

D. P. VIPRA COLLEGE, BILASPUR(C.G.)

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Program Outcomes

Program Outcomes for B.Sc. students

PO 1: The B. Sc. Programme develops scientific temperament and attitude among the science graduates.

PO 2: The qualities of a science observation, precision, analytical mind, logical thinking, clarity of thought and expression, systematic approach, qualitative and quantitative decision making are enlarged.

PO 3: The program also empowers the graduates to appear for various competitive examinations or choose the post graduate programme of their choice.

PO 4: This programme trains the learners to extract information, formulate and solve problems in a systematic and logical manner.

PO 5: This programme enables the learners to perform the jobs in diverse fields such as science engineering, industries, survey, education, banking, development-planning, business, public service, self-business etc. efficiently.

Program Outcomes for B.com students

PO1: The B. Com. Graduates would be able to acquire basic and fundamental knowledge and skills for doing business and commercial activities of their choice.

PO2: The program also empowers the graduates to appear for various competitive exams or choose a profession of their choice such as CA, CS, ICWA, MBA, M.Com etc.

PO3: The program enables the students to acquire the accounting knowledge, management principles, retail trading, banking and insurance transactions, business economics and financial management.

PO4: The students also acquire knowledge in the field of management accounting, corporate accounting, statistical and mathematical techniques and knowledge relating to corporate law and business laws.

PO5: The students become capable of doing a business of their choice or choosing a profession or can become employees having basic knowledge and skill required for such activities.

Program Outcomes for B.A students

- PO 1: The students acquire knowledge in the field of social sciences, literature and humanities which make them sensitive and sensible enough.
- PO 2: The B.A. graduates will be acquainted with the social, economic, historical, geographical, political, ideological and philosophical tradition and thinking.
- PO 3: The program also empowers the graduates to appear for various competitive examinations or choose the post graduate programme of their choice.
- PO 4: The B. A. program enables the students to acquire the knowledge with human values framing the base to deal with various problems in life with courage and humanity.
- PO 5: The students will be ignited enough to think and act over for the solution of various issues prevailed in the human life to make this world better than ever.

Program outcome for M.com Students

- PO 1: The post graduate program provides the students advanced knowledge in the field of business and management and also enables the students to acquire the basic skills required for carrying out business activities, research, stock market operations, accounting practices, etc.
- PO 2: The program also provides them with adequate knowledge and skill to provide consultancy services in Finance and Marketing.
- PO 3: Similarly after completion of the program students can confidently prepare for NET, SET, and other competitive examinations of their choice.
- PO 4: After the completion of post graduate program there is a wider scope for research work.

Program outcome for M.Sc Students

- PO 1: Ability to integrate and generate in-depth relevant scientific knowledge for the benefit of related course.
- PO 2: Ability to apply knowledge to perform project works scientifically to explain Course phenomena.
- PO 3: Ability to analyze and solve Course problems and also ability to evaluate situations and react responsibly to communicate, cooperate and lead a team among peers and others.
- PO 4: Ability to integrate professional ethics in life, organization, society and individual to fulfill the needs of mankind in both spiritual and material aspects.
- PO 5: Ability to acquire knowledge independently for continuous personal and professional Development

PO 6: Ability to explain managerial concepts and identify business opportunities and initiate action to achieve it.

Program outcome for M.A. Students

- PO 1: The students acquire in depth knowledge in the field of social sciences, literature and humanities which make them sensitive and sensible enough to solve the issues related with mankind.
- PO 2: The postgraduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking of their respective subjects.
- PO 3: The program also empowers the post-graduates to appear for various competitive examinations or choose the any post graduate or research programme of their choice.
- PO 4:The M. A. program enables the students to aquire the knowledge with human values framing the base to deal with various problems in life with courage and humanity.
- PO 5: The students will be ignited enough through the knowledge of the special PG programme to think and act over for the solution of various issues prevailed in the human life.
- PO 6: Through the PG programme the students will come know about research in their respective subject. It may also provide the information to the students for collection of Data, enquiry, primary and secondary methods of collection of data, classification and tabulation of data. Students get knowledge of various research methods and can realize the importance of research to find solutions of a specific issue.

Program Specific Outcomes

B.Sc. Physics Programme Specific Outcomes

On completion of the Program student able to:

- Understanding of core knowledge on various papers op Physics. Clear the concepts which help them in understanding physical phenomenon in nature.
- Demonstrate skills and competencies to conduct scientific experiments related to Physics.
- Indentify their area of interest and further specialize in the Physics.
- Possess advanced knowledge and skills in job market for various technical industries.
- Relate their knowledge and skills in carrying out independent work.
- Analyze situations, search for truth and extract information, formulate and solve problems in a systemic and logical manner.
- Discuss debate and communicate in a clear and logical way, with graduates in Physics and other fields.

M.Sc. Physics Programme Specific Outcomes

On completion of the Program student able to:

- Develop a logical and reasoning abilities.
- Develop thorough understanding of synthesis and characterization of solid state Physics and electronic Electronics.
- Develop various applications of Nanotechnology and Electronic Devices.
- Develop a thorough understanding of Renewable Energy sources.
- It helps to develop them in various research fields in Physics.
- It helps to develop them in CSIR Examination.

B.Sc. Electronics Programme Specific Outcomes

- The students attain a sound level in basic Electronics and laid a secure foundation for research and higher studies.
- The students have development problem-solving skills, experimental and data analysis skills in Electronics.
- They learn various concepts which help them in understanding construction and working of electronics equipments.
- At the end of the course, students develop problem solving skills and learn various concepts which help in developing logical tools and models used to solve various real life problems.

B.Sc. Chemistry Programme Specific Outcomes

- After completing this programme students will be able to integrate their knowledge of skills in order to become problem solving:
- Students followed and understood general laboratory practice guidelines, including safety.
- They are able to handle instruments for basic and modern chemical analysis.
- After completing the UG program the students secured thorough knowledge of Basic and Applied Chemistry.
- To make students capable of studying Chemistry and Analytical Chemistry in academic and industrial courses.
- To expose the students to promising frontiers of Chemistry and Analytical Chemistry.
- To build up problem solving skills in students.
- To develop abilities to apply the knowledge of contents of principles of Chemistry.
- To develop the power of appreciation, the achievements in Chemistry and the role in nature as well as society.
- To explore knowledge to the students and studies in Chemistry in multidisciplinary areas that can be helpful for self-employment.

M.Sc. Chemistry Programme Specific Outcomes

- To develop abilities to apply the knowledge of contents of principles of Chemistry inculcated by teachers.
- To develop proper attitude towards the subject and ability to explore the subject up to thorough depth retaining their interest.
- To develop the power of appreciation, the achievements in Chemistry and its role in nature as well as in the social order.
- To develop skills required in Chemistry such as the proper handling of apparatus, chemicals and sophisticated instruments, ability to analyze the data and its interpretation, etc.
- They will learn to do their research ethically, with areas at the forefront of Chemical Sciences, with interdisciplinary approach.
- Students will become able to secure jobs in industries, teaching profession and other requisite government employments.
- To flourish interest of PG students to pursue their further studies in research institutes and in renowned institutes with Chemistry as a discipline.
- To make them able to qualify National Competitive examinations such as NET, SET, GATE, JRF, UGC-CSIR etc.
- To be able to apply the concept and principle studied in Chemistry to various emerging areas of Chemical Sciences.

B.Sc. Zoology Programme Specific Outcomes

- The students are expected to acquire the knowledge of animal science, natural phenomenon, and manipulation of nature and environment by man.
- Understanding the scientific terms, concepts, facts, phenomenon and their interrelationship.
- Applications of the knowledge develop skills in practical work, experiments and laboratory materials.
- Students followed and understood general laboratory practice guidelines, including safety.
- They are able to handle instruments for basic and modern analysis.
- To develop scientific attitude which is the major objective this makes the students open minded, critical observations, curiosity, thinking etc.

Abilities to apply scientific methods, collection of scientific data, problem solving.

M.Sc. Zoology Programme Specific Outcomes

- Students will demonstrate broad understanding of major current and past theories research findings and methodologies and techniques in their area of concentration.
- Students will develop critical thinking skills.
- Students will develop and complete original research that advances a specific field of study within one of the broad subject area.
- Students will retrieve, evaluate, and interpret professional scientific literature and use this information to develop theoretical framework, hypothesis and prediction.
- Student will conduct independent research analyze and interpret resulting data.
- Student will prepare and submit manuscripts resulting from their independent research for publication in professional peer-reviewed journals.
- Students are encouraged for study of sericulture, apiculture, pisiculture and poultry keeping for future endeavor.

B.Sc. Botany Programme Specific Outcomes

A degree with Botany is applicable to many types of careers.

- Some plant biologists work primarily outdoors, in forests, parklands, or fields.
- Others work in laboratories, museums, in botanical gardens, or in industry.
- Graduates go into fields as diverse as biotechnology, environmental monitoring and protection, agriculture and Ethenobotany.
- More than half of Botany students go on to post graduate/higher studies in natural science, agriculture, environmental sciences, and education.
- Students can work to develop organic farming.

M.Sc. Botany Programme Specific Outcomes

- Students can become Plant Pathologists specialize in diagnosis
- Learners can work as Plant Ecologists
- Students can avail the opportunity to become Plant Evolutionary Biologists and Taxonomists.
- Learners can work as Plant Physiologists and Molecular Biologists.
- Students can work and research in the field of Genetically altered food production.

B.Sc. Microbiology Programme Specific Outcomes

- Learners will understand the scope and historical developments in microbiology, characteristics of different types of microorganisms and methods of their classification.
- Students will understand ultra structure of bacterial cell. Explain the nutritional requirements and mechanisms of their transportation in the cell.
- Understand and use methods of visualizing microorganisms, controlling growth of microorganisms, isolation of microorganisms. Perform isolation and maintenance of bacterial cultures.
- Learners will understand and explain the body defense mechanisms and describe the immunological concepts with reference to infection, immunity.
- Learners will understand the impact of microorganisms on environment for sustainable development.
- Students will understand ultra structure life cycle of Virus, Fungus, Algae and Protozoa.

M.Sc. Microbiology Programme Specific Outcomes

- Design microbiological experiments at an advanced graduate level.
- Demonstrate expertise with a variety of conventional and advanced microbiology techniques.
- Read, understand and review existing literature related to their research topic.
- Produce significant scientifically reliable research results.
- Research outcomes and their interpretations should be clearly presented orally, elucidate in posters and in peer reviewed publications.
- Build up awareness and perspective as a member of a local, national and global scientific community.
- Compete successfully for industrious

B.Sc. Mathematics Programme Specific Outcomes

- Students can apply induction principle
- Students can find LUB, GLB apply the definition of limit and continuity.
- Students can learn integration through infinite sum.
- They can solve improper integral of any kind using the known methods
- Students can know the definition of the limit of a sequence, evaluate the limits of a wide class of real sequences.

- Students can understand the significance of differentiability for complex functions and be familiar with the Cauchy-Riemann equations.
- Students can apply discrete probability distributions.

M.Sc. Mathematics Programme Specific Outcomes

- Students are able to learn Action mapping and fundamental theorems of homomorphism.
- Analyze any type of sequence or series.
- Recognize definition and properties of initial value problems.
- Understand how complex numbers provide a satisfying extension of the real numbers
- Solve examples on Bays Theorem.
- Differentiate continuous and discrete random variable.
- Find Dimension of vector space.
- Know and understand products measures of various theorems

BCA Programme Specific Outcomes

- Use and apply current technical concepts and practices in the core computer applications.
- Identify computer application related problems, analyze them and design the system or provide the solution for the problem.
- Recognize the need for and an ability to engage in continuing professional development.
- Communicate effectively by oral, written, computing and graphical skills and presentation.

B.Sc. CS Programme Specific Outcomes

- Be able to analyses a problem, construct alternate approaches to its solution and evaluate the merits and demerits of each.
- Be aware of the history of the discipline of Computer Science and understand the conceptual underpinnings of the subject.
- Understand the nature of the software development process, including the need to provide appropriate documentation.
- Understand standard techniques for solving a problem on a computer, including programming techniques and techniques for the representation of information.
- Understand the basic theory of computer architectures, including computer hardware and networking.

- Be able to effectively communicate with persons who are not technically versed in the subject.
- Be able to communicate effectively, both orally and in writing.
- Recognize the need for life-long learning and development.

M.Sc. CS Programme Specific Outcomes

- Utilize and implement hardware and software technologies that provide computing solutions to address the needs of an organization.
- Identify various needs within the organization and provide solution using computing technologies.
- Apply basic cultural, social, legal, and ethical practices inherent in the discipline of computing.
- Understand analyze and develop computer programs in the areas related to algorithms, system software, compiler design, data mining, mobile computing and networking for efficient design of computer based system of varying complexity.
- To attain deep knowledge and understanding the principles of programming for applying in broad range of languages and open source platforms.
- To improve the ability of imparting knowledge in various domains and to solve real world problems with modern technological tools.

B.Sc. Biotechnology Programme Specific Outcomes

- Apply basic science, engineering and program core to solve complex biotechnological problems.
- Isolate, purify and characterize biological samples using sophisticated analytical experimental techniques.
- Design process equipment, plants, biosensors and recombinant molecules for biotechnological and allied processes.
- Apply research based knowledge and biotechnological methods to investigate complex biological problems
- Apply modern software tools including prediction and modeling methods on biological databases to identify issues in biomedical problems
- Assess personal, product and environmental safety, intellectual property and social responsibilities related to modern biotechnological research and development.

- Identify measures for energy, environment, health, safety and society following ethical principles.
- Work in multi-disciplinary teams to attain project objectives, document the activities and present reports effectively.
- Apply engineering and management principles for effective implementation of projects
- Pursue life-long learning to enhance knowledge and skills for professional advancement.

B.A. Political Science Programme Specific Outcomes

- Students will understand the need for a constitution and explain the role of constitution in a democratic society.
- For the welfare of the society students can demonstrate an understanding of the concepts
 & central themes of the political ideologies examined
- Students will able to explain the Governmental mechanism from Gram panchayat to Parliament and can suggest solutions over various issues in its functioning and implementation.
- Students will use various political concepts and ideology to analyze new situations.
- Students can work as political analyst, political party adviser, as a research scholar or can be a political thinker and writer.

M.A. Political Science Programme Specific Outcomes

- Students will be able to describe the history and making of Indian constitution with its philosophical base.
- Students will be able to explain parliamentary system in India.
- Students will be able to critically analyze and apply the basic principles of Indian and western political thinkers and scholars.
- Students will be able to understand the composition and functions of Election
 Commission of India and other state election commissions.
- Students will be able to understand the meaning, nature and scope of the International organization, International Law and International Politics.
- The programme provides the students with the capacity to identify issues and problems relating to the realization of human rights.

B.A. Sociology Programme Specific Outcomes

- Curriculum or Syllabus of the sociology department attempted to provide social sense amongst the students.
- It also tried to give them sociological understanding of various concepts which we found
 in the society and at the same time it gave them a sociological perspective to analysis
 social issues, social movements, social structure, social thinkers and their theoretical
 contribution in the sociology.
- Teaching faculties of the sociology department took initiative to make students familiar with the sociological discourse.
- Another very useful outcome also we found that academic study of the papers related to social research methods, social welfare policies, human rights and society played very vital role to provide useful knowledge to students for their careers in social research, NGO's government job.

M.A. Sociology Programme Specific Outcomes

- · How to choose the problem for research in Social study.
- He can understand and guide about various research methodology to carry out the research in sociology so that issues in social life of the people can get better solutions over the problems faced by mankind.
- He can be an adept and can work as an advisor to various social organizations to iradicate the social issues.
- He can undertake Research Projects over the social issues independently and can sought financial assistance for it from Government or non-Government organizations.
- He can be a good social worker and address various social issues and make the people aware about it.
- He can work better to make the society sensitive and sensible enough to overcome various social issues.

M.A. Public Administration Programme Specific Outcomes

- Students will understand the basic concepts of Public Administration and can observe it as a responsible citizen.
- Students can have knowledge of basic administrative system in India and work for reforms in it.
- Students are able to work effectively on any administrative post; right from Class I to Class IV.

- Students will be able to find out the multi-dimensionality of problems and processes of Indian Administration and can work for reforms in it. Understand the concept of Office Administration.
- They can develop employer-employee relations manage stress and maintain more efficiency of the organization. Students can develop a local leadership.

B.A. Economics Programme Specific Outcomes

- Students will understand the role finance institution, finance management, Banking E Banking, money and Capital markets.
- Students will understand the concepts GNP, NNP, GDP, NDP, PCI, Disposable Income.
 Students will understand various aspects and features of Indian economy.
- Student will know about Consumer's behavior, Demand analysis, cardinal and ordinal
 utility. It may also provide the information to the student for elasticity of demand, price,
 income and cross elasticity of demand.
- Students will learn about the concepts of statistical methods. Students will know the
 concepts of supply of money and demand for money, types of money, classical and
 modern theory of interest, Trade cycle Theory.
- Students will know demographic features, size, sex ratio, growth rate, migration,
 Industrial development, Industrial policy, FERA, FEMA, Act. and the Concept of LPG.
- The students will understand various concepts of Agricultural Economics and they can
 be well familiar with rural Economy. Students can work efficiently in the field of
 banking, finance, industry, farming, consumer rights, production, research and trade.

M.A. Economics Programme Specific Outcomes

- Students can know how to apply the knowledge from Economics in various sectors of society in order to solve various financial issues.
- Students will know Foreign Trade, FDI, International Trade, Foreign Policy, International Institutions, such as W.T.O, World Bank, I.M.F, ASSION, and Trade Policies and International debts etc. and can design local policies to overcome economical crises.
- Students can utilize their knowledge to solve issues in land reforms, traditional and Modern Agriculture, Small and Marginal Farmers, Agricultural Production and Productivity.

- Students can design policy to build the gap between agricultural, Industry, infrastructure sectors. Students can be aware of and make the public aware of Taxation, Public debt, Fiscal and Monetary policy etc.
- Students can understand Fund Based Activities and Non Fund based Activities, Sources
 of Revenue, Merchant Banking in India, Functions of Merchant Bank and Commercial
 Banks, Concept of Credit Rating such as CRISIL, IICRA, CAREDCR, ONICRA.

B.Com. Programme Specific Outcomes

- The students able to understand the fundamental knowledge of commerce.
- The program also empowers the students to choose a profession of their choice such as CA, CS, ICMA, MBA, M.Com etc.
- The program enables the students to acquire the accounting and auditing knowledge.
- The students also acquire knowledge in the field of management accounting, corporate accounting etc.
- The students become capable of doing a business of their choice.

M.Com. Programme Specific Outcomes

- The post graduate program provides the students advanced knowledge in the field of business and management.
- It also enables the students to acquire the basic skills required for carrying out business
 activities, research, stock market operations, accounting practices, etc.
- The program also provides opportunity in consultancy services in various aspects of commerce.
- Similarly after completion of the program students can also build their career through Ph.D Programme on finance, marketing, HR etc.

B.A. Hindi Programme Specific Outcomes

- Students get information about social relations among the people through stories to develop social morals.
- Students get information about education system and they also promote to stop dowry system and another problems in society by reading literature in Hindi language.
- Course Student know about Hindi Prachin Kavita, also know modern poem it gives Human values, social commitment.
- These poems also promote students to develop sensitiveness and also Develop humanity.
- Student know new compose like dairy and letter of renowned authors.

M.A. Hindi Programme Specific Outcomes

- This programme provides an opportunities to become a translator, officer and Block writer.
- The programme offers a wide scope for research work.
- The programme encourages to be a good motivational speaker.
- The Programme also imbibe among students to become a spiritual speaker.

B.A. History Programme Specific Outcomes

- History has surrounded us and waits for the right time to explode. It never lets one to forget past easily.
- Present has its own need and facilities. Some try to forget History where as some we History as per their necessity.
- All the sage and saints through their saying portray history is very good.
- It means that everyone is utilizing history according to their perspective only thing is we
 don't realize it as it is past and parcel of our life.
- When it becomes violent and aggressive, then we realize that past is still alive and exists.
- None of the countries can history of its own and make a new beginning.
- In this way, History always is alive giving a direction to presents hence history cannot be considered as only a syllabus to study.
- Countries may be ruled or became independent anytime but the feeling of patriotism remains in the hearts of the people. History provors people about going independence whenever they are ruled by.
- One historical truth is past condition creating present and it can giving new birth to future and so it is important to remind it.
- Students can avail good opportunities to work in the field of archeology, education and research.

M.A. History Programme Specific Outcomes

- Student can go for research work in Historical places.
- This Programme provides opportunity for the students in Archeological Survey of India.
- Employment opportunity in tourism industry is opened for the students.
- The programme offers various avenues to study the various Civilizations.

B.A. English Programme Specific Outcomes

- Literature contributes to the gradual civilization of man by activating his sense perceptions sharply so as to be quick enough to react to their appeal.
- Literature arts appeal to the emotional, aesthetic, reflective, intellectual, meditative and spiritual faculties of man.
- On the other hand, literature is a mode of reflecting reality, intending to appeal to the various faculties of sensitive sensible and sentient man.
- It also offers pleasure. Besides it helps the learner to know the noble values in life
 making him a responsible citizen of this world and leads him to make the place more
 worth living.
- Simultaneously this course will help the students to improve communicative skills in English.

M.A. English Programme Specific Outcomes

- Students will gain a knowledge of the major traditions of literatures written in English, and an appreciation for the diversity of literary and social voices within-and sometimes marginalized by-those traditions.
- They will develop an ability to read texts in relation to their historical and cultural
 contexts, in order to gain a richer understanding of both text and context, and to become
 more aware of themselves as situated historically and culturally.
- Students will Value literature, language, and imagination, they will develop a passion for literature and language.
- They will appreciate literature's ability to elicit feeling, cultivate the imagination, and call us to account as humans.
- They will cultivate their capacity to judge the aesthetic and ethical value of literary texts-and be able to articulate the standards behind their judgments.
- They will appreciate the expressive use of language as a fundamental and sustaining human activity, preparing for a life of learning as readers and writers.
- Students will develop an appreciation of how the formal elements of language and genre shape meaning.
- They will recognize how writers can transgress or subvert generic expectations, as well as fulfill them. And they will develop a facility at writing in appropriate genres for a variety of purposes.

B.A. Geography Programme Speific Outcomes

- The courses of the program shall helpful to gather the information and knowledge of basics in geography.
- This knowledge will be useful to understand and survive the life with geographical situation around us, which varies spatially and temporally.
- Have firm foundations in the fundamentals and application of recent Geographical and scientific theories.
- The data and knowledge of these courses in present program will help to students to become sustain and compete in competitive world.
- They may able to interpret and analyze quantitative data.
- This program will help to students to understand the natural processes on the earth and beneath the earth surface, which directly and indirectly affecting on the human life.

M.A. Geography Programme Specific Outcomes

- The courses of this program are helpful to the student for extract the knowledge of geographical aspects at local, regional, national and global level. e.g. topography, climate oceanic activities etc.
- Being as an applied earth sciences, it useful to the study of geographical elements around us.
- By getting the knowledge of geographical aspects the students will become competent to face various competitive examinations and build their career.
- Students should have an advanced level understanding.
- Students should enlarge their professional foundations through activities such as teaching, internships, and fellowships
- Students should be able to communicate scientific results in writing and in oral presentation.
- Students should acquire the basic tools needed to carry out independent research.

Physical socio-economic survey of micro-regions.

Principal

D. P. Vipra College,

Bilaspur (C.G.) PRINCIPAL



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COURSE OUTCOME

COURSE OUTCOME OF ARTS DISCIPLINE

MA Political Science

Public Administration (Semester I)

After the completion of the course the students enable to understand the following concepts:

- To enhance the political understanding.
- The importance of public administration as an instrument for welfare state.
- The importance of public administration as a study of a discipline.
- An instrument for providing public services.
- Essential for the development of civilization.
- The importance of public administration as an instrument for development in the changing environment.

Research Methodology (Semester II)

- To acquire knowledge about the nature, area, importance and utility of research.
- To understand about the methodology of scientific research and the construction of hypothesis and sample testing.
- To obtain knowledge regarding observation, interview, questionnaire and schedule.
- To obtain information about the importance of computer in social science.
- To obtain information about the process of using statistics in research.

Federal System in India (Semster III)

- To understand about how the administration operates in the federal system of governance.
- To understand about the unitary and associational features.
- To understand the relationship between the center and the state with respect to legislative, administrative and financial relations.
- Information about the planned economic development and regional and federal system.

Local Self-Government in India(Semester IV)

- Information about the work and importance of local self-government.
- Information about the 73rd and 74th Constitutional Amendment.
- Information about the rural local self-government and Panchayati Raj system.
- Information related to urban local self-government.
- Information related to bureaucracy, lokpal-lokayukta and right to information.

MA History

Modern World (Semester I)

- To give information about the history of capitalism, imperialism, colonialism and its development in the world.
- In the history of world, all the international revolutions were understood and investment policy should be done while telling the home policy.

Contemporary World (Semester II)

- Nazism in Germany, clarifying militarism principles and highlighting its achievements and contributions
- Chinese revolution on the world stage II.

Cultural History of India (Semester III)

- Spread of Aryans in India.
- To understand the culture of epic era.

Cultural History of India (1526-1950) (Semester IV)

- To understand the cultural history of India.
- Effects of arrival of Europeans.
- To understand about the status of women in British India.

MA Sociology (Semester I & II)

Classical and Modern Sociological Theories

- To understand about the history of social thinkers.
- To understand about the bureaucracy.
- Rise of social classes and struggle for existence among them.
- To understand about the division of labour.

Methodology of social research and statistics

- To understand about the importance of research for the progress of the society.
- The need for social research in the developing country like India.
- To understand the role of direction/guidance.
- To apply the different methods to know the views of educated, uneducated and illiterate people.

Rural sociology and Rural development

- To understand the role of village in Indian society.
- Role of farmers in society.
- Culturalisation in rural society.
- Traditions in rural society.

Urban society in India and Urban social structure and problems

- To understand the urban life pattern.
- To know the development and change of city and town.
- To discuss the knowledge and effects of changes due to urbanization.
- To study the effect of social stratification on changing occupational structure.

MA Sociology (III & IV)

Perspective of Indian Society and Theoretical Perpective

- Introduction to sociological perspective
- To study about the different Indian sociologists.
- To study about the major issues related to the perspectives of Indian society.
- To study Indian society in the historical context.

Industrial Sociology and Society in India

- To study about the origin and importance of industrial sociology.
- To study about the movement of people from village to city due to industrialization.
- To understand about the industrial bureaucratic and industrial management.
- Role of human relations in productivity of work.

Demographical Profile and Social Demography of India

- To study about the importance of census in society
- To study about the effect of birth and death rate in society
- To study about the ill-effect of accumulation.
- To study about the effect of research on society.

Criminology and Correctional Institutions

- To understand about the legal practicality and social aspects in crime.
- To uncover the changing nature of crime and criminal.
- To study about the growing and changing nature of drinking and drugs in society.
- To study about the methods of punishment and reforms.

M A English Literature

Poetry (Semester I)

- This paper improves students reading style.
- Develops wits and deep understanding.
- Impacts positively on social and emotional learning of children.
- Offers new way of thinking about something.

Drama (Semester II)

- This paper helps in developing language and communication skills.
- Gives mental relief and arouses inner emotions through dialogue and expressions.
- Entertains the children.
- Helps students to understand each-other in several different aspects.

History of english literature (Semester III)

- This is a very important paper as it helps the students to know about the history of English literature.
- Helps in several competitive exams related to English literature.
- Makes a base in studying English literature.
- Deepens the knowledge about the development of English language and literature.

Colonial and post colonial literature (Semester IV)

- It develops the understanding of post-colonial literature.
- Makes students to understand how colonialism impact upon literature.
- Develops understanding, wits and creative style.

Fiction (Semester IV)

- Helps the readers to understand other people's perspectives.
- Helps the students to interpret and infer.
- Reading fiction aids creativity.
- Fiction makes us more empathetic.
- Children get more socialize and learn to focus.

Poetry (Semester II)

- Poetry enhances reading, speaking and listening skills.
- It inspires writing and encourages creative thinking.
- It purifies human emotions and helps improve ideas.
- Studying poetry gives students a healthy outlet for surging emotions.

<u>Indian literature (Semester III)</u>

- Enriches the necessary competencies that daily life requires and provides.
- Helps to understand our tradition and culture.
- Allow a person to step back in time to know about our rich past.
- Represents the ethnic memory of the Indian people.
- Plays a significant part in human life.
- Its narratives inspire empathy and give people a new perspective on their lives.

Diaspora and dalit literature (Semester IV)

- Refers to literature created by Dalits for Dalits. It meant to oppose the heinous crimes against Dalits.
- It makes acquainted to the people with the caste system and untouchability in India.
- It primary aim is the liberation of Dalits. This anger, resentment of Dalits against the social inequality comes out in grab of Dalit Literature.
- It has given groups that have faced discrimination, exploitation and marginalization as a result of the hierarchical caste system a new voice and identity.

COURSE OUTCOME OF SCIENCE DISCIPLINE

M.Sc Chemistry

Organic Chemistry (Semester I)

- To learn acylation, Nitration and prominent process in the laboratory.
- How to synthesis soap and cleaning agent.
- To understand synthesis of some of the organic drugs in the laboratory like, Asprin, Sulphonamides.
- How to prepare indicators and dyes like Methylorange, phenophthalin and indigo, Alizarin etc.
- How to isolate casin, caffine from milk and tea leaves.
- To understand the structure of Hetrocyclic compounds used as medicine.

Physical Chemistry (Semester I & II)

LAB

- The preparation for each experiment by studying lab handouts and links therein
- Safety requirements and lab skills to perform physico-chemical experiments
- How to keep records of instruments, parameters, and experimental observations
- Reporting of experimental results (including error analysis) in a publication-style (journal paper)
- An appreciation for modern problems and scientific controversies in physical chemistry
- Key spectroscopic techniques including FTIR, UV-vis absorption, luminescence, laser methods

Theory

- The application of mathematical tools to calculate thermodynamic and kinetic properties
- The relationship between microscopic properties of molecules with macroscopic thermodynamic observables
- The derivation of rate equations from mechanistic data

- The use of simple models for predictive understanding of physical phenomena associated to chemical thermodynamics and kinetics
- The limitations and uses of models for the solution of applied problems involving chemical thermodynamic and kinetics

Spectroscopy (Semester I & III)

- Determine the (most important) quantum states of a given material (atoms, small molecules) and can assign these states to energy Terms.
- Determine which quantum state(s) belong(s) to the ground state.
- The student can rationalize which transitions between quantum states as a result of an absorption, emission or scattering event have a more than zero probability of taking place.
- The student can determine which atomic orbital's, molecular orbital's, vibrational normal modes and energy terms belong to a particular irreducible representation and rationalize from there which transitions in vibrational and electronic spectroscopy are symmetry forbidden.
- The student is able to determine which vibrational motion belongs to a particular transition in the infrared region.
- The student is able to qualitatively predict which signals are to be observed in the rotational, vibrational or electronic spectrum of various materials ranging from single atoms (atomic spectroscopy) to large molecules (IR, Raman, UV-vis spectroscopy).
- Be able to predict the fragmentation patterns expected to arise in the mass spectrum of alkanes, alkyl halides, ethers, alcohols, and ketones.
- Be able to describe what happens to a compound in a mass spectrometer
- Be able to use the mass spectrum of a compound to find the molecular mass, and to help identify the structure of a compound.

Spectroscopy (Semester IV)

- Characterize the kinetics of deactivation process and their role in the photochemical reactivity.
- Quote the various types of photochemical reaction.
- Explain the basic principles of the thermodynamics and kinetics of photo induced electron transfer.
- Describe the photochemical reactivity of thane and carbonyl compounds.
- Express the principles of photo polymerization and polymer photo degradation and stabilization.

M.Sc Computer Science

Advanced operating system (Semester I)

- Reviewing the basic concept of operating system like processor, register, cache memory, instruction cycle, interrupt types and objective of operating system.
- Learn advanced features of operating system and understand how to operating system working in kernel user mode.
- Understand process thread and all process control strategy.
- Understand the use of different process scheduling algorithm and synchronization techniques to avoid deadlock.
- Learn different memory management technique like paging, segmentation and demand paging swapping.
- Able to understand input output management like organization, design issue, buffering, disk scheduling, input output management in different operating system.
- Able to understand file management and file sharing in advanced operating system.

Computer Network (Semester I)

- To develop an understanding of computer networking basics.
- To develop an understanding of different components of computer networks, various protocols, modern technologies and their applications.
- Recognize the technological trends of Computer Networking.
- Discuss the key technological components of the Network.
- Evaluate the challenges in building networks and solutions to those.
- The main emphasis of this course is on the organization and management of local area networks (LANs).
- The course objectives include learning about computer network organization and implementation, obtaining a theoretical understanding of data communication and computer networks, and gaining practical experience in installation, monitoring, and troubleshooting of current LAN systems.

Data Structure (Semester II)

- Develops skills in implementation and applications of data structures.
- Students are able to understand the algorithm and its use while planning to write program in any programming language.
- Students able to understand basic operations like traversing, inserting, deleting any record from data structure like Linked List, Array, stack, queue and graph.
- Implements basic data structure such as stacks, queues and trees.
- Applies algorithms and data structure in various real-life software problems.

Soft computing (Semester III)

- Learn soft computing techniques and their application, identity and describe soft computing techniques and their role in building intelligent machine.
- Understand neural network concept and their terminology and use the idea of artificial neural network,
- Understand learning method in artificial neural network- activation function, learning process, training and their examples.
- Learn the idea of Fuzzy Logic and use heuristic based on human experience and all mathematic concept of Fuzzy Logic.
- Introduce and use the concept of genetic algorithm and its application to soft computing using some application.
- Learn to use various tool to solve soft computing problem.
- Understand the concept of hybrid soft computing and benefit of hybrid soft computing.
- Design neuro-fuzzy model, neuro-genetic model, fuzzy-genetic & neuro-fuzzy-genetic model an experiment with MATLAB.

.NET Technology (Semester III)

- Develop the console and GUI applications using VB.Net as well as C#.NET
- Develop interactive web pages using ASP.NET.
- Students are able to develop web pages using Database connectivity.
- Explain advance concepts related to web services.

Artificial Intelligence(Semester IV)

- Understand different types of learning method- Machine Learning, supervised learning, unsupervised learning and reinforcement learning.
- Able to design Codes using Machine Learning (python).
- Able to understand different types of Algorithms.
- Able to perform such kind of Operations Breadth-first search, Depth-first search, climbing etc.

 Able to prolong which can help to develop logical programming.

C language (PGDCA)

- Students are able to develop logics which will help them to create programs in C.
- Students are able to learn about control statements. looping and Functions.
- Students are able to understand File handling to manage information related to application.

COURSE OUTCOME OF COMMERCE DISCIPLINE

M.Com

Management accounting (Semester I)

- To acquaint student with the management accounting concept.
- Tools and techniques for managerial decisions.
- Reduction in business risks.

Advanced Accounting (Semester I)

- To expose students to accounting issues.
- To expose students to practices such as maintenance of company accounts and handling accounting adjustments.
- Develop a process for or Redemption of preference shares.
- Calibrate the procedure involved in Amalgamation of companies.

Corporate Legal Framework (Semester I)

- To provide knowledge of relevant provisions of various laws influencing business operations.
- Full and faire disclosure of all reasonable information relating to the affairs of the company
- Effective participation and control by shareholders and the protections of their legitimate interests.
- Enforcement of proper performance of duties by company management.

Accounting for managerial decisions (Semester II)

- To study about standardize financial information for comparison.
- To understand about the evaluation of current operations.
- To study about the decision relating to selection of alternatives.
- To study about financial analysis.
- To study about the effect of changes in cost.

Business Laws (Semester II)

- To study about the protection of rights and interest of investors.
- To study about prohibit the abuse of dominance in a market.
- To study about rights to be protected against the marketing of goods and services.
- To study about the external trade payment.

Tax planning and management (Semester III)

- To expose the students to the latest provisions of income tax act.
- To identify the tax planning and assessment procedures for individuals, firms and companies
- To give students the working knowledge regarding legitimate way of tax planning.
- To make students aware about financial and managerial decisions after taking considerations the impact of direct tax laws.

Organizational behavior (Semester III)

- To help student to understand conceptual framework of management.
- To understand organizational behavior.
- To study about how to develop good leaders.
- To study about how to develop a good team.

International Marketing (Semester IV)

- To understand the nature of global Markets and international marketing.
- To analyze the environmental forces affecting international marketing efforts.
- To learn the benefits of international markets.
- To aware about the global international market.

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Under-Graduate Course Outcomes

Science Faculty

Department of Mathematics

B.Sc (First Year)

Vector Analysis and Geometry:

- Vector analysis, a branch of mathematics that deals with quantities that have both magnitude and direction.
- Some physical and geometric quantities, called scalars, can be fully defined by specifying their magnitude in suitable units of measure.
- A vector quantity can be represented graphically by a directed line segment, symbolized by an arrow pointing in the direction of the vectors.
- Vector analysis is a mathematical tool used to explain and predict physical phenomena in the study of mechanics.

Calculus:

- Calculus is the study of how things change.
- Calculus provides framework for modelling system in which there is change.
- The concept of speed of motion is a relation straight from Calculus.
- Calculus provides a way for us to construct relatively simple quantitative models of change.

B.Sc (Second Year)

Mechanics:

- Dynamics studies motion and its effects on force on a structure.
- Kinematics deals with observed motions and their effects.
- Statistics deal with force and their relation in a fixed part or structure.
- Mechanics is one of the fundamental areas of study in mechanical engineering.

Differential Equations:

- In mathematics, a differential equation is an equation that relates one or more functions and their derivatives.
- In applications, the functions generally represent physical quantities.
- The derivatives represent their rates of change, and the differential equation defines a relationship between the two.
- Differential equations play a prominent role in many disciplines including engineering, physics, economics, and biology.



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Advance Calculus:

- Advance Calculus is usually developed by working with very small quantities.
- These are objects which can be treated like real numbers but which are, in some sense, "infinitely small".
- Advance calculus is a collection of techniques for manipulating infinitesimals.
- Advanced calculus is supposed to be calculus of several variables or calculus of variations.

B.Sc. (Third Year)

Discrete Mathematics:

- The main objects of study in discrete mathematics are discrete objects, analytic methods from continuous mathematics are often employed as well.
- Discrete mathematics has involved a number of challenging problems which have focused attention within areas of the field.
- Theoretical computer science includes areas of discrete mathematics relevant to computing.
- Discrete mathematics has been characterized as the branch of mathematics dealing with countable sets.

Analysis:

- Real analysis stems from the concept of the real numbers. Where each numbers on the real number line is understood as partitions with infinite enumerations.
- Its application can be clearly seen in the computer world, engineering.
- Complex analysis is a branch of mathematics that studies analytical properties of functions of complex variables.
- Techniques based on complex variables are very powerful, with a large number of applications to the solution of physical problems.

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B. Sc. (First Year) & B.Sc (Third Year)

Algebra & Trigonometry & Abstract Algebra:

- To provide a first approach to the subject of algebra this is one of the pillars of modern Mathematics.
- To study of certain structures called groups, rings, fields and some related structures.
- To use algebraic methods to solve a variety of problems involving exponential, logarithmic, polynomial and rational functions, systems of equation and inequalities, sequences.
- To use mathematical vocabulary and symbols in order to understand, interpret and represent mathematical information

B.C.A. PART-I

Discrete mathematics:

- Able to argue the mathematical logics.
- Derive the concept of Boolean algebra.
- Explain the theory and concepts of Set.
- Explain the theory and logicsof Graph.

Computer fundamental and concepts of software:

- Able to describe the basics of computer.
- Explain the concepts of Memory.
- Understand the theory and concepts of Software.
- Derive the concept of loaders and compilers.

PC software packages and programming in C:

- Able to define the concepts of Operating System.
- Explain the concepts of Excel and Access.
- Understand the theory and concepts of C language.
- Able to argue the concept of file maintenance in C.

Data structure:

- Explain the use of Array.
- Understand the concepts of Linked Lists.
- Understand the concepts of Stacks and Queues.

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• Able to argue the complexity of algorithms.

B.C.A. PART-II

Operating system:

- Explain the concepts of Operating System.
- Able to argue the Scheduling algorithms.
- Explain the concept of Memory.
- Explain the structure of File-System.

Digital electronics and microprocessor:

- Derive the various logic gates.
- Explain the concepts of logic families.
- Understand the concepts of Boolean Algebra.
- Able to derive the combination and sequential circuit.

Computer networks and cyber technology:

- Derive and study the techniques of network.
- Explain the concepts of data link layer.
- Understand the concepts of network and transport layer.
- Explain the concepts of cyber law in India.

Object oriented programming using C++:

- Explain the features of OOP.
- Understand the concepts and techniques of conditional statements.
- Explain the concepts of objects.
- Understand the concepts of inheritance.

Computer graphics and multimedia:

- Explain the features of Graphic System.
- Understand the concepts 2D & 3D Transformations.
- Understand the Image processing using Photoshop.
- Understand the Vector processing using CorelDRAW.



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B.C.A. PART-III

Computer organization and architecture:

- Derive the various Registers and Memory.
- Explain the concepts of Instructions.
- Understand the concepts of Uni-processor architecture.
- Able to derive the Multi-Processor Architecture.

Software engineering:

- To Evaluate the software process models.
- To interpret the requirements and design techniques.
- To Identify the Software Testing Plan.
- To Evaluate the software project management.

Database design and RDBMS (oracle):

- To interpret the suitability of data models.
- To identifying various ER Model and Programming Techniques.
- To evaluate the Transaction Processing.
- To evaluate the concepts of oracle.

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Web technology:

- Explain the concepts of websites.
- Explain the tags of hyper-text language.
- Understand the concepts of CSS and JavaScript.
- Understand the concepts of PHP and MySQL.

Numerical analysis:

- Explain the concepts of algebraic equations.
- Explain the concepts of simultaneous equations.
- Understand the concepts of Curve-Fitting.
- Understand the concepts of Differential Equations.

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B. Sc. (C.S.) Part 1

Computer Hardware (Paper 1)

- Explain the organization of Computers.
- Explain the concepts of CPU architecture.
- Understand the concepts of memory and I/O devices.
- Understand the concepts of programming techniques.

Computer Software (Paper 2)

- Explain the concepts of languages.
- Explain the concepts of control statements and functions.
- Understand the concepts of homogeneous elements.
- Understand the concepts of file handling.

B. Sc. (C.S.) Part 2

Computer Hardware (Paper 1)

- Explain the classification and organization of computer.
- Explain the concepts of central processing unit.
- Understand the concepts of memory.
- Understand the concepts of programming techniques.

Computer Software (Paper 2)

- Explain the concepts of website.
- Explain the concepts of hypertext language.
- Understand the features of OOP.
- Understand the concepts of virtual function and file stream.

B. Sc. (C.S.) Part 3

Computer Hardware (Paper 1)

- Explain the organization of microprocessor& microcomputer.
- Explain the concepts of VDU.
- Understand the concepts of dos/windows.
- Understand the concepts of disk and files.



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Computer Software (Paper 2)

- Explain the concepts of data models.
- Explain the concepts of relational data design.
- Understand the concepts of procedure and oracle.
- Understand the concepts of GUI programming.

B. Sc. Computer Science (Third Year)

Computer Software and Hardware:

- Able to Define E-R model.
- Able to create and manage database.
- Understand the various Microprocessor architecture.
- Understand the various hardware interrupts.

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DEPARTMENT OF PHYSICS

B. Sc. (First Year) (First Paper)

Mechanics, Oscillations & Properties of matter

Students will get fundamental knowledge of Laws of motion.

- On completion of these course student will have knowledge of mechanics & properties of matter for higher studies.
- Through this course student will get practical knowledge of different type of pendulum will provide clear concept.
- This course will also give basic understanding of Astrophysics.

B. Sc. (First Year) (Second Paper)

Electricity, Magnetism & Electromagnetic Theory

- This paper will provide mathematical concepts of vector field.
- This course provides knowledge of electricity & magnetism.
- Basic concepts of Maxwell equations for electromagnetic theory.
- This course will introduce application of electricity & magnetism.
- Knowledge of gauss law & its application.

B. Sc. (Second Year) (First Paper)

Thermodynamics, Kinetic Theory & Statistical Physics

- This course will provide fundamental knowledge of statistical physics.
- After completion of this course student will get fundamental knowledge of thermodynamics & statistical physics.
- Understanding of kinetic theory of gases.
- Knowledge of different laws of thermodynamics & thermodynamics relationships.



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B. Sc. (Second Year) (Second Paper)

Waves, Acoustics & Optics

- Knowledge of waves in media.
- This paper will give clear difference between reflection, refraction & diffraction of waves.
- Through this course student will learn mechanism & application of laser.
- It gives practical approach of optical instruments and enhances student's knowledge and interest about it.

B.Sc. (Third Year) (First paper)

Relativity quantum mechanics, atomic & molecular physics and nuclear physics

- After completion of this course students will have fundamental knowledge for higher studies.
- On completion of this paper students will able to solve numerical problems based on this paper for competitive exams.
- Basic understanding of quantum mechanics.
- Knowledge regarding relativistic concept of physics.
- Understanding of modern physics through introduction of atomic & molecular theory.
- Students will learn nuclear structure and its properties.

B.Sc. (Third Year) (Second paper)

Solid state physics solid state devices & electronics

- This course will give strong base for future study of solid state physics.
- Through this course students will study transistor and different diodes characteristics.
- Application of semiconductor devices will enhance the student's interest towards research.
- Basic idea of number conversion and digital electronics.

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Department of Microbiology

B. Sc (First Year)

Paper -1 General Microbiology & Basic Technique

- To build up the concept of microorganism & fields of microbiology as well as their role in daily life.
- Students are made to understand different methods of studying microorganisms like sterilization, isolation & staining techniques.
- To inculcate the concept of structure, functional organization of viruses & bacteria and their economic importance.
- To build up the general concept of fungi and disease caused by them in crops.
- To inculcate the concept of phycology & protozoology.

Paper – 2 Biochemistry & Physiology

- To inculcate the concept of biomolecules like carbohydrates, proteins and lipids and their structure, classification & properties.
- To build up the general concept of nucleic acids (DNA& RNA) & their replication.
- Students are made to understand the concept of enzymology.
- To build up the concept of microbial metabolism, physiology & transport system.

B.Sc (Second Year)

Molecular Biology and Genetic Engineering: (Paper I)

- Building up their concept of the Fundamental of Molecular Biology.
- To make students understanding the Protein Synthesis Concept.
- Introducing them the concept of DNA Damage and DNA Repair.
- Develop their Basic Concept of the Gene correlating with the Bioinformatics.
- To lay down the Concept of Genetic Engineering.

Bioinstrumentation and Biostatistics: (Paper II)

- Students are made to understand the Principle and working of Microscope and Centrifugation.
- To build up their Concept of working of PH Meter, Chromatography its Principle and Applications.

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- Students are able to understand the law on which Spectrophotometer works and its Applications.
- To introduce them the Principle of Electrophoresis and X-ray diffraction techniques and their uses in various fields.
- The students are made to understand the Basic Concept of Biostatistics.

B. Sc (Third Year)

Paper I-Medical Microbiology and Immunology

- Students are made to understand various sources of diseases from the surroundings like Air and Water
- To inculcate the idea of various clinical diseases, their diagnosis and treatment.
- The concept of immunology laid to make them understand how human body and cells react with the exposure of various pathogens.
- The idea given to use and analyse various immunological concepts for the diagnosis of various diseases

B. Sc (Third Year)

Paper II- Environmental, Industrial and Agriculture Microbiology

- Microorganisms are omnipresent and influence human life variously. Students are made to understand the role and importance of microorganisms play in maintaining our environment and ecosystem in steady state, viz., air, water and soil.
- Having understood the various aspects of microorganisms, students are made to understand about the commercial use of microbes on industrial level to generate products of microbial origin.
- With the prior knowledge of soil microbiology, students now understand and focus
 on the soil microbes for the improvement of crop production both qualitatively and
 quantitatively

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Department of BioChemistry

B.Sc (First Year)

Biomolecules: (Paper I)

- Students are made to understand the Basic Concept of Various Biomolecules like Carbohydrate, Lipids, Proteins and Aminoacids.
- Building up their Complete Knowledge on Structure, Function & Classification of Carbohydrate, Lipids, Proteins& Porphyrins.
- Introducing them the concept of Nucleic Acid i.e DNA & RNA their Structure, Nature and various Experiments performed for the Evidence that DNA is Genetic Material.

Biophysical & Biochemical Techniques: (Paper II)

- To lay down the concept of Bioenergetics & various Laws of Thermodynamics.
- To build up their Concept of Working and Principle of Centrifugation, pH Meter & Chromatography.
- Students are made to understand the law on which Spectrophotometer works & its Applications.
- Students are made to understand the Principle Working & Applications of Electrophoresis and various Immunological Techniques.

B.Sc (Second Year)

Enzymology: (Paper I)

- Students are made to understand the complete knowledge of Enzyme its structure, Nature, Classification & Function.
- To introduce them the various Methods of Isolation & Purification of Enzymes.
- To develop their Concepts on Enzyme Kinetics.
- To understand them the Industrial & Clinical Applications of Enzymes.

Intermediary Metabolism: (Paper II)

- Building up their Concept of Metabolism of various Biomolecules.
- Students are made to understand the Biosynthesis & Degradation of Carbohydrates & Lipids.
- To develop their concept on Biosynthesis & Degradation of Amino Acids, Nucleotides & Porphyrins.

B.Sc (Third Year)

Molecular Biology: (Paper I)

- Building up their concept on Basics of Molecular Biology.
- Introducing them the Concept of DNA Replication, Transcription & Translation.
- Students are made to understand the Concept of DNA Damage & Repair.



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To lay down the concept of Recombinant DNA Technology.

Nutritional, Clinical & Environmental Biochemistry: (Paper II)

- To develop their concept on Nutritional, Clinical & Environmental Biochemistry.
- To develop their concept on Composition of Balanced Diet & Recommended Dietary Allowances(RDA).
- Students are made to understand about the various diseases related to Metabolism & enzymes responsible for this



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Department of Chemistry

B.Sc (First Year)

Inorganic, Organic and Physical Chemistry:

- To evaluate the Bohr's theory and its limitations
- To emphasise the chemical bonding ionic and covalent bonding.
- Deviation from ideal gas behaviour
- To understand dissymetric nature of organic molecules
- To emphasise the Nucleophilic addition of carbonyl compounds

B.Sc (Second Year)

Inorganic, Organic and Physical Chemistry:

- To emphasize the characteristics properties of transition metals
- To understand the lanthonoide contraction
- Acidic nature of phenol and Name reaction of phenol
- To evaluate the aromaticity of hetrocyclic compounds
- To understand the extensive and intensive properties state and path function

B.Sc (Third Year)

Inorganic, Organic and Physical Chemistry:

- To emphasize crystal field splitting in octahedral, tetrahedral and square planar complexes.
- To understand the configuration of carbohydrate
- To emphasis colour and chemical constitution
- To evaluate the physical interpretations of the wave functions
- To understand jabloanaski diagram depicting various process occurring in the excited state.

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BSc BOTANY

B.Sc (First Year)

Lower Plants

- Paleobotanist
- Mycologist
- Phycologist
- Industrist

B.Sc (Second Year)

Plant Ecology

- Student Gain Skill And Knowledge Of Plant
- Environmental Conservation And Genetic Modification Of Plants
- Conservationist
- Ecologist

B.Sc (Third Year)

Plant Pathology

- Farming Consulting
- Plant Pathologist
- Nursery Manager
- Plant Explorer

B.Sc (Second Year)

Plant Taxonomy

- Taxonomy Help Us Categorize Plants
- Study Of Taxonomy So We Can More Easily Communicate Biological Information
- Its Primary Goal Is To Reconstruct The Evolutionary History Of Plant Life
- It Divides Plants Into Taxonomic Groups

B.Sc (Third Year)

Ethnobotany

- Proper Documentation Of Medicinal Plants
- Preservation Of Herbal Plants

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- It Gives Information About Useful Plants
- The Traditional Knowledge Of The Local Culture Of People

B.Sc (Third Year)

Cytogenetics

- Karyotyping Analysis
- Fluorescence In Situ Hybridization (Fish)
- Chromosones Microarray Analysis (Cma)
- Next Generation Sequensing (Ngs)
- Precision Medicine

B.Sc (Third Year)

Biostatics

- Statistical Modeling
- Epidemiological Studies
- Designing Surveys
- Clinical Trial Design
- Statistical Finance

B.Sc (Second Year)

Plant Physiology

- Plant Physiologist
- Horticulturalist
- Plant Scientist
- Assistant Pathologist
- Assistant Professor In College/University

B.Sc (Third Year)

Plant Biotechnology

- Tissue Culcure Techniqe
- Use Of Pharmaceutical
- Important Technology For The Production Of Disease Free
- Preserve Plant Genetics



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B.Sc (Second Year)

Plant Anatomy

- It May Help Improve Food Security
- Improve Crop Yields
- Furniture, Building Material
- Identify Archaeological Plant Remain

B.Sc (Second Year)

Plant Embryology

- Employed At Ivf Clinics And Hospitals
- Student Work As Embryologists
- Work In Andrology Laboratory
- Develop Skills In Embryo Biopsy

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Arts Faculty Department of English B. A. (First Year)

Literature in English 1550-1750: Paper-1

- Renaissance Poetry includes wit, beauty and truth.
- An era of cultural revival and poetic evolution.
- Poets used repetition to emphasize their themes.
- Neo-classical Literature emphasized restraint, self control and common sense.

Literature in English from 1750-1900: Paper-2

- Romanticism focuses on celebration of nature, the individual and spirituality.
- Romanticism includes the celebration of isolation and melancholy, interest in the common man.
- Era of peace, prosperity, political awakening, democratic reforms and educational advancement.
- Conflict between science and religion.

B. A. (Second Year)

Modern English Literature: Paper 1 and 2

- It opposes the principle fundamentals of Victorianism.
- The main theme is the stream of consciousness which is a free flowing inner monologue.
- A self conscious break with traditional ways of writing.
- An era of individualism, experimentation, absurdity, symbolism and formalism.

B. A. (Third Year)

Indian Literature: Paper - 1

- Acquaintance with most ancient literature
- Major themes are east-west conflict, multiculturalism, social realism, gender issues and morality and virtue.
- Deals with religion deeds, love and human values.

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American Literature: Paper-2

- Main characteristic is plot of decline, indifferent of nature, third person omniscient reaction to romanticism and surrealism.
- It discusses American history and social issues.
- It consists of themes of individualism loss of Innocence, survival of the fittest, American dream, and relationship with nature, science and society.

B. A. Economics 1st Year

Micro Economics (Paper 1)

- Analyse traditional and classical theories of economics and understanding methodology.
- Understanding allocation of limited resources among alternative uses.
- Analyze the behaviour of consumers in terms of demand for products and attaining its equilibrium.
- Understanding Market structure and how it works.
- Observing various models against the real world.

B. A. Economics

Indian Economy (Paper 2)

- To understand the situation of economy prior and post independence.
- Comprehend the economic growth and development.
- To analyze the demographic trends in India.
- To analyze the contribution of different sectors in economy and different plans for its improvement.
- To study various economic and social issues.

B. A. (Economics) 2nd Year

Macro Economics (Paper 1)

- To understand National income and methods of calculating.
- To understand different theories of employment.
- Interpretate consumption, saving and production function.
- Describe banking and monetary system.

B. A. Economics 2nd Year

Money, Banking and Public finance (Paper 2)

To understand Money and its role in economies.



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- Theoretical analysis of real world issues and phenomena.
- To understand banking system in India.
- To analyze monetary policy and financial system.

B. A. Economics 3rd Year

Development and Environmental Economics (Paper 1)

- To understand economic growth and various models for achievement of economic growth.
- To know the demographic trends and the problems of population in growth.
- To realise the importance of environmental protection and causes of deterioration.
- Analyze different hurdles in economic growth and removal.

Department of Sociology

BA (First Year)

Introduction of Sociology:

- History of Sociology its origin and development and to make aware of its utility.
- Fundamental concept of society.
- To give information about the land and importance of society
- To study about social change.

BA (First Year)

Contemporary Indian society:

- To study about the principles of caste system, Ashram system.
- To study about the structure of Indian society.
- To study about Tribes, Dalits and the position of women in Indian society etc.
- To study about the minority, caste system, Dowry and the practice of domestic violence, divorce, etc., and to make them aware of the solutions to the same.
- To study about the provisions of Act related to unmarried conjugal relationship and information about government schemes in the country.

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B.A. (Third Year)

Social Thinker:

- To make aware about the father of sociology and their thoughts in the present scenario.
- To study about the present industrial society, so in such a situation, knowing the division of labour, struggle and its solution.
- To study about the social change
- To study about the situation of the so-called aristocracy.

Social Research and Statistics:

- To understand about the importance of social research
- To know about the truth.
- To study about universe in research and selection of sample size
- To study about the literacy rate, birth-death rate and production rate etc.

Department of Political Science

B.A.(Second Year)

Western Political Thoughts : (Paper I)

- To study about the meaning and importance of political principles.
- To study about the relevance of present and development of western thoughts.
- To express about the developed principles.
- To study about the degradation of political principles.

Comparative Politics: (Paper II)

- To study about the theoretical aspects and development of comparative politics.
- To study about the practical aspect of comparative politics.
- Comparative study of the governance system of Britain, America, Switzerland and China.
- To study about the concept of political system.

Department of History

Indian History (1206 to 1716):

- To study about the history of Mughal period.
- To study about the establishment of Mughal dynasty.
- To study about the socio-economic condition during the Mughal administration.



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- To study about the establishment and administration during Medieval period.
- To study about the third battle of Panipat.

World History (1890 to 1964):

- To study about the causes and result of war between Russia and Japan.
- To study about the war between China and Africa.
- To study about the Second World War.
- To study about the Cold War.

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Commerce Faculty

B. Com (First Year)

Business Communication:

- Exchange of information, Increase the Efficiency
- Achievement of Organisational Goals
- Motivating the Employees
- Developing a better image, improves Job Satisfaction

Business Regularly Framework:

- To provide exposure to Students about the Business Regulatory frame work of India.
- To create awareness about select laws concerning business activities
- To provide basic legal knowledge
- To provide knowledge about t intellectual property rights

Business Economics:

- To familiarize the students with the basic concept of microeconomics.
- To make student understand the demand and supply analysis in business applications.
- To familiarise students with the production and cost structure under different stages of production.
- To understand the pricing and output decisions under various market structure.

Financial Accounting:

- To Impart basic accounting knowledge as applicable to business.
- Accounting is used for the maintenance of a systematic record of all financial transactions in books of accounts.
- Calculation of Profit and Loss: The main objective of accounting is to ascertain the profit earned or loss sustained by a business during an accounting period.
- Partnership accounting requires a recording of each partners' share of the profit and capital of the business
- Branch accounts are dependent on the nature of business and specific need of a particular branch. To know the profit or loss of each branch.

Business Mathematics:

- To understand the basic concepts of Mathematics.
- To have a proper understanding of mathematical applications in Economics, Finance, Commerce and Management.

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Business Environment:

- Examine how different factors and trends in the external environment are likely to impact upon a proposed business venture.
- Conduct a business analysis of the local and national environment.
- Employ business models and tools to evaluate changes in an organization's business environment.
- Present a business environmental analysis and recommendations to reduce the risk of the identified issues.

B. Com (Second Year)

Cost Accounting:

- Students will be able to understand the meaning cost, costing and Cost Accounting, Advantages and Disadvantages of Cost accounting.
- Students will be able to understand attendance and payroll system, Methods of Labour Turnover, remuneration and bonus methods, also be able to calculate labour cost.
- Students will be able to understand cost unit, cost centre and calculation of various costs.
 They shall also able to prepare a cost sheet to find out cost and net profit/net loss of a particular product.
- Students will be able to acquaint with the procedure of store-keeping, documentation of
 material receipt and issue, how to use a technique for setting stock levels, calculation of
 Economic Order Quantity, Methods of valuation of inventory and importance of ABC
 analysis for classification of the various materials.

Business Statistics:

- To develop the students ability to deal with numerical and quantitative issues in
- business
- To enable the use of statistical, graphical and algebraic techniques wherever relevant.
- To have a proper understanding of Statistical applications in Economics and Management.

Fundamentals of Entrepreneurship:

- To identify the concept of entrepreneurship, its emergence and its need for society.
- To generate a business idea and diagnose for a new business opportunity.
- To prepare a business plan.
- To identify different institutional support available to the entrepreneur.



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Principles of Business Management:

- This Course familiarizes the students with the basics of principles of management
- The process or functions of planning, organizing, leading, and controlling
- The act or process of creating goals and objectives as well as the strategies to meet them
- The materials presented the students will be able to: Understand the decision making process and understand management information systems.

Company Law:

- This objective of this course is to provide basic knowledge of the provisions Companies
 Act. 2013, along with relevant case law.
- To provide the students with thorough knowledge of corporate laws
- To explore in detail the major concepts and issues that are essential in today's business world. To carry business in legal ways. To have a secured business
- To make the students aware of the legal issues involving businesses and how to deal with them

Corporate accounting:

- To expose students to accounting issues
- To expose students to practices such as maintenance of company accounts and handling accounting adjustments
- Develop a process for or Redemption of preference shares
- Calibrate the procedure involved in Amalgamation of companies.

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B. Com (Third Year)

Auditing:

- It includes the basic but important concepts related to Audit which help students to understand the scope of audit.
- Students will know the process of auditing, pre-commencement consideration of audit. To understand Audit Programme, Audit Evidence, procedure, techniques and Audit working papers.
- To have practical knowledge regarding the points to be covered while checking the payment as well as receipts of vouchers and the related supporting documents.
- To understand how an asset or a liability can be verified by applying certain audit techniques.

Indirect Tax:

- To acquaint the students with certain basic terms of Goods and Services Tax Act.
- To acquaint the students with various transactions for supply and identify levy of a particular tax.
- To acquaint the students with provisions related to the term supply, place of supply, time of supply and value of supply.
- To acquaint the students with application of above provisions to various practical situations.

Income Tax:

- To acquaint the students with certain basic terms of Income Tax.
- To acquaint them with residential status and scope of total income.
- To acquaint them with computational provisions under the heads "Salary Income",
 "Income from House Property", "Profits and Gains of Business /Profession", "Capital
 Gains", "Income from other Sources" and head wise computation for these heads of
 income.
- To acquaint them with certain deductions from total income and basic computation of total income for individual assesses.

Management Accounting:

- This course provides the students an understanding of the application of accounting techniques for management.
- Explain the need for management accounting information. Explain the differences between management accounting and financial accounting.
- Communicates Up-to-date Information Evaluates policies effectiveness



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Principle of marketing:

- Collection and Analysis of all information related to the marketing
- Product planning, product pricing
- Appropriate distribution management
- To maximize consumer satisfaction

International Marketing:

- To understand the nature of global Markets and international marketing
- To analyse the environmental forces affecting international marketing efforts
- To learn the benefits of international markets
- To be globally aware

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B. Sc (First Year) (Cytology, Taxonomy, Embryology)

- Study of Evolutionary Phylum to Marine habitats.
- Knowledge to animal development.
- Lower Vertebrates to Higher Vertebrate in (Evolution of Animals)
- Immunity process of Human.
- Cancer Cell.
- Reproduction Biology & Embryology
- Extra embryonic membrane
- Placentation & Embryo development.
- Adaptation in Animal.
- Migration in Animal. (Fish/Birds)

B. Sc (Second Year) (Vertebrates Anatomy, Physiology, Endocrinology, Animal Behaviour)

- Economic Zoology
- Apiculture (Honey production)
- Sericulture (Silk production)
- Lac culture (Lac production)
- Fish culture (For food purpose)
- Poultry keeping
- Hospital & Nursing Scope (Gyno)
- Endocrinology (Hormones) Types of Gland)
- Our Body Function (External/Internal)
- Fertilization & Reproduction Cycle, Pregnancy
- Menstruation, Lactation, Parturition.
- Heart, Kidney, Lungs, Brain, Blood-circulation.
- Blood pressure, ECG Test & other paramedical.
- Nervous system & Muscle constriction and Bones.
- Research & Study & Lab work.

B. Sc (First Year) (Ecology, Toxicology, Tool Techniques, Industrial Zoology)

- Scope of Research, field work study & paramedical.
- Environment study and social importance.
- Ecology & their importance.
- Grassland, Forest, Marine, Wildlife.
- Pollution Air, Water, Soil, Noise.
- Conservation of Natural resource.
- Biosphere reserve, National Park.
- Sanctuaries & Project tiger.



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- Toxic aliments, Food poisoning.
- Milk & Bakery product industries.
- Water treatment plant -Domestic water, Sewage water.
- Medicine & paramedical Industries.
- Alcohol Industries.
- Tools and techniques- Microscope, pH meter, colorimeter, centrifuge, electrophoresis.
- Genetics & forensic science (DNA finger printing)
- Enzymes & metabolism of Carbohydrates, Lipid protein.
- Cytology/Biotechnology/Field Lab work.
- Protozoon, Helminthes, Nematode Diseases & Treatment.

Principal
P. Vipra College,

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