**PROGRAM OUTCOMES**

**Government PG College for Women, Rohtak**

**(2023-2024)**

**Program Outcomes**

Government PG College for Women (GPGCW) offers three-years undergraduate B.A. (pass) programme in English, Economics, Fine Arts, Music, Geography, Psychology, Political science, Mathematics, History, Sanskrit, Sociology, Physical Education and Commerce. The college also provides B.Sc. (Home Science), B.Sc. (Pass) medical and non-medical programmes and B.Sc. with computer science.

The college also offers a full-time three-year programme BBA (Bachelor of Business Administration) and Bachelor's Degree in Computer Application (BCA). The college offers B.A. (HONS) programme in Hindi, Economics, Commerce, Psychology, Math and Physics. Moreover, the college offers Postgraduate programmes in Hindi, Commerce, Economics, Geography, Hindi, History, Physics and computer science. The college also offers B.Com. Vocational Programme.

**Programme Learning Outcomes** of undergraduate programmes reflect disciplinary knowledge, general awareness, specific abilities, and global competencies that all students in many academic subjects should gain and display. The following are some of the program's available outcomes:

* **Disciplinary knowledge:** Proficient in exhibiting a thorough understanding and grasp of one or more fields studied as part of an undergraduate degree.
* **Communication Skills**: Potential to properly convey thoughts and opinions in writing and verbally; Use proper mediums to communicate with others; openly share and express one's views; exhibit the ability to pay attention, read and write critically, and convey complicated material to various audiences in a clear and concise form.
* **Lifelong Learning:** Potential to gain knowledge and skills, such as learning how to learn, "that are essential for engaging in active learning throughout life, through self-paced and self-directed learning directed at personal growth, meeting economic, social, and cultural objectives, and adjusting to evolving trades," through self-paced and self-directed learning.
* **Multicultural Aptitude:** Have a global perspective and awareness of many cultures' values and beliefs and the ability to effectively engage in a multicultural society and interact politely with diverse groups.
* **Self-directed Learning:** Aptitude to work independently, find relevant project resources, and manage a project from start to finish.
* **Problem Solving:** Aptitude to generalize from what one has learned and apply one's competencies to address various non-familiar issues rather than just repeating curricular core knowledge; and use one's learning in real-world scenarios.
* **Research-based skills:** Theseskills developsan attitude of curiosity and the ability to ask pertinent questions, solve problems, synthesise ideas, and articulate them. It recognises cause-and-effect connections, resolve issues, formulate and test hypotheses, analyse, interpret, and make conclusions from data and facts, establish assumptions, anticipate cause-and-effect relationships; ability to plan, execute, and notify the experimental data or investigation; capacity to manage, implement, and report the findings or analysis.
* **Logical reasoning:** It is theability to assess the validity and significance of facts; spot logical faults and holes in others' arguments; analyse and synthesise data from a range of sources; develop legitimate conclusions and back them up with evidence and examples; and respond to opposing views logically.
* **Team Work:** This creates the logicalcapacity to work successfully and respectfully with various teams. It helps in fostering cooperative or coordinated effort on a group and acts as a group or team for a common purpose to work efficiently as a team member.
* **Scientific Reasoning:** This enables to evaluate, interpret, and make conclusions from quantitative and qualitative data, as well as critically examine ideas, evidences, and experiences from an open-minded and reasoned point of view.
* **Digital Nous:** It is the potential **to** exhibit capacity to use ICT in many learning scenarios, as well as access, assess, and apply a variety of relevant information sources and use appropriate tools for data analysis.
* **Moral and Ethical consciousness/reasoning:** Beinga rational citizen this is theability to live one's life according to moral/ethical ideals, establish an ethical position/argument from different perspectives, and employ ethical methods in all work. It facilitates the capability of identifying concerns related to one's work, avoiding unethical behaviour such as data fabrication, falsification, misrepresentation, plagiarism, or failure to respect intellectual property rights; appreciating environmental and sustainability issues; and taking an objective, unbiased, and truthful actions in all facets of one's work.
* **Leadership qualities**: It is the potential of mapping out a team's or organisation's tasks and setting direction, as well as developing an inspiring vision. It forms a team that can help to realise the idea for inspiring and motivating team members to interact with that vision, and using management skills to guide people to the correct destination placidly and efficiently.

**Postgraduate programme learning outcomes** reflect knowledge, skills, learning, and experience.

1. **Knowledge:** Through the courses, seminars, and conferences that are part of students’ specific postgraduate studies, students will have a understanding of a particular field (and maybe allied subjects). Students have also completed an in-depth research project and authored a dissertation on a topic of interest to employers at the completion of the degree. Employers will value their expertise in handling a project on their own competence and performance regardless of the subject.
2. **Work-Related Skills:** Students have learned technical skills relevant to their subject of study e.g., laboratory, IT, Research and language skills. In addition, the student will have gained or enhanced valuable academic and work-related skills. These may include the following:
3. Managing a research project on her own,
4. Demonstrating the ability to think critically and analyse,
5. Using knowledge in a creative way to solve difficulties,
6. Collaborating with people from a variety of disciplines and cultures,
7. Being able to use critical thinking and research skills,
8. Maintaining a professional demeanour at work,
9. Making updated decisions based on inadequate information when dealing with complicated, uncertain circumstances,
10. Taking charge of her education and growth,
11. Analyzing texts critically and the flow of thoughts
12. Communicating your thoughts in a variety of methods and to persons with varying degrees of understanding,
13. Being a self-disciplined and self-directed learner.
* **Technical Skills:** Technical and communication skills to design, evaluate, implement, analyse, theorise, and disseminate research that contributes to knowledge.
* **Cognitive Skills:** Cognitive skills refers to demonstrate mastery of theoretical knowledge and reflect critically on theory and its application. Cognitive, technical, and creative skills are designed to investigate, analyse and synthesise complex information, problems, concepts, and views. It applies established theories to different bodies of knowledge or practice cognitive, technical, and creative skills to generate and evaluate complex ideas and concepts at an abstract level. The cognitive and technical skills to design, use and evaluate research and research methods.
* **Research Skills:** These skills are demonstrated cognitive and technical aspects in a body of knowledge or practice and use critical analysis and reflection to ethical study, synthesise, and evaluation of detailed information, problems, concepts, interpretations, and theories. It is used for highly developed communication skills to effectively convey research findings to various audiences and collaborate with a team of subject expert.
* **Experience**: It facilitates job placements, volunteering part-time work, work-based projects, or the dissertation and provide students with work-related experience. This experience may be relevant to their eventual career path, but it will demonstrate work-related skills even if it isn't. Other university activities that students may have participated in include being a class representative or a member – possibly a leader – of an academic or social group. It prepares an individual as a team member, or coach, a student may have participated in university sports, music, or any other extracurricular activities. These experiences will improve students’ talents in teamwork, communication, and leadership that are highly appreciated by the companies.
* **Application of Knowledge and Skills:** The student will demonstrate the application of knowledge and skills in following manner:
1. With creativity and initiative to new situations and/or for further learning,

**(b)** With a high-level personal autonomy and accountability,

**(c)** With planning and executing a substantial piece of research.

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| **Programme Name** | **Programme Specific Outcome (PSO)**  |
| **B.A. (Pass)** **English** | **1.** On successful completion of the Programme, the students will be able to corelate Literature and language to a wider context.**2.** They will achieve initial foregrounding and attainment of a certain level of competence in English language usage.**3.** They will have exposure and introduction to varieties of Literary genres composed in English Language. **4.** They will gain academic competence in comprehending Literary works.**5.** Grounding in reading Literature as a part of contemporary discursive discourse. **6.** They will be able and eligible to impart instructions in English Language and Literature at college level.  |
| **B.A. (Pass)** **Economics** | The students upon completion of B.A (Pass) Economics Programme will be able to:**1.** Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.**2.** Effective Communication: Listening, Speaking, Reading, Writing clearly in person and through electronic media in English in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology. **3.** Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings. **4.** Effective Citizenship: Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering. **5.** Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them. **6.** Environment and Sustainability: Understand the issues of environmental contexts and sustainable development. **7.** Self-Directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context of socio-technological changes. |
| **B.A. (Pass)****Arts Painting**  | **1.** The subject of fine arts indulges the mind of the students in one of the most creative processes of representing the contemporary world through the beauty of art in a language that is an outcome of imagination, skill and talent. **2.** The students are encouraged to develop the artistic process of creating art through the formal mode of making practical assignments that enhances the ability of the students at core level of learning and practicing the skill required in the professional fields. **3.** Understanding of Concepts: Effective understanding of concepts by students as they engage in practical based learning of the syllabus related conceptual learning such as, the basic understanding of the colour wheel through practical sessions and related assignments. Referring to the broader perspective, students will be able to understand the true meaning behind the art that they create with a sound conceptual and contextual knowledge. **4.** Strengthening of Core Abilities: Strengthening of students’ ability to perceive, cognize and think effectively with an open mind set to formulate solutions for the problems addressed during practical renditions in the subjects of Art and Applied Arts. This also enhances the ability of students to consider alternative systems of thought that challenge received notions and issues.**5.** Identification and Application: Identify and apply the basics of Art Appreciation such as elements and principles of Visual Art in the process of communicating concepts and layouts of visual design. It also enhances their capability of effectively expressing concepts in concrete form.**6.** Interpretation of perceived knowledge: On the basis of the perceived knowledge of theoretical historical narratives of western as well as Indian art; an understanding of the contemporary issues addressed in the art world; details of processes and directions required in the field of Art and Applied Art, the program outcome will enhance the ability of applying perceived knowledge conditioned by the manner in which it is exhibited, presented and distributed. It develops innovation in response and the ability to cognize interpretations. A basic understanding of the knowledge at hand with the ability of expressing it through the chosen medium of art. |
| **B.A. (Pass)****Applied Arts** | **1.** Ability to Describe: Understanding the meaning of a work of art the student will be able to appropriately describe the historical events and contemporary issues concerning their specific field of interest. This enhances their ability to contemplate methods of presentation and involvement in inventive manners of response. **2.** Development of Skill: Regular projects and assignments related to syllabus focus on developing skill using various mediums of art, developing their understanding of mediums and materials best suitable to the concept and task at hand. Skilful creation of artistic forms using suitable mediums of art indulges creativity in intended results.**3.** Performance: Practical performance in the subject of Art and Applied Art is carried forward on the basis of critical analysis of communication, forms and concepts. It further develops a professional standard that can be well carried forward in the contemporary art scenario.**4.** Enhancing Creativity: Continuing learning from the syllabus offered encourages acting upon ideas leading to contemplation and critical thinking in effectively meeting artistic standards. **5.** Problem solving at practical level: Trial and Error method through practical involvement with consistent repetition encourages solving problems based on formal, conceptual and communicative levels; ultimately leading towards refinement. Visual, conceptual and technical problems can be solved independently or through self-involvement and also through collaborative groupings that leads to a holistic approach with a general analysis, evaluation and refinement.**6.** Exploration: Syllabus related practical renditions encourage the ability to explore the expressive possibilities of inumerous mediums of art applied through the diverse conceptual content. Self-independence and confidence lead to students’ exploration with self-creativity such as direct painting from nature or similar expressions. **7.** Personal expression: The program outcome in the subject of Art and Applied Art ultimately lead to expression of independent working and progression of a consistent development of a personal style. |
| **B.A. (Pass)** **Music** | **1.** Communication skills such as listening and singing are developing. **2.** Possess practical as well as theoretical knowledge of Ragas, Talas and Gayanshaili etc.**3.** Personal skills such as singing in groups and singing independently are developing. **4.** Know the importance of Music in, National integration, Meditation and Depression.**5.** Acquire the knowledge of Gharanas, folk music and notation. **6.** Practical and theoretical knowledge of basic parts of instruments such as Harmonium, Tanpura and Tabla is developing.**7.** Demonstrate practical and learning skills of music. |
| **B.A. (Pass)****Geography** | The students upon completion of B.A. (Pass) with Geography Programme will be able to:**1.** Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives. **2.** Effective Communication: Listen, Speak, Read, Write and clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology. **3.** Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings. **4.** Effective Citizenship: Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering. **5.** Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them. **6.** Environment and Sustainability: Understand the issues of environmental contexts and sustainable development. **7.** Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes. **8.** Knowledge of Spatial System: An ability to understand geographical theories and functioning of physical environment its interaction with human and consequent cultural environment. **9.** Statistical and Cartographical Skills: Acquaint with collection, organization, tabulation and analysis of spatial data. Ability to use basic geographical and cartographic tools to solve real spatial problems.**10.** Geographical Applications: Acquaint with basic and applied geographical tools and methods. The aim of this course is to provide a foundation in Remote sensing and Geographical Information System Tools. **11.** Human Geographical Perspectives: An ability to understand human adaptation to environment, world demography, and understanding of human settlements. **12.** Sustainable Resource Utility: This course emphasizes on environmental problems emerging from man environment interaction. The course also addresses environmental degradation, sustainable development, deforestation, soil erosion, air and water pollution. The course also acquaints with the measurement of development with the help of theories along with the conceptual issues of poverty and inequalities.**13.** Perspectives on Indian Geography: Acquaint with physical, socio-economic and cultural features of India. This course reviews major contemporary spatial issues in India such as disaster management; demographic issues; agrarian crisis; environmental issues and regional inequality. |
| **B.A. (Pass)****Psychology** | **1.** Knowledge Base of Psychology: Students will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.**2.** Research Methods in Psychology: Students will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.**3.** Critical Thinking Skills in Psychology: Students will respect and use critical and creative thinking, sceptical inquiry, and, when possible, the scientific approach to solve problems related to behaviour and mental processes.**4.** Application of Psychology: Students will understand and apply psychological principles to personal, social, and organizational issues.**5.** Values in Psychology: Students will be able to weigh evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a discipline.**6.** Information and Technological Literacy: Students will demonstrate information competence and the ability to use computers and other technology for many purposes.**7.** Communication Skills: Students will be able to communicate effectively in a variety of formats.**8.** Sociocultural and International Awareness: Students will recognize, understand, and respect the complexity of sociocultural and international diversity. |
| **B.A. (Pass)****Political Science** | **1.** The subfield of political methodology is concerned with the philosophical bases of political science, social science, empirical research design and analysis, and practical field research experience. **2.** Courses in the political methodology field cover philosophical issues regarding the possibility of a science of politics, the similarities and differences between political science and other social sciences, alternative modes of explanation, and the truth of knowledge claims. **3.** They also examine the formulation of experimental and non-experimental research designs for making causal inferences about political processes and behavior and explore the. use of statistics, mathematics and computers for the analysis of political data generated by such research designs. **4.** Students are also provided an opportunity to conduct individual and group research projects through seminars. The political methodology faculty has current research and teaching interests in such diverse topics as mass media, feminist theory, language politics, political economy, rational choice theory, and public policy. |
| **B.Sc. Mathematics /B.A. Mathematics** | The students upon completion of B.Sc. Mathematics /B.A. Mathematics Programme will be able **1.** To learn about polynomials, matrices, tracing of curves, differential equation, modern algebra and other fields of mathematics. **2.** To get the firm foundation for further mathematical research.**3.** To solve various problems for competitive exams like banking, insurance, data analysts and in a variety of other public and private organisations. **4.** To utilize mathematics for solving theoretical and applied problems by critical understanding and analysis. **5.** To discuss thoughts and ideas while seeking and learning from the skills and viewpoints of others. |
| **B.A (Pass)****History** | The students upon completion of B.A with History Programmewill be able to:**1.** Know the stages of growth of human civilization and the evolution of the Social System and on Cultural and Scientific Development. **2.** Analyze different kinds of sources like archeological, architectural, literary or textual materials etc. that the historian utilise to write the history.**3.** Students will also be able to distinguish between Primary and Secondary sources.**4.** Gain an understanding of the restructuring of state and society from tribe-based polities to those based on territorial identity of citizenship. **5.** Critically evaluate the multiple perspectives from which historians have studied the Politics, Cultural developments and Economic trends in India and world.**6.** Students provide a historio-graphical perspective to their work.**7.** Recognize and appreciate the diversity of human experiences and how these change over time.**8.** Evaluate and analyses how political, economic and social structures affect historical change and how they interlinked.**9.** Students should understand academic honesty, value of diversity; develop a secular outlook towards society. They should also believe in the equality of man irrespective of caste creed, religion and colour.  |
| **B.A. Pass & Compulsory,** **B.Sc. 2nd C.S, N. M.)****Sanskrit** |  **1**. बी ० ए ० compulsory B.Sc 2nd N.M, C.S में संस्कृत प्रोग्राम का बहुत ही महत्त्वपूर्ण स्थान हैं इससे भाषा की जानकारी मिलती है और संस्कृत भाषा का विकास होता है। **2.** पढ़ने - लिखने विचार करने और किसी भी सिद्धान्त और उसके व्यवहारिक पक्ष को समझने का भरपूर मौका मिलता है । **3.** संस्कृत(comp) के बाद उच्च शिक्षा ग्रहण कर स्कूल एवं कॉलेज के अध्यापक की नौकरी प्राप्त कर सकते हैं । |
| **B.A. (Pass)****Sociology** | Sociology seeks to understand all aspects of human social behaviour, including the behaviour of individuals as well as the social dynamics of small groups, large organizations, communities, institutions, and entire societies. Sociologists are typically motivated both by the desire to better understand the principles of social life and by the conviction that understanding these principles may aid in the formulation of enlightened and effective social policy. Sociology provides an intellectual background for students considering careers in the professions or business.The students upon completion of B.A. (Sociology) Programmewill be able to developed:**1.** Critical Thinking: The programme seeks to develop in students the sociological knowledge and skills that will enable them to think critically and imaginatively about society and social issues.**2.** Sociological Understanding: The ability to demonstrate sociological understandings of phenomena, for example, how individual biographies are shaped by social structures, social institutions, cultural practices, and multiple axes of difference and inequality.**3.** Written and Oral Communication: The ability to formulate effective and convincing written and oral arguments. **4.** Better understanding of real-life situation: The ability to apply sociological concepts and theories to the real world and ultimately their everyday lives. **5.** Analytical thinking: Field survey and preparation of dissertation paper is an inseparable part of Sociology Hons Programme. Students have to collect primary data for census as well as his/her research topic and analyse the data to draw conclusions. So, qualitative and quantitative analytical skills are enhanced. **6.** Observation Power: a sensible observation power is necessary to identify the research problems in field study. Consequently a perception about human society slowly grows up. **7**. Communication Skills and Social Interaction Power: Students of Sociology stream have to work beyond the class room boundary at the time of field study activities. As a result good communication skill develops while interacting with local people. **8.** Ethical and Social Responsibility: Students have to learn about institutions, folkways, mores, culture, social control, social inequality, population composition, population policy, society and culture of India. All these helps to instil among the students of Sociology a sense of ethical and social responsibility. **9.** Professional and Career Opportunities: Students will have the opportunity to join professional careers in Sociology and allied fields. Sociology provides an intellectual background for students considering careers in business, social services, public policy, government service, non-governmental organizations, foundations, or academia. **10.** This programme lays foundation for further study in Sociology, Social work, Rural Development, Social Welfare and in other Allied subjects. |
| **B.A. (Pass)****Physical Education**  | The students upon completion of B.A Programme (Physical Education) will be able:**1.** Identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.**2.** Students will acquire a comprehensive knowledge and sound understanding of fundamentals of Physical Education.**3.** Recognize different value systems including your own, understand the moral dimensions, and accept the responsibility for them.**4.** Understand the issues of environmental contexts and sustainable development.**5.** Demonstrate empathetic social concern and equity-centered national development, and the ability to act with an informal awareness of issues and participate in civic life through volunteering.**6.** Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.**7.** Students will develop practical, theoretical skills in Physical Education.**8.** Students will be prepared to acquire a range of skills, to specific skills to communicate with society effectively and learn independently.**9.** Elicits views of others, mediate disagreements and help reach conclusions in group settings.**10.** Students will acquire a job efficiently in diverse fields such as B.P.Ed,M.P.Ed, SSC, NET, SET etc. |
| **B.COM. (Pass)** | **1.** The programme aims to equip students with the skills of knowledge and attitude to meet the challenges of the modern day business organizations. **2.** This programme brings out reflective and scientific thinking in the students which will make them inquisitive and curious to get deep insights of the business world and tackle the complex situations with much knowledge and wisdom.**3.** It will inspire the students in enhancing the knowledge and understanding of the business world and its complexities.**4.** It will develop inclusive knowledge of the areas related to Finance, HRM, marketing, International Business Environment, Corporate laws, Accounting, Taxation etc.**5.** The students will be made capable of efficient use of modern ways and means of dealing with issues arising in the dynamic business world.**6.** The students will be exposed to the pedagogy that will help them understand real life situations through case studies.**7.** It will enhance the communication skills of the students and will make the students capable enough to deliver and communicate information effectively. |
| **B.Sc. (Pass)****Home Science** | The students upon completion of B.A. (Home Science) Programme will be able to:**1.** Understand and appreciate the role of interdisciplinary sciences in the development and well-being of individuals, families and communities. **2.** Understand the sciences and technologies that enhance the quality of life of people **3.** Acquire professional and entrepreneurial skills for economic empowerment of self in particular, and community in general. **4.** Develop professional skills in food, nutrition, textiles, housing, resource management, product making, communication technologies and human development. **5.** Providing scientific attitude from the laboratory to the people. **6.** Understand the role of elements and principles of art in decoration.**7.** Gain knowledge about importance of kitchen gardening, types of manures and cultivation of various vegetables in kitchen garden. **8.** Acquiring skills in energy, time and money management. **9.** Develop understanding about personal hygiene, good health, cleanliness and types of immunity. **10.** Study the causes, symptoms, mode of spread, prevention and treatment of various infectious diseases. **11.** Understand the foods nutritional, microbiological and sensory aspects. **12**. Understand various methods of cooking their advantages and disadvantages, concepts of food processing, and preservation of foods using different methods. **13.** Recognize learning, its theories, types of personality and factors affecting personality**14.** Understand the functioning of the human systems. **15.** Understand child psychology, its scope, objectives and importance for teachers, parents and society. **16.** Analyze emergent issues in human development and stages of development of individuals. **17.** Understand the processes of fibers, their physical and chemical properties.**18.** Study the fabrics, weaves, finishes, laundry & selection of fabric according to age, sex, climate, occupation and religion.  |
| **B.Sc. (Pass)****Chemistry** | **1.** B.Sc. Chemistry curriculum is so designed to provide the chemistry students a comprehensive understanding about the fundamentals of covering all the principles and perspectives.**2.** The branches of Chemistry such as Organic Chemistry, Inorganic Chemistry, Physical Chemistry and Analytical Chemistry expose the diversified aspects of chemistry where the students experience a broader outlook of the subject. **3.** The syllabi of the B.Sc. Chemistry course are discretely classified to give stepwise advancement of the subject knowledge right through the three years of the term. **4.** The practical exercises done in the laboratories impart the students the knowledge about various chemical reagents and reactions. Thereby, honing their skills of handling the corrosive, poisonous, explosive and carcinogenic chemicals making themselves employable in any kind of chemical industries. They are also trained about the adverse effects of the obnoxious chemicals and the first aid treatment. **5.** The students after completing the course at graduation level in chemistry will develop an understanding of major concepts, theoretical principles and experimental findings in chemistry.**6**. The students have effective written and oral communication skills especially the ability to transmit complex technical information in a clear and concise manner.**7.** They are able to employ critical thinking and efficient problem solving skill in the four basic area of chemistry (analytical, inorganic, organic and physical).**8.** They will have an ability to work effectively in diverse teams in both classroom and laboratory.**9**. Students will grasp the mechanisms of different types of reactions both organic and inorganic and will try to predict the products of unknown reactions. **10.** Students will learn to synthesize the chemical compounds by maneuvering the addition of reagents under optimum reaction conditions.**11.** They are able to conduct experiments, analyze data andinterpret results while observing responsible and ethical scientific conduct.**12.** They are able to use modern library searching and retrieval methods to obtain information about a topic, chemical technique or an issue relating to chemistry. **13.** They know the proper procedures and regulations for safe handling and use of chemicals and can follow the proper procedures and regulations for safe handling when using chemicals. **14:** The students will understand the existence of matter in the universe as solids, liquids, and gases which are composed of molecules, atoms and sub atomic particles. Students will learn to estimate inorganic salt mixtures and organic compounds both qualitatively and quantitatively using the classical methods of analysis in practical classes.**15.** After completion of degree, students gained the theoretical as well as practical knowledge of handling chemicals and they expand the knowledge available opportunities related to chemistry in the government services through public service commission particularly in the field of food safety, health inspector, pharmacist etc. **16.** Afford a broad foundation in chemistry that stresses scientific reasoning and analytical problem solving with a molecular perspective. **17.** Achieve the skills required to succeed in graduate school, professional school and the chemical industry like cement industries, agricultural products, Paint industries, Rubber industries, Petrochemical industries, Food processing industries, Fertilizer industries etc. **18.** Got exposures of a breadth of experimental techniques using modern instrumentation. **19.** Understand the importance of the elements in the periodic table including their physical and chemical nature and role in the daily life. **20.** Understand the concept of chemistry to inter relate and interact to the other subject like mathematics, physics, biological science etc. **21.** Learn the laboratory skills, safely to transfer and interpret knowledge entirely in the working environment. |
| **B.Sc. (Pass)****Zoology** | The students upon completion of B.Sc. (Medical Science) Programme will be able:**1.** To identify, classify and differentiate diversity in non- chordates based on their morphological, anatomical and systemic organization. They will also be able to describe economic, ecological and medical significance of various animals in human life. **2.** To identify the relationship or synchronization between structure and function at all levels: molecular, cellular, and organism. They are able to correctly use biological instrumentation and proper laboratory techniques.**3.** To identify and understand vertebrate as well as invertebrate. Students will be able to communicate biological knowledge in oral and written form.**4.** To understand genetics as basic unit of inheritance. To explain the importance of genetics and biotechnology in human life. To study and acquire complete knowledge of disciplinary as well as allied biological sciences.**5.** To define and explain major concepts in the biological sciences. This will create a curiosity and awareness among them to explore the animal diversity in chordates and take up wild life photography or wild life exploration as a career option. The procedural knowledge about identifying and classifying animals will provide students professional advantages in teaching, research and taxonomist jobs in various government organizations; including Zoological Survey of India and National Parks/Sanctuaries.**6.** To acquire skills in diagnostic testing, hematology, histopathology, staining procedures etc. used in clinical and research laboratories will provide them opportunity to work in diagnostic or research laboratory.**7.** To obtain overview of economic important chordates and understand the origin & evolutionary relationship in different subphylum of chordates. Candidates find opportunities in government departments, environmental agencies, universities, colleges, biotechnological, pharmaceutical, environmental/ecological fields.**8.** To understand how mammalian body gets nutrition and understand the nature of endocrine glands & their secretions. To understand the blood flow & working of heart. To understand how physiological parameters are measured in mammals. To describe the physiology of Respiratory, Renal. Endocrine Reproductive system to define their normal & abnormal functions.**9.** To provide students with an in-depth knowledge of different types of fish culture. Learn about the consumable fish of fresh water & marine water. Learn about the different types of foods need to provide to the different stages of fish. To recognize different types of Fishing craft and Fishing gears used in fish capturing. To understand skill enhancement courses like aquaculture, sericulture and apiculture will inculcate skills involved in rearing fish, bees and silk moth which would help them in starting their own ventures and generating self-employment making them successful entrepreneurs.**10.** To understand the various factors affecting our environment. To understand ecosystem energetics, food chain food web. To obtain knowledge in wildlife and can choose Wildlife Tourism as a career. Candidates may find jobs as Animal Behaviourist, Conservationist, Wildlife Biologist, Zoo Curator, Wildlife Educator, Zoology faculty, Forensic experts, Lab technicians, Veterinarians etc.**11.** To understand about different types of pesticides of cash crops, vegetables and stored grain. To understand about different control methods of pest control. At the end of graduation, they are likely to possess expertise which will provide them competitive advantage in pursuing higher studies from India or abroad; and seek jobs in academia, research or industries. **12.** To understand the process of gamete formation. To understand Fertilization and further development process in invertebrate and vertebrate. To understand the scope of development of biology. There are numerous career opportunities for candidates completing their B.Sc., M.Sc. and Ph.D. in Zoology in public and private sector. |
| **B.Sc. (Pass)****Botany** | Combination of Theoretical and Practical components will provide comprehensive information and insight into the: **1.** Knowledge and understanding of the range of plant diversity in terms of structure, function and environmental relationships. The evaluation of plant diversity, plant classification and the Flora and Fauna of Haryana and National Capital Region(NCR). The role of plants in the functioning of the global ecosystem.**2.** Intellectual skills to think logically and organize tasks into a structured form. Assimilate knowledge and ideas based on wide reading and through the internet. Transfer of appropriate knowledge and methods from one topic to another within the subject. Understand the evolving state of knowledge in a rapidly developing field.**3.** Practical skills: Students learn to carry out practical work, in the field and in the laboratory, with minimal risk. They gain introductory experience in applying each of the following skills and gain greater proficiency in a selection of them depending on their choice of optional modules. * Interpreting plant morphology and anatomy.
* Plant identification.
* Vegetation analysis techniques.
* A range of physiochemical analyses of plant materials in the context of plant physiology and biochemistry.
* Hands on Training will help students learn use of microscope, mounting, section-cutting and staining techniques for the study of plant materials.
* Making Drawings in Practical Records will enhance understanding morphological and structural details and related functional aspects in diverse plant groups.
* Use of Illustrations, Photographs, Charts, Permanent Slides, Museum and Herbarium Specimens along with ICT Methods will provide an interesting insight into the beautiful world of microbes and plants.

**4.** Transferable skills:* Communication of scientific ideas in writing and orally.
* Ability to work as part of a team.
* Ability to use library resources.
* Time management.
* Career planning.

**5**. Scientific Knowledge: * Apply the knowledge of basic science, life sciences and fundamental process of plants to study and analyze any plant form.

**6.** Problem analysis: * Identify the taxonomic position of plants using principles and methods of nomenclature and classification in Botany.

**7.** Plants as solution to Health problems: * To have brief idea of medicinal plants for health problems, disorders and disease of human beings and phytochemicals present in plants.

**8.** The Botanist and Society: * Apply reasoning informed by the contextual knowledge to assess plant diversity, its importance for society, health, safety and environmental issues and the consequent responsibilities relevant to the biodiversity conservation practices.

**9.** Environment and Sustainability: * Understand the impact of the plant diversity in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**10.** Ethical principles: * Apply ethical principles and commit to environmental ethics and responsibilities and norms of the biodiversity conservation.

**11.** Individual and Team work: * Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**12.** Communication: * Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**13**. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. |
| **B.Sc. (Pass)****Physics** | **1.** A logical and coherent understanding of different academic fields of physics and its distinct learning areas and applications in basic physics like Mechanics, Solid State Physics, Atomic and Molecular Physics, Nuclear and Particle Physics, Quantum Physics, Optics, Thermodynamics and Statistical Physics and its association with related disciplinary subjects like Chemistry, Environmental sciences, Computer Science and Statistics. **2.** Procedural knowledge that build up different types of professionals related to subject area of physics which includes professionals engaged in teaching, research and development in various government and public services. **3.** Demonstrate the ability to use skills in physics and its related areas by applying appropriate principles and methodology to solve physics related problems. **4.** Execute the physics related experiments, analyse and interpret the data collected with appropriate mathematical methods and often include the usage of the programming languages to and report the true findings of experiments with relating conclusion with relevant theories of physics. **5.** Demonstrate significant generic skills such as (i) Problem solving attitude and skills to solve physics related problems with well-defined solution. (ii) Investigative skills i.e., to find the solution within and also in interdisciplinary fields like usage of software. (iii) Communication skills include ability to listen, read text and coordinate with other students. (iv) ICT skills (v) Personal skills like ability to work both in groups and independently. * **6.** Demonstrate professional behaviour such as being unbiased, objective and truthful in all aspects of work and avoid unethical behaviour such as misrepresentation of data and falsification etc. and promotion of safe learning and working environment.
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| **B.Sc. (Pass)****Computer Science**  | **1.** Ability to communicate computer science concepts, data structures, programming Languages, databases, computer hardware etc.**2.** Apply problem solving skills and the knowledge of computer science to solve Real World problems.**3.** Holistic development of students with the inculcation of moral and social values to help them become better citizens of India.**4.** Innovative practices would be utilized to bridge the gap between business leaders and computer industry experts.**5.** Students would be able to use mathematics through Differential and Integral Calculus, Numerical Analysis, Probability and Statistics and its applicability to computer science and engineering |
| **BBA**  | The students upon completion of BBA Programmewill be able to:**1.** To provide adequate basic understanding about the subject of management among the students.**2.** To prepare the students to exploit the newly created opportunities in the profession of management.**3.** To effectively train the students in communication skills.**4.** To develop an environment of appropriate skills in the students so as to make them competent and train them to get self- employment.**5.** To inculcate entrepreneurial skills.**6.** To recognize and solve business problems in an ethical manner.**7.** Possibility of a Higher Remuneration.**8.** Help in acquiring professional skills.**9.** Enables students to apply knowledge of management theories and practices to solve business problems. **10.** Encourages analytical and critical thinking abilities for business decision making. **11.** Provides a wide knowledge of all disciplines of the course and training in management of both animate and inanimate entities and develops leadership skills. **12.** Enables students to effectively communicate business issues, management concepts, plans and decisions both in oral and written form using appropriate supportive technologies. |
| **BCA**  | The students upon completion of BCA (Bachelor of Computer Application) Programme will be able to:**1.** Improve their computer literacy, their basic understanding of operative systems and gain a working knowledge of software commonly used in academic and professional environments.**2.** Develop the skills to present ideas with the latest technology, tools and applications in IT in order to meet the ever-growing requirement of IT professionals**3.** Demonstrate the ability to identify the business problems, analyse and access various issues, set appropriate criteria for decision making and draw appropriate conclusions **4.** Exhibit communication and management skills, especially in providing technical support and develop IT oriented security issues and protocols.**5.** Blend proficiency in mathematics used in computer science, differentiate between various data structures used in programming language.**6.** Gain the knowledge of computer programs by using functional programming object-oriented programming paradigms, apply techniques of software validations and reliability to computer programs**7.** Serve as system administrators with through knowledge of Data Base Management System (DBMS), work as hardware designers and engineers with the knowledge of networking concepts.**8.** Demonstrate critical thinking and communication skills, which help in expressing ideas effectively. **9.** Develop interdisciplinary approach among the students.**10.** Acquire knowledge of algorithms and the role they play in developing programming techniques and computer science.**11**. Preparing students for various roles to IT industry like web designer, system analyst, software developer and network administrator etc.**12.** Focusing on developing programming skills, networking skills and learning latest techniques of computer science.**13.** Developing ability to use research, experiment to resolve industrial problems.**14.** Developing ability to demonstrate team work with the quality leadership and analytical reasoning for solving various critical problems.**15.** The students will be able to design, implement knowledge for computer programme.**16.** This course will develop human values and professional ethics in the social, moral, spiritual and legal aspects of computing techniques. |
| **B.A. (HONS)****Hindi** | **1.** हिंदी ऑनर्स प्रोग्राम बहुत ही महत्त्वपूर्ण प्रोग्राम है इससे भाषा की जानकारी मिलती है और हिंदी भाषा का विकास होता है। **2.** पढ़ने लिखने विचार करने और किसी भी सिद्धांत और उसके व्यवहारिक पक्ष को समझने का भरपूर मौका मिलता है। हिंदी ऑनर्स के बाद उच्च शिक्षा ग्रहण कर स्कूल एवं कॉलेज में अध्यापक की नौकरी प्राप्त कर सकते हैं|**3.** मीडिया, पर्यटन, फिल्म, हिंदी अधिकारी, अनुवादक, विभिन्न प्रतियोगी परीक्षा, कॉल सेंटर, टूरिज्म और इंटरप्रेटर, रचनात्मक लेखन, लिंग्विस्टिक का भी कोर्स कर सकते हैं ।**4.** क्रिकेट कमेंट्री, फैशन जगत, एड एजेंसी और एनजीओ, पत्रकारिता व्याख्या, भाषण, व्याख्यान, विज्ञापन, आवाज सहयोगी, प्रकाशन संचार इत्यादि क्षेत्रों में कार्य कर सकते हैं ।**5.** रेखाचित्र, निबंध ,संस्मरण अथवा नाटक, उपन्यास इत्यादि का भी ज्ञान प्राप्त होता है। |
| **B.A.** **(HONS)** **Economics** | **1.** Economics is the study of how societies, governments, businesses, households and individuals allocate their scarce resources.**2.** This discipline has two important features. First, it helps to develop conceptual models of behaviour to predict responses to changes in policy and market conditions. Second, rigorous statistical analysis is used to investigate these changes. **3.** Economists are well known for advising the government on economic issues, formulating policies at the Reserve Bank of India and analysing economic conditions for investment banks, brokerage houses, real estate companies, and other private sector businesses. They also contribute to the development of many other public policies including health care, welfare, and social reform and efforts to reduce inequality, pollution and crime. **4.** The study of economics can also provide valuable knowledge for making decisions in everyday life. It offers a tool with which to approach questions about the desirability of a particular financial investment opportunity, whether or not to attend college, the benefits and costs of alternative careers, and the likely impacts of public policies including universal education and a higher minimum wage. |
| **B.COM.** **(HONS)** | **1.** It will inspire the students in enhancing the knowledge and understanding of the business world and its complexities.**2.** It will develop inclusive knowledge of the areas related to Finance, Human Resource Management(HRM), Marketing, International Business Environment, Corporate Laws, Accounting, Taxation etc.**3.** The students will be made capable of using modern ways and means of dealing modern ways and means of dealing with issues arising in the dynamic business world.**4.** The students will be exposed to the pedagogy that will help them understand real life situations through case studies.**5.** It will enhance the communication skills of the students and will make the students capable enough to deliver and communicate information effectively.**6.** The course will make them understand the need of the current business world and make them capable to look at various aspects from global perspective.**7.** It aims at instituting entrepreneurial skills in the students by instilling in them competencies needed to become an entrepreneur.**8.** It broadens the horizons of the students by making them understand the ins and outs of the business world and overall, the economics of the country as well as the world.**9.** The programme enables the students to think of a given problem from different perspectives like economic, financial, social etc. and broadens the horizon of their thought processes.**10.** The programme will enable the students to be technologically updated as it has courses like basics of computer/IT, MS Excel etc which will make them independent enough in this world of digitization. |
| **B.Com. (Vocational)** | **1.** Enables learners to get theoretical and practical exposure in the commerce sector which includes Accounts, Commerce, Marketing, Management, Economics, Environment etc.**2.** Develops communication skills and build confidence to face the challenges of the corporate world.**3.** Enhances the capability of decision making at personal and professional levels.**4.** Makes students industry ready and develop various managerial and accounting skills for better professional opportunities.**5.** Develops entrepreneurial skills among learners.**6.** Strengthens their capacities in varied areas of commerce and industry aiming towards holistic development of learners.**7.** Thus, after completing their graduation learners develop a thorough understanding of the fundamentals in Commerce and Finance. |
| **B.A.** **(HONS)**  **Psychology** | **1.** Knowledge about the discipline and research methods.**2.** Basic professional skills pertaining to psychological testing, assessment and counselling.**3.** Ability to use skills in specific areas related to chosen specialization (e.g. cognitive, industrial-organizational, clinical, counselling, health, educational, social, community).**4.** Ability to connect theory with personal experiences and varied applied settings.**5.** Understand how psychology can be applied to solve problems facing humankind.**6.** Computer literacy, including the ability to use various e-resources, technology and social media.**7.** Articulation of ideas, scientific writing and authentic reporting.**8.** Tolerating ambiguities and appreciating the limitations of the discipline, and critically analysing conflicting theories and approaches.**9.** Understanding varied socio-cultural contexts, and being mindful of indigenous traditions.**10.** Creating awareness about gender issues.**11.** Cultivating an ethical mind-set, including a strong work ethic, avoiding unethical behaviours such as data fabrication and plagiarism, being mindful of implications of research using human participants.**12.** Commitment to health and wellbeing at different levels (e.g. individual, organization, community, society).**13.** Developing skills of communication, negotiation, team work, effective presentation, etc.**14.** Appreciating and tolerating diversity |
| **B.Sc. (HONS)****Maths** | The students upon completion of B.Sc. Mathematics Hons Programme will be able **1**. To learn algebra, calculus, geometry, differential equations, statistics and various other branches of mathematics in depth. This leads to the study of related fields such as computer science and physical science. As a result, this program assists students in laying a solid basis for future studies in mathematics. **2.** To utilize the acquired abilities and information in modelling and solve real-world situations. **3.** To utilize mathematics for solving theoretical and applied problems by critical understanding and analysis. **4.** To share ideas and thoughts while seeking and benefiting from others' expertise and perspectives. **5.** To assist students in improving their employability for positions in the banking, insurance, and investment industries, as data analysts, and in a variety of other public and private organisations. **6.** To apply multivariable calculus tools in physics, economics, optimization, and understanding the architecture of curves and surfaces in plane and space etc. **7.** To describe mathematical ideas from multiple perspectives and explain fundamental concepts of mathematics to non-mathematicians.**8.** To create mathematical ideas from basic axioms. **9.** To gauge the hypothesis, theories, techniques and proofs provisionally. |
| **B.Sc. (HONS)****Physics**  | The students upon completion of B.Sc. Physics Hon. Programmewill be able to:**1.** Understand Solid State Physics, Nano Physics, Quantum Mechanics, Thermodynamic, Electricity and Magnetism, Integrated Circuits and Applications, Electronics and Electronic Devices and Mathematical Physics. This course helps the students to develop the ability to successfully continue with further studies and research in the subject of physics.**2.** Each subject of the course has its own importance and application. Mathematics is the basic tool for physics. It is used to solve the physics problems theoretically using mathematical formula.**3.** Topics in Solid State Physics cover the knowledge of solid materials and the crystalline states of solid. It gives the knowledge of crystal structure and their properties like ferroelectric, ferromagnetic, para-electric, etc.**4.** The subject Electric Circuits and Electric Field helps us to understand the electromagnetic Phenomena based on electric field in the electric circuits and their theoretical concept.**5.** Quantum mechanics help the students can understand the behaviour of matter as well as light at microscopic level. The wave function in quantum mechanics can be used to illustrate the wave properties of a particle.**6.** Nanotechnology helps the students to understand the importance of nano-particles which are used in various fields of food science and food microbiology, including food processing, food packaging, functional food development, food safety, detection of food borne pathogens, and shelf-life extension of food and/or food products. |
| **M.A.** **(Hindi)** | **1.** आधुनिक काल में रचित हिंदी कविता की विविध प्रवृत्तियों को महत्वपूर्ण कवियों और कविताओं द्वारा समझना।**2.** आधुनिक काल में रचित विविध गद्य विधाओं का आलोचनात्मक अध्ययन ताकि उनके माध्यम से साहित्य एवं समाज के अन्तरसम्बन्ध की जानकारी हो सके।**3.** 1050 ई. से अब तक रचित हिंदी साहित्येतिहास की विविध सोपानों के माध्यम सेजानकारी।**4.** भाषा एवं विज्ञान, कोश विज्ञान, शैली विज्ञान लिपि की वैज्ञानिक जानकारी प्रदान करना।**5.** जनजीवन में गहरी पैठ बनाने वाले कवि कबीर की बानी की निर्गुण साहित्य परम्परा को जानना।**6.** समन्वयवाद के प्रस्त्रोता तुलसीदास साहित्य को रामभक्ति काव्य के संदर्भ में समझना ।**7.** भक्ति, श्रृंगार और वात्सल्य रस के चित्रण में बेजोड़ सूरदास को कृष्णभक्ति के माध्यम से समझना। |
| **M.COM** | **1.** Students will be able to understand the role of business-men, entrepreneurs, managers, consultants, and the same is required for critical decision making. **2.** This course provides a learning environment to the students through students can understand the global and national perspective of the economy. **3.** The course will provide the skills required for effective communication, decision making techniques which are useful for day-to-day routine business problems. **4.** The course provides a platform for the researchers to get new dimensions for the economy. Through this programme the students will involve in various co-curricular activities; and demonstrate their practical and theoretical knowledge; and gain practical exposure in corporate world. **5.** Sstudents can also acquire practical skills to work as tax consultant, audit assistant and other financial supporting services. **6.** Students will be able to do higher education and advance research in the field of commerce and finance. **7.** Students are able to understand and develop ethical, logical and professional behavior. **8.** It helps the students to demonstrate adequate skills, knowledge and ability to nurture them for tackling the different situations of the life for their overall development. |
| **M. A.** **Economics** | **1.** The Master of Arts programme in Economics has been designed with the objective to develop in-depth knowledge of students in frontier areas of economic theory and methods, so that they are able to use the knowledge to study real world economic problems. **2.** The course has a strong focus on theoretical and quantitative skills and train students in the collection and analysis of the data using their software skills. The programme offers specialised optional courses, which allow student to pursue their studies in their area of interest. The students are required to submit report and present their findings of field-study. Besides, to hone the student’s writing and analytical skills they are required to submit a term paper on current economic problem. **3.** Prepare students to develop critical thinking to carry out investigation about various socio-economic issues objectively while bridging the gap between theory and practice. **4.** Equip the student with skills to analyse problems, formulate a hypothesis, evaluate and validate results and draw reasonable conclusions thereof. **5.** Prepare students for pursuing research or careers that provide employment through entrepreneurship and innovative methods. Because today’s unemployment problem can also be solved by developing the micro and small entrepreneurship.**6.** Prepare students to develop own thinking /opinion regarding current national or international policies and issues. **7.** Create awareness to become a rational and an enlightened citizen so that they can take the responsibility to spread the governments’ initiatives/schemes to the rural areas for the upliftment of the poor or vulnerable section of the society for inclusive growth. **8.** At the end of the programme, the students will have adequate competency in the frontier areas of economic theory and methods. The students will acquire additional specialisation through optional courses. They will be able to use common software for analysis of economic data. **9.** Besides, students will be able to execute in-depth analysis of economic issues based on their understanding of economic theory, which will not only widen their opportunities for employment, but also help them to pursue their doctoral studies.**10.** Understanding the basic assumptions in various economic theories and enhance capabilities of developing ideas based on them. **11.** Prepare and motivate students for research studies in Economics especially by developing questionnaire, collecting primary data through field surveys. **12.** Provide knowledge of a wide range of econometric techniques using excel or other statistical software. **13.** Motivate students to extract or utilize different websites for secondary data collection, generating concepts for various facets of economic studies and gather latest information provided by various Universities, UGC, or ICSSR.**14:** Motivate students in preparing for various competitive examinations, NET, SET, Indian Economic Service etc., by developing or gaining value addition day by day by giving assignments, by following a routine or developing discipline / concentration etc. |
| **M.A** **History** | The students upon completion of this Programmewill be able to:**1.** Students will be able to demonstrate broad knowledge of historical events and periods of their significance **2.** Students will able to explain and critically evaluate the historical schools of thoughts that have shaped scholarly understanding of their field of study. **3.** Students will be able to deploy skills of critical analysis such as Formulating persuasive arguments, Evaluating evidence and present clear and compelling arguments based on critical analysis of diverse historical sources, Interrupting a variety of primary sources **4.** Articulate factual and contextual knowledge of specific places and times to make careful comparison and to discuss how each generation uses the past for present purpose.**5.** Students will be able to conduct research that makes an original contribution to knowledge by providing a high-quality research paper that will be well written and meeting professional standards prescribed for academic publication.  |
| **M.A.** **Geography** | **1.** The Master of Arts programme in geography has been designed with the objective to develop in depth knowledge of students in frontier area of geographical theory and methods, so that they are able to use the knowledge to study real world geographical problems. **2.** The course has a strong focus on theoretical and quantitative skills which trains students in the collection and analysis of the data using their software skills. The program offers specialized optional courses like Population Geography, Oceanography, Urban Geography, Bio Geography and Geography of India which allowed student to pursue their studies in their areas of interest. **3.** The students are required to submit report and present there finding of the field study. The master in geography programme seeks to; Prepare students to develop critical thinking on various issues, Equip the students with skills to analysis problems, prepare students to develop own thinking about national and international policies.**4.** At the end of the program the students will acquire additional specialization through different optional courses. They will be able to use different software for analysing the geographical data.**5.** Understanding the conceptual and dynamic aspects of landform development, global atmospheric circulation, disturbance, world climate system, concept & classification of resources and will learn conservation methods.**6.** Motivate students for research in geography by collecting primary data field survey.**7.** Motivate students in preparing for various competitive exams like NET, SET etc. **8.** Students will be able to understand the important and use of maps.**9.** This course will provide the students learning outcomes like and ability to analyse, classify and prepare data for drawing statistical diagrams through computer.**10.** Students would be able to understand how in an increasing globalized world, economic activities occur unevenly over geographical space.**11.** Students will understand the importance of conserving biodiversity to maintain ecological balance as well as national and international concern on various environmental issues |
| **M.Sc.** **(Computer Science)** | The students upon completion of M.Sc. (Computer Science) Programmewill be able:1. Acquire advanced knowledge and a critical understanding of emerging developments andissues relating to the domain of computer science as life-long skills.2. Exhibit an advanced understanding of the principles, methods, and techniques applicable totheoretical and practical contexts.3. Extrapolate acquired knowledge and skills to real-life situations, new and unfamiliar contexts,for problem solving and create innovative solutions.4. Demonstrate the ability to apply conceptual, operational, and technical knowledge with a range of cognitive and practical skills.5. Apply advanced knowledge of research methods to conduct research and investigations to formulate evidence-based solutions using a systematic problem solving approach for complex problems that require higher order thinking.6. Communicate their solutions, application, research findings and professional insights in a well-structured and coherent manner to both specialist and non-specialist audiences.7. Engage in self-directed learning to continually upgrade their knowledge and skills, including research competencies along with ethical standards and practices in their professional andacademic endeavors for a life-long learning.8. To Work collaboratively as a member or leader in multidisciplinary teams and be able to select teaching/software engineer as their career after acquiring necessary eligibility requirement. |
| **APGDCA (ADVANCE POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS)**  | **1.** It will equip the students with skills required for designing, developing applications in Information Technology. **2.** Students will able to learn the latest trends in various subjects of computers & information technology.**3.** The PG Diploma is aimed at graduates with a computing background and provides a detailed coverage of the key concepts and challenges in data and resource protection and computer software security. **4.** To give hands on to students while developing real life IT application as part of the study. **5.** To train graduate students in basic computer technology concepts and information technology applications. **6.** Design and develop applications to analyse and solve all computer science related problems.**7.** To expose the students to open-source technologies so that they become familiar with it and can seek appropriate opportunity in trade and industry.**8.** Able to provide socially acceptable technical solutions to real world problems with the application of modern and appropriate programming techniques.**9.** Design applications for any desired needs with appropriate considerations for any specific need on societal and industrial aspects. |
| **M.Sc. Physics** | 1. The students would be able to realize various applications with a proper understanding of linear vector space and matrices, differential equations, special functions, series expansion and integral transforms. The students are enabled to understand the motion of a mechanical system using Lagrange and Hamilton formalisms, concept of central force motion and moving co-ordinate systems and theory of small oscillations.
2. The students would be able to understand the concepts of Quantum mechanics and capable to solve problems such as hydrogen atom, determination of the energies and wave functions of first and second order. The students would be able to explain the ground state of hydrogen and helium molecules and analyse various transitions and their selection rules.
3. The students would be able to explain basic physics and application of different types of electronic devices, design of switching circuits and analysis of effect of doping in semiconductor materials, carrier concentration and mobility. Further, they will be able to implement Boolean expressions, design basic building blocks of ICs for different operations and develop building blocks for ICs using MOSFET. The students will be able to understand the fabrication process of solar cells, photodiodes, PMT’s etc. and realize operational amplifier and related applications such as comparator, A/D & D/A convertor, oscillators etc.
4. The students would be able to apply ensemble theory to complex problems, analyze the peculiar gas behaviour and explore the applications ofIsing Model and different approximations. Further, they would gain the knowledge about electrostatic and magnetic fields produced by static and moving charges in a variety of simple configurations and basics of theory of transmission lines and waveguides.
5. The students will be able to differentiate between different lattice types, explain motion of electron in periodic lattice, understand lattice vibrations in solids and explain various types of magnetic phenomena and possible applications. In addition, they would be able to understand working and application of absorption and emission spectroscopy, DSC and Impedance spectroscopy for material characterization.
6. The students will be able to explain Raman effect and different types of Raman spectra, Electronic spectra and electronic bands using Born Oppenheimer approximation and Frank Condon principle and origin of x-rays and different types of x-rays along with emission and absorption spectra. The students would be able to appreciate NMR, ESR and Mossbauer spectroscopy and related applications in the field of spectroscopy/material science/ lasers.
7. Understanding the nature of a specific numerical problem, designing programs in FORTRAN language, new necessary basic knowledge of various software like Origin and MATLAB to acquire a vision for use of computer in research prospective.
8. The students would be able to realize the nature of nuclear force and nuclear reactions with the understanding of the structure of the nucleus and different nuclear decays. They would gain basic knowledge about Elementary Particles, radioactivity, uses of radio-isotopes, radiation quantities and units along with interaction of radiation with matter.
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