derivative operations
- Apply the theory to study physical quantities like moment of inertia

➤ **PAPER IV-CALCULUS OF VARIATION AND SPECIAL FUNCTIONS-I**

Course Outcomes:-

- To aware students about various special functions that arise in the solution of various classical physics problems
- To make a student able to solve various optimization problems like brachistochrone problem

➤ **PAPER V-NUMERICAL METHODS – I**

Course Outcomes:-

- Apply algorithms to solve any algebraic or transcendental equation
- Quantitative Analysis and prediction of any mathematical model

SEMESTER II

➤ **Paper-I-ADVANCED LINEAR ALGEBRA PAPER**

Course Outcomes:

- to understand algebraic and Geometric interpretations of Linear transformations
- recognise and use matrices, eigen values in various mathematical problems

➤ **PAPER II-MEASURE THEORY AND INTEGRATION**

Course Outcomes:-

- To acquaint a student with advancement in analysis from Riemann integral to Lebsgue integral
- generalizing the notions of length, area and volume

➤ **PAPER III-INTEGRAL TRANSFORMS**

Course Outcomes:-

- Student will be able to apply transform techniques in solution of differential equations
- To solve boundary value problems for example the ones that arise in thermal physics

➤ **Paper IV-SPECIAL FUNCTIONS-II**

Course Outcomes:-

- The students would be able to determine special functions that arise in various disciplines

➤ **Paper V-Numerical Methods II**

Course Outcomes:-

- fitting of curves for approximating the relationships between variables
- Numerical approach to differential equations

SEMESTER III

CORE COMPULSORY

➤ **PAPER I-DIFFERENTIAL EQUATIONS**

Course Outcomes:-

- Approximating the solution of initial value problems to desired accuracy
- Solve engineering problems like heat and wave equation and those comprised of dynamical systems

➤ **PAPER II-GENERAL TOPOLOGY**

Course Outcomes:-

- to make a student understand about generalized approach towards metric spaces
- To understand the compactness of a set

CORE ELECTIVE

➤ **Paper IV- OPERATIONS RESEARCH**

Course Outcomes:-

- To enable a student to use simplex method to solve linear optimisation problems that usually arise in industries
- To understand the various algorithms for linear programming problems.

➤ **Paper V-PROGRAMMING IN C++**

Course Outcomes:

- to create a C program for given logical problem
- practically solve the numerical problems on computer without pen and paper

OPEN ELECTIVE

➤ **Paper II-MATHEMATICAL STATISTICS**

Course Outcomes:

- To understand and apply concepts related to various probability distributions
- To understand and expressing probability of events
- To understand mutual relationships of events and their conditional probability

SEMESTER 4

CORE COMPULSARY

➤ **PAPER I- INTEGRAL EQUATIONS**

Course Outcomes:-

- learning techniques to solve differential equation by converting them into integral equation

➤ **PAPER II-FUNCTIONAL ANALYSIS**

Course Outcomes:-

- to understand Banach spaces and their properties
- to understand Gram Schmidt orthonormalisation for given set of vectors

CORE ELECTIVE

➤ **Paper I-GRAPH THEORY**

Course Outcomes:-

- to make a student understand about various algorithms like Dijkstra Algorithm and how food delivery apps like Zomato use it
- Student would be able to apply graph theory for network analysis, routing etc.

➤ Paper IV-NON LINEAR PROGRAMMING AND DYNAMIC PROGRAMMING

Course Outcomes:-

- introduction to quadratic optimisation problems that arises in science and various methods to solve them
- To enable a student to determine the existence and conditions for optimality of a non linear programming problems

OPEN ELECTIVE

➤ Paper II-MATHEMATICAL STATISTICS – II

Course Outcomes:-

- Applying statistics to a sample of normal population
- Determine the efficient and sufficient estimator for statistical attributes

❖ M. Sc. ZOOLOGY

Programme Outcomes:

- To understand the complex evolutionary processes and behavior of animals and correlate the physiological processes of animals and relationship of organ systems.
- To develop and understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species.
- To gain knowledge of Argo based Small Scale industries like sericulture, fish farming, butterfly farming and vermin-compost preparation.
- To develops empathy and love towards the animals.
- To analyze the relationships among animals and other organisms.
- To understand the applications of biological sciences in Apiculture, Aquaculture, Agriculture and Medicine.
- To gain knowledge about research methodologies, effective communication and skills of problem-solving methods.
- To gain an understanding of the natural world and measures to help conservation.

Program Specific Outcomes :

- Understand Nature, environment natural resources and their conservation, Classification & Behaviour of different animals, Human genetics, Cytology and Evolution.
- Apply the wide range of subject based skills to various fields that provide a base for future career in disciplines such as Health Sciences, Agriculture, Environmental Management, Biotechnology, Publishing, Teaching and Research.
- Distinguish between the Structure, Function, Behaviour and evolution of different animals.
- Perform, Assess and implement practical techniques and procedure to solve biological problems of animals and analyse and quantify data collected during any project.
- To prepare the students for career options as Animal Behaviorist, Conservationist, Wildlife Biologist, Zoo Curator, Wildlife Educator, Zoology faculty, Forensic experts, lab technician and job opportunities in Pharma industry ,media houses as scientific writers and editors, Environment consultants etc.
- To prepare the students for many competitive exams like RPSC, UPSC NET SET GATE.

M.Sc.Previous -Zoology

➤ Paper I – Taxonomy, Phylogeny, Structure and Function in Invertebrates

Course Outcomes:

- To help students learn the categories, organisms so they can more easily communicate biological information taxonomy.

➤ Paper II – Biological Chemistry, Immunology and Physiology

Course Outcomes:

- To gain knowledge about the conservation biology and natural source management
- To know the interdependence between people and nature:

➤ Paper III- Molecular Biology, Cytogenetics and techniques in Biology

Course Outcomes:

- To apply the tools of molecular biology to develop improved knowledge about drugs, vaccines diagnostic tests to improve human & animal health.

➤ Paper IV- Evolution, Statistical Methods and Computer Application in Biology

Course Outcomes:

- To explain how life develop on earth and how different species are connected
- To understand the evolutionary linkages in the addressing of biological challenges &diversity of life
- To help in the study of genetics, medic reason through the study of zoology.

M.Sc. Final-Zoology

➤ PAPER V: CHORDATA & DEVELOPMENTAL BIOLOGY OF CHORDATES

Course Outcomes:

- To introduce Chordates for an ecosystem study of these animals
- To gain knowledge of chordates as representative animals for anthropocene to understand the continuity of life from one generation use the next.

➤ PAPER VI: ANIMAL ECOLOGY AND ETHOLOGY

Course Outcomes:

- To gain knowledge about the conservation biology and natural source management
- To know the interdependence between people and nature:
- To enable to investigate the behavior non human animal which has important applications in field such as medicine, ecology and animal training.

- **PAPER VII(D): FISH BIOLOGY**
- **PAPER VIII(D): FISH BIOLOGY-FISH BIOLOGY PRACTICAL BASED ON PAPER VII AND VIII**

Course Outcomes:

- To apply scientific knowledge for the development of fishing industry
- To provide knowledge about rational exploitation and management of fish stocks.

❖ **M. Sc. CHEMISTRY**

Programme Educational Objectives:-

- Attainment of proficiency in chemistry from a basic level to the present understanding.
- Acquiring cognitive research abilities necessary for further studies.
- Proficiency in conducting experiments, making observations, and analysing data applicable to any Chemistry institution.
- Knowledge of the available tools for carrying out certain scientific investigations.
- To effectively communicate chemical knowledge to professional scientists and the general public using both verbal and written means.

Programme Specific Outcomes:-

- To comprehend the use of traditional disciplines in advanced chemistry.
- To achieve a comprehensive mastery of both factual and experimental knowledge throughout the primary subjects of chemistry
- To use models for computation, data analysis, and experimentation to address scientific problems faced by businesses.
- To go more deeply into the fundamentals of Physical, Inorganic, and Organic Chemistry.
- With the purpose of gaining knowledge of contemporary analytical and spectroscopic instruments, as well as their applications to various sections of chemistry.
- In addition to designing and carrying out experiments, one must also evaluate and interpret the data collected.
- To perform admirably as an individual and in a team setting.
- To get an understanding of the multidisciplinary character of chemistry and apply that understanding to a range of chemical issues.
- To realise the value of establishing goals and the significance of reflective learning throughout one's life.
- To acquire knowledge, plan, and exhibit environmentally, socially, ethically, health- and safety-conscious, and productively sustainable industrial responses.

M.Sc. Previous-Chemistry

➤ **PAPER-I INORGANIC CHEMISTRY**

Course Objectives: To equip the students with the knowledge of bonding and structures of Inorganic compounds and their chemical aspects.

Course Learning Outcomes: Upon successful learning, students will be able to:

- Access structural knowledge of inorganic molecules and their applications.
- Understand metal- ligand interaction in solution phase and their applications.
- Apply crystal field theory and molecular orbital theory for metal-ligand bonding.
- Evaluate acidic nature acids formed by oxides and hydroxides of metals.

- .Understand preparation, properties and structural aspects of metal-ligand pi complex.

➤ PAPER-II ORGANIC CHEMISTRY

Course Objectives: To impart advanced knowledge on nature of bonding in organic molecules, structure and reactivity, reaction mechanism, nucleophilic substitution, addition reactions to carbon-heteroatom multiple bonds and radical reactions.

Course Learning Outcomes: Upon successful completion of the course, students will be able to understand:

- The fundamental concept of delocalized chemical bonding, conjugation in organic molecules and role of electronic effects.
- Types of organic reactions and determining reaction mechanism, kinetics, energetics, structure, stabilities and reactivities of various reactive intermediates.
- The fundamental concepts of aliphatic nucleophilic substitution reactions, neighbouring group participations including their reaction mechanism and stereochemical outcomes of products.
- The fundamental aspects of various addition reactions to carbon-heteroatom multiple bonds including their mechanistic aspects and applications in organic synthesis.
- The chemistry for the generation radicals, detection, radical geometry and stability, various types of free radical reactions, including radical substitution, rearrangement and oxidation reaction, mechanistic aspects of various free radical reactions.

➤ PAPER-III PHYSICAL CHEMISTRY

Course Objectives: To impart advanced knowledge about quantum mechanics, equilibrium and dynamics of a chemical reaction.

Course Learning Outcomes: Upon successful completion of the course, students will be able to understand:

- Basic principles and laws of Quantum Chemistry.
- Understanding about classical thermodynamics including non ideal systems.
- Understanding rate laws based on Chemical Kinetics.
- Understanding different aspects of surface chemistry.
- Different aspects of Electrochemistry

➤ Paper-IV: ANALYTICAL CHEMISTRY

Course Objectives: To make aware the students with various aspects of spectroscopy and diffraction methods as well as to equip them to use this knowledge for practical purposes.

Course Learning Outcomes: Upon successful learning, students will be able to

- Understand various aspects of NuclearMagnetic Resonance Spectroscopy like NMR like shielding of magnetic nuclei, factors influencing chemical shift etc.
- Understand basic principles of Electron Spin Resonance Spectroscopy (ESR) and other important factors like factors affecting the 'g' value, Isotropic and anisotropic hyperfine constant etc.
- Understand basic principles of photoelectron spectroscopy.
- Understand principles and different aspects of X-ray diffraction, Debye – Scherr method of X-ray structural analysis of crystals, Ramchandran diagrams etc.
- Understand principles and applications of electron diffraction and neutron diffraction.

PRACTICAL

➤ Inorganic chemistry Practical

Course Objectives: To impart practical knowledge of qualitative and quantitative analysis of less common ion in metallic mixture, in alloys and in less soluble inorganic compounds

Course Learning Outcomes: Upon successful learning, students will be able to 1.

- Identify the less common ions directly and in the mixture
- Analyze less soluble metal oxides
- Identify metals from the metallic alloys

➤ Organic chemistry practical

Course Objectives:

- To develop experimental skills of various qualitative analysis
- including separation and purification techniques, TLC and column chromatographic methods, functional group identification using IR spectra.
- To prepare various organic compounds, study of reaction mechanism
- Involving different reactive intermediates, characterization of products by Spectral techniques.
- To develop experimental skills for quantitative analysis.

Course Learning Outcomes: Upon successful learning, students will be able

- To acquire knowledge on the qualitative analysis of separation of binary mixture of organic compounds and purification techniques,
- To understand separation by TLC methods, separation and purification by column chromatographic methods,
- To develop knowledge on functional group identification using IR spectra.
- To prepare various organic compounds involving different reactive intermediates, study of reaction mechanism, characterization of products by various spectral techniques.
- To understand quantitative analysis and develop experimental skill to determine iodine and saponification values of an Oil sample and acquire knowledge on DO, COD, BOD of water sample.

➤ Physical Chemistry Practical

Course Objectives: To show the practical applications of basic principles of physical chemistry, like of surface chemistry, phase equilibria, chemical kinetics, and electrochemistry

Course Learning Outcomes: Upon successful learning, students will be able to understand

- How to analyse errors and other statistical data
- To get hand on experience how to measure adsorption, determine congruent composition of binary mixture, glass transition temperatures, constructing phase diagram for 3 component system
- To calculate velocity constant of various rate equations including ester hydrolysis, iodine clock reaction and primary kinetic salt effect.
- To determine molecular weight, degree of dissociation of different electrolyte.
- To determine the rate constant for hydrolysis/ inversion of sugar using polarimeter.

M.Sc. FINAL- CHEMISTRY

➤ PAPER-V SPECTROSCOPY PHOTO CHEMISTRY AND COMPUTER IN CHEMISTRY

Course Objectives: To impart knowledge of spectroscopic techniques and applications and brief knowledge of photochemical and solid state reactions and to equip the students with the knowledge of Ms Excel, Ms word, Foxpro, Mopac, Lotus.

Course Learning Outcomes: Upon successful completion of the course, students will be able to understand:

- Basic principles of symmetry and group theory.
- Background of spectroscopy and their applications.
- Understanding various aspects of molecular spectroscopy.
- Basic principles of vibrational spectroscopy including and its application in molecular characterization.
- Basic principles of Raman spectroscopy and Microwave spectroscopy with different applications.
- know the basic structure and functioning of a computer.
- Develop code for the laboratory data analysis such as linear regression.
- How to operate standard program packages such as MS Excel using PC.

➤ **PAPER-VI MODERN TECHNIQUES AND SCOPE OF CHEMICAL BIOLOGY ELECTIVE PAPERS**

Course Objectives: To introduce the basics of the chemical structure and function of important biological molecules.

Course learning outcomes: Upon successful learning, students will be able to

- Incorporate the basic terminology of cell structures and inculcating the understanding of the basic function different cell organelles as well as introducing the biomolecules.
- To impart understanding about the structure and function of important carbohydrates and learning the carbohydrate metabolism through various biological cycles.
- To know and gain information about various important lipid molecules in biological system and their role in the structure of biological membrane.
- To gain knowledge about the chemical and enzymatic reactions of peptides, proteins and amino acids, study amino acid metabolism and sequence determination.
- Understanding the chemical composition of the genetic material DNA and RNA as well as preliminary information about their replication.
- The concept of Bioinorganic Chemistry and its biological applications.
- Enzyme as biological catalysis and its remarkable catalytic power.
- Co-enzyme chemistry and their structures function relationship.
- The concept of Biophysical Chemistry and Bioenergetics.
- The chemistry of Biopolymers and the role of various interactions existing with them.
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➤ **Group-B Paper: VIII-A ORGANIC SYNTHESIS**

Course Objectives: To impart advanced knowledge of reactive intermediates, stereochemistry of organic compounds, pericyclic reactions.

Course Learning Outcomes: Upon successful learning, students will be able to learn

- The chemistry of different types of aliphatic substitution reaction and its application.
- The chemistry of different types of aromatic electrophilic and nucleophilic substitution reaction and its application in advanced organic chemistry.
- A concept of stereochemistry with stereo chemical aspects of organic synthesis at advance level.
- The mechanistic facets of Addition of Carbon- Carbon multiple bonds and Elimination reactions.
- The advance knowledge of Pericyclic Reactions.

➤ **Group-B Paper-VIII-B Heterocyclics and Natural Products**

Course Objectives: To introduce the basic knowledge of various natural products including terpenoids, carotenoids, alkaloids, steroids, plant pigments, Haemoglobin, prostaglandins, pyrethroids and rotenones.

Course Learning Outcomes: Upon successful completion of the course, students will be able to understand:

- The classification, occurrence, isolations, nomenclature, structure determination and chemical synthesis and biosynthesis of terpenoids.
- The classification, occurrence, isolations, nomenclature, structure elucidation, physiological effects, chemical synthesis and biosynthesis of alkaloids.
- The occurrence, isolations, nomenclature, determination of structure, chemical synthesis and biosynthesis of steroids.
- The classification, occurrence, isolations, nomenclature, methods for determination of structure, chemical synthesis of various plant pigments, synthesis of haemoglobin, and biosynthesis of flavonoids.
- The classification, occurrence, isolations, nomenclature, biogenesis and physiological effects of prostaglandins, chemistry and importance of pyrethroids and rotenones.

➤ **PRACTICAL.**

Course Objectives: To develop experimental skills of various separation, purification techniques and structural elucidation of natural products.

Course Learning Outcomes: Upon successful learning, students will be able to learn

- Isolation and identification of natural products.
- Estimation of bio-molecules by chemical methods.
- Multistage organic synthesis and spectroscopic analysis.

FACULTY OF COMMERCE

❖ **M.Com.-ABST**

M.COM. (PREVIOUS) ACCOUNTANCY AND BUSINESS STATISTICS

➤ **PAPER I- MANAGEMENT ACCOUNTING AND FINANCIAL CONTROL**

Course Outcomes:

- To acquire Knowledge about the Financial key points of an organisation.
- To understand about how to raise fund and their utilisation.
- To knowledge about solvency procedure of an organisation.
- To achieve knowledge about encompasses various functions including budgeting, forecasting, cost accounting and financial analysis.
- To knowledge about preparing various reports and use about mathematical and quantitative techniques.

➤ **Paper II: RESEARCH METHODOLOGY AND STATISTICAL TECHNIQUES**

Course Outcomes:-

- To understand about research and its procedures.
- To knowledge about collection, analysis, interpretation and various terminology of research.
- To make clarity about what is hypothesis and how important their use in research.

- To understand various tools of statistics which helps in research.
- To knowledge about how sampling theory works I.e. collection of data to test of hypothesis by various tests like “Z”, “t”, “F”, Chi square.

➤ **Paper-III: HIGHER ACCOUNTING**

Course Outcomes:-

- The key purpose of this paper is that focus on company or corporate accounting procedures.
- Helps student knowledge about how measurement of profits in economics & accounting.
- To enhance knowledge about stock related transaction, Inflation their significance, limitations and accounting.
- To learned about how merger, reconstructions, amalgamations, demerger work and their implications on business.
- To develop basic to high level clarity on IND AS and International financial reporting standard (IFRS) and accounting of holding their subsidiary.

➤ **PAPER IV: COST ACCOUNTING AND COST CONTROL**

Course Outcomes:-

- To introduce knowledge about design & maintain the record under company act for cost accounting. Also inspired for understanding about cost information system.
- To develop capability of students about how process costing, job costing, batch costing and contract costing works.
- To understand role of standard costing in budgetary control by way of calculate various variances.
- To learn about use of break-even analysis in marginal decisions.
- To brief about transfer pricing in international business-related work.

M.COM. (FINAL) ACCOUNTANCY AND BUSINESS STATISTICS

➤ **PAPER - V: DIRECT& INDIRECT TAXES**

Course Outcomes:-

- To familiarize students about income tax act, rules, regulations so that they develop understanding about day-to-day activities and also business related works.
- To introduce detailed overview about Income tax act and their rules.
- For develop clarity about how indirect tax I.e. GST works, GST act, SGST, CGST concepts works.
- To enhance the student knowledge in recording & maintaining of records inn Sales tax also clarity about exemption, demand, recovery related works.
- Course also helps student for E-filling procedures, rates of GST, important dates and IGST procedures.

➤ **PAPER-VI: OPERATIONS RESEARCH**

Course Outcomes: -

- To create basic understanding about operational research. Also understand about operational planning, use of statistical technique in operational research.
- By use of Transportation how we minimize the cost of distribution or maximize the profits.
- By way of linear programming, we understand relationship among two or more variable and optimal allocation of limited resources.
- For study about decision making in different situation use game theory of conflicts/complications.
- To helps knowledge about PERT that can be used for planning, scheduling and controlling the projects when time not known and CPM use for total project duration.
- To study about motion, fatigue, concept of productivity & value analysis.

➤ **PAPER - VII: MANAGEMENT AND OPERATIONAL AUDIT**

Course Outcomes: -

- To develop basic understanding about meaning, nature of management & operational audit and knowledge about review of internal control, manufacturing operations, policies & appraisal of management decisions.
- To study about audit of public sector companies and maintain knowledge about professional discipline.
- To learn about what is cost audit their objects, advantages, right, duty of cost auditor and how prepare cost audit reports
- To develops understanding how report generate in special cases and investigations.
- To brief study about banks, co-operative society, holding & subsidiary company audit.

➤ **PAPER –VII: ADVANCED COSTING PROBLEMS**

Course Outcomes: -

- To maintain & develop advance knowledge about cost accounting analysis , design of cost records, break even analysis in management decision marking.
- To use and familiarize about computer in cost accounting and also knowledge about product & productions decisions.
- To enhance knowledge about pricing decisions, production accounting.
- To understand the method & procedures about cost reduction programme and participation of employees in the programme.
- To make clarity about various type of treatment like R& D cost, wastage, defectives, spoilage, obsolesces.

➤ **PAPER-IX: PROJECT PLANNING, APPRAISAL AND CONTROL**

Course Outcomes:-

- To introductory knowledge to students about investment opportunities & detailed project report.
- To inspired students for understanding about source of financing and appraisal of project and tax implications on it.
- To develops clarity about how financial institutions sanction the project and how organisation project planning perform.
- To build understanding about project review, controlling & monitoring the projects.

➤ **PAPER–X: TAXATION ANDTAX PLANNING**

Course Outcomes: -

- To develops understanding about direct tax law in India and how we make planning for taxation and problems while doing tax planning.
- To clarity about various methods available for tax planning for salaries.
- To introduce knowledge about various terminology of taxation like tax holidays, rebate, deductible and non-deductible expenditure.
- Tax planning on capital gains, evasion of tax etc.