Name of Programme: B.A.

Programme Outcomes	**PO1**-To impart basic knowledge of Languages, Humanities and Social Sciences. **PO2**-To enable students to acquire jobs and services in various sectors. **PO3**-To have Proficiency in Languages. **PO4**-To acquaint students with literature, grammar, and functional languages. **PO5**-To pass the eligibility criteria for different master's degrees. **PO6**-To sensitize students about professional careers i.e. Teaching, Media, Creative and Professional writing etc. **PO7**-To inculcate Human Values and Ethics among youth through Literature and Social Sciences.
Course Name	**Course Outcomes**
Hindi	**CO1**-To impart basic knowledge of Hindi language and literature. **CO2**-To enable students to acquire jobs and services in various sectors. **CO3**-To enhance efficiency of using accurate grammar and functional Hindi in various contexts. **CO4**-To familiarize students with Hindi literature. **CO5**-To develop aesthetic sense in students. **CO6**-To pass the eligibility criteria for M.A. (Hindi). **CO7**-To sensitize students about professional careers i.e. Teaching, Media, Creative and Professional writing etc. **CO8**-To inculcate Human Values and Ethics among youth through Hindi Literature. **CO9**-To equip students with knowledge to conduct research on Hindi language, literature and culture.
Punjabi	**CO1**-To impart basic knowledge of Punjabi language and literature. **CO2**-To enable students to acquire jobs and services in various sectors. **CO3**-To enhance efficiency of using accurate grammar and functional Punjabi in various contexts. **CO4**-To familiarize students with Punjabi literature. **CO5**-To develop aesthetic sense in students. **CO6**-To pass the eligibility criteria for M.A. (Punjabi). **CO7**-To sensitize students about professional careers i.e. Teaching, Media, Creative and Professional writing etc. **CO8**-To inculcate Human Values and Ethics among youth through Punjabi Literature. **CO9**-To equip students with knowledge to conduct research on Punjabi language, literature and culture.
English (Elective)	**CO1**-To impart basic knowledge of English language and literature. **CO2**-To enable students to acquire jobs and services in various sectors. **CO3**-To enhance efficiency of using accurate grammar and English communication skills in various contexts. **CO4**-To familiarize students with English literature.

	CO5-To develop aesthetic sense in students. **CO6-**To pass the eligibility criteria for M.A. (English). **CO7-**To sensitize students about professional careers i.e. Teaching, Media, Creative and Professional writing, Soft Skills, Language skills, Verbal Skills etc. **CO8-**To inculcate Human Values and Ethics among youth through English Literature. **CO9-**To equip students with knowledge to conduct research on English language, literature and culture. **CO10-** To prepare students for various Competitive Exams.
Political Science	**CO1-**To provide knowledge about the political systems and political issues in India and throughout the World. **CO2-**To enable students to participate in the political activities. **CO3-**To prepare students for various Competitive Exams. **CO4-**To receive numerous carrier opportunities in Law studies. **CO5-**To enable students to acquire jobs and services in various sectors. **CO6-**To pass the eligibility criteria for M.A. (Political Science). **CO7-**To equip students with knowledge to conduct research.
1.POLITICAL THEORY	**CO1-**The students will develop a deeper understanding of the institutions, politics, processes and services of state and local governments by understanding fundamental principles of political science. **CO2-** Knowledge of some of the philosophical underpinnings of modern politics and government and the legal principles by which political disputes are often settled **CO3-** Ability to use the comparative case study method of analysis, quantitative forms of analysis, and legal analysis in oral communication and in written research
2.INDIAN POLITICS	**CO1-**The course seeks to give students an understanding the significance and the role of state and local governments in the Indian federalist system. **CO2-**Be able to apply the comparative method of analysis to state and local government research. **CO3-**Develop a deeper understanding of the institutions, politics, processes and services of state and local governments. **CO4-**Understand the issues that drive contemporary research in political science and analyze current political situations. **CO5-**Critical evaluation of social, economic and political variables for a proper understanding of the plurality of Indian society
3.COMPARATIVE POLITICAL SYSTEMS (UK & USA)	**CO1-**Through comparative study of these political systems students will be able to analyze the structural differences as well working of these systems. **CO2-**They will have conceptual understanding of different type of terms like monarchy, republic, parliamentary democracy, aristocracy etc. **CO3-** they will be able to distinguish between different type of political systems of the world**.**
3.International Politics	Students will be able to know; **CO1-** How to define various concepts of international politics (e.g.; balance of power, collective security etc.) **CO2-** Students will understand and will be able to describe and analyze the difference between local politics, national politics and international politics.
General English	**CO1-**Knowledge of major literary works, genres and critical traditions Understand and empathize with other cultures and people through exploring their literary traditions **CO2-** Knowledge of linguistic, literary, cultural contexts in which literature is written and

	read **CO3-** Understanding: Written and oral communication skills - ability to define audience, construct an argument, present an idea, and provide background information on a variety of issues · Write and speak with clarity and precision, and learn the best methods to persuade an audience **CO4-** Detailed, balanced and rigorous examination of texts or spoken language and the ability to articulate interpretations to others **CO5-**Sensitivity to how communication is shaped by circumstances, authorship and intended audience **CO6-**Sensitivity to the power of language and its role in creating meaning **CO7-** A broad vocabulary and ability to use critical terminology appropriately · Skills in a variety of research methods and the ability the accurately and appropriately present research
Economics	**CO1-**To acquaint students with the working of economy. **CO2-**To provide general understanding of economic systems and institutions. **CO3-**To provide knowledge about various economic issues. **CO4-**To prepare students for Indian Economics Services (IES), Economist in Banking Sector, State Civil Services and Working in Economics Finance Sector. **CO5-**To prepare students for various Competitive Exams. **CO6-**To pass the eligibility criteria for M.A. (Economics). **CO7-**To receive numerous carrier opportunities. **CO8-**To equip students with knowledge to conduct research.
1.Micro Economics	**CO1-**Develop the ability to explain core economic terms, concepts and theories (explain the function of market and prices as allocative mechanisms, apply concepts of equilibrium, identify and discuss the key concepts underlying comparative advantage, identify and explain major types of market failures.) **CO2-**Demonstrate the ability to employ the "economic way of thinking" (discuss the application of marginal analysis, explain the use of benefit /cost analysis, explain the contribution of economics to the analysis of non-market social issues.) **CO3-** Demonstrate awareness of global historical, and institutional forces (assess the role of domestic and international institutions and norms in shaping economics.)
2.Macro Economics	**CO1-**Identifying the basic concepts and theories of Macro economics. **CO2-** Awareness about changing macro economics policies and theories. **CO3-** Understanding various concepts such as; GDP, GNP NNP, Personal Income, Disposable Income, Per Capita Income, and National Income. **CO4-** Identifying the factors determining gross domestic product, employment, the general level of prices, and interest rates. **CO5-** Realizing the law of markets, consumption function and investment function. **CO6-** Judging the role of fiscal policy and monetary policy in a Developing economy. **CO7-** Knowing features, phases and theories of trade cycles. **CO8-** Evaluating types, merits and demerits of taxes. **CO9-** Comprehending the role of public finance in developing economy**.**
3.Development Economics	**CO 1:** Development- concepts and measurement-GDP and PCI, PQLI, HDI, HPI etc. **CO 2:** Obstacles to development, Indian economy as a developing economy, occupational pattern etc. **CO 3:** Different concepts of poverty and unemployment with reference to developing countries **CO 4:** Theories of Economic growth – Classical, Harrod-Domar, Solow, endogenous

	growth, etc. **CO 5:** Theories of persistence of underdevelopment- vicious circle of poverty, Myrdal's cumulative causation, Rostow's stages of growth, balanced and unbalanced growth strategy, Lewis theory of unlimited labour supply
Public ,Finance and International Ecnomics	**CO 1:** Structure, pattern and policies of taxation in developing economies with special reference to India **CO 2:** Trend and pattern of public expenditure, nature and magnitude of public debt in India **CO 3:** Budget system, techniques of budgeting, budget deficits, latest Union budget with changing perspective **CO4:** Classical trade theories- Adam Smith's absolute advantage, Ricardo's comparative advantage, Neo-classical models, offer curve, Heckscher-Ohlin theorem. **CO 5:**Terms of trade and gain from trade, Prebisch-Singer views on deterioration of terms of trade, Myrdal's theory of backwash effect, immiserising growth **CO 6:** International trade policy- free trade and protection, globalization, capital movements etc. **CO 7:** Foreign exchange markets & exchange rates.
3.Indian Economy	**CO1-**Students will know the structure and state of Indian economy, emerging challenges for economy, different sectors and sectoral growth. Students will get the knowledge of reasons for slow growth, problems of the sectors and different solution strategies. **CO2-**Students will identify the situation of Indian Economy, better evaluate and understand the data and problems related to different indicators of growth of countries economy. Students will intellectually search solutions for different types of problem of whole economy.
Psychology	**CO1-**To understand human behavior. **CO2-**To apply psychological theories to predict the human behavior through observation, questionnaires and experimenting. **CO3-**To influence and alter behavior in desirable ways to achieve the desired goal. **CO4-**To provide awareness of cognition and cognition processes. **CO5-**To pass the eligibility criteria for M.A. (Psychology). **CO6-**To supply students with multiple opportunities to opt specialized careers i.e. Psychotherapist, Psychologist, Counselor, Social workers, Sports psychologists, Human resource roles, Mass media roles, Hospitals and comical settings. **CO7-**To enable students to attain teaching and counsellor jobs in schools, colleges and universities. **CO8-**To prepare students for various Competitive Exams. **CO9-**To equip students with knowledge to conduct research.
1.General Psychology	**CO1-**Making familiar with the field of general Psychology. **CO2-** Acquaintance with intelligence, motivation and emotions. **CO3-** Acquaintance with Personality.
2.Experimental Psychology	**CO1-**Experimental Psychology offers a thorough introduction into basic principles of research in psychology, covering key principles of research design. **CO2-**It equips students with the competency to apply these principles within the context of concrete examples, and develops their skill to design and conduct an experiment, analyze and interpret the results, and structure the research report. **CO3-**Students will be able to critically reflect on classical and recent psychological studies.
3.Clinical psychology	**CO1-** Students will acquire and demonstrate knowledge and skill necessary to plan, conduct, evaluate and disseminate research in areas relevant to clinical psychology. **CO2-** Students will acquire and demonstrate knowledge and skills relevant to the theory and practice of clinical psychology, emphasizing theory-based, empirically supported approaches

	to understanding, evaluating, and intervening with clinical disorders. **CO3-** Students will acquire and demonstrate broad knowledge of psychology, and demonstrate ability to integrate these areas with clinical psychology. **CO4-** Students will acquire knowledge and skills necessary to conduct themselves professionally and to prepare for careers in clinical science. In addition to the above activities, in which students are socialized into academic clinical psychology, they are expected to behave in a professional manner.
4.Behavioral disorders	Upon completion of the course students should be able to: **CO1-**Enhance personal and social interactions by using the knowledge of the history and major theories of abnormal behavior. **CO2-**Better understand one's own and others' behavior by applying the knowledge of assessment, diagnosis, classification systems and DSM categories. **CO3-**Become a more effective consumer of and advocate for mental health care services through an understanding of the various approaches to the diagnosis and treatment of psychological disorders.
Music (Vocal)	**CO1-**To acquaint students with Indian classical music (Vocal). **CO2-**To develop aesthetic sense in students. **CO3-**To inculcate moral values in students through music. **CO4-**To secure career as singer and composer. **CO5-**To enable students for teaching in schools, colleges and universities. **CO6-**To pass the eligibility criteria for M.A. (Music). **CO7-**To equip students with knowledge to conduct research.
History	**CO1-**To provide knowledge about the history of India and the World. **CO2-**To prepare students for various Competitive Exams. **CO3-**To receive numerous carrier opportunities. **CO4-**To enable students to acquire jobs and services in various sectors. **CO5-**To pass the eligibility criteria for M.A. (History). **CO6-**To equip students with knowledge to conduct research.
1.History of India,1750-1964 A.D.	**CO-**To understanding Modern India this paper is essential. Students from history stream will get knowledge about the penetration, expansion and consolidation of British Rule in India. Indian awakening, cultural changes and socio-religious reforms movements, Revolt of 1857 are described in this paper. **.**
2.History of Punjab ,1469-1966 A.D.	**CO1-**The course will inculcate the knowledge of traditional Punjabi society. **CO2-**Students will be guided to analyze it with reasons and logic. **CO3-** Students will be able recognize how different individuals, groups, organizations, societies, cultures, countries and nations have affected history. History gave the students, wisdom and foresight for the future.
3.History of Punjab 1849-1966	**CO-**This course deals with significant developments in the history of the Punjab region since the beginning of colonial rule in 1849 to 1966 when the present Punjab came into existence. The course explores the major changes taking place in the administrative framework of the new Punjab province, followed by significant political, economic, social and cultural changes leading to partition. The discussion of the post partition developments goes up to the creation of the Punjabi speaking state**.**
4.World	**CO-**With an emphasis on Europe, the course will impart knowledge to

History(1871 to 1991 A.D.	the students regarding the political transformations of the modern world that took place from the sixteenth century till the end of the 1950.
5.World History 18th - 20th Century	**CO-**The course will impart knowledge to the students regarding the political transformations of the modern world that took place from the sixteenth century till the end of the 1919.
6.History of India UPTO 1200A.D	**CO-**In this paper the students from general course will learn about the socio cultural pattern of India.They read the sources of history, primitive civilization like Harappa, Vedic Age, protestant movements such as Jainism, Budhhism, the royal history of Maurya, Kusanas and Satbahans
7.History of India 1200-1750A.D	**CO-**Students will be able to identify the major political developments in the History of India during the period between the twelfth and the seventeenth century. Outline the changes and continuities in the field of culture, especially with regard to art, architecture, bhakti movement and sufi movement. Delineate the development of trade and urban complexes during this period.
8.History and Culture of Punjab	**CO-1-** The student gets to know of the rich history and culture of Punjab. **CO2-** The student gains a better knowledge and understanding of the various ages through which Punjab has evolved to its present state. **CO3-** To think and argue critically of the culture and history of Punjab. **CO4-**To develop a bonding and liking of one's own roots. **CO5-** To develop a liking and intention of pursuing the subject for the higher studies. **CO6-** The students who do not have any knowledge of Punjabi as a language opt for this subject. They are made aware of the rich social and cultural heritage of Punjab**.**

NAME OF PROGRAMME-B.COM

Programme Outcomes	This program aim to provide students with specific knowledge and skills relevant to their disciplines and careers. This program satisfies the educational entrance requirements for membership of relevant professional bodies. To demonstrate and understanding of the principles of accounting, finance, economic and business law. **PO1-** To develop numerical abilities of students **PO2-**To inculcate writing skills and business correspondence **PO3-**To create awareness of law and legalizations related to commerce and business **PO4-**To introduce recent trends in business, organizations and industries **PO5-**To acquire practical skills related with banking and other business.
Course Name	**Outcomes**
Commercial Laws	The Commercial Law Program has the following primary outcomes- **CO1-** To explain the framework within which business activities shall be carried out. **CO2-** To raise an issue to various legal and semi-legal authorities against the government in case the legal rights of the business have been violated. **CO3-** Some business laws are made to encourage business persons to achieve their goals fast. **CO4-** The Business Law also has social objectives to serve the society at large. The Right to Information Act 2005, The Consumer Protection Act 1986 etc. are a few examples. Recently, the control of prices of generic medicines by law has also played a role of government in the interest of the society **CO5-** Business law tries to prevent the concentration of economic power to some extent and helps in the fast settlement of claims of individuals against business houses.
Management	**CO1-** Management is basically concerned with thinking and utilizing human, material and financial resources in such a manner that would result in the best combination. **CO2-** The main objective of management is to secure maximum output with minimum effort and resource. Through proper utilization of various factors of production, their efficiency can be increased to a great extent which can be obtained by reducing spoilage, wastages and breakage of all kinds; this in turn leads to saving of time, effort and money which is essential for the growth and prosperity of the enterprise. **CO3-** Management serve as a tool for the upliftment as well as betterment of the society. Through increased productivity and employment, management ensures better standard of living for society.
Accounts	**CO1-** Define bookkeeping and accounting **CO2-** Explain the general purposes and functions of accounting **CO3-**Describe the main elements of financial accounting Information, liabilities, revenue and expenses **CO4-** Identify the main financial statements and their purposes. **CO5-**Students will recognize commonly used financial statements,

	their components and how information from business transactions flows into these statements **CO6-** Students will demonstrate progressive learning in the elements of managerial decision making, including planning, directing and controlling activities in a business environment. **CO7-** Students will be able to demonstrate progressive learning of various tax issues and tax forms related to individuals. **CO8-** Students will be able to demonstrate knowledge of preparation of Financial Statements and or financial schedules in accordance with GAAP.
Operation Research	**CO1-** The objective of this course is to impart knowledge in concepts, techniques and tools of Operations **CO2**- Research for business decision making. This will help to understand various mathematical models and techniques that can be applied constructively to solve various problems in business and to make effective business decisions. **CO3-**This course also aims to build capabilities in the students for analysing different situations in industry/ business scenario that involves limited resources and finding optimal solution with constraints.
Business Mathematics and Statistics	**CO1-** The objective of this paper is to help the students in understanding mathematical and statistical tools in business decisions. **CO2-** It is designed to foster the development of foundational statistical skills that are necessary for day to day business analysis. **CO3-**This course will help to develop the ability to analyse & interpret the data to provide meaningful information to assist in making management decisions.
Essentials of Business Economics	**CO1-** The 'Essentials of Business Economics' courses introduce students to the core economic principles and their application in a business environment through decision making and behaviour. **CO2-** The first course focuses on the fundamental concepts of microeconomics that explain: the decision making by various economic agents, how these decisions interact at individual level, demand and supply, price mechanisms and market equilibrium. **CO3-** The second course delves on the principles underlying macroeconomics explaining how the economic system works, where it fails and how decisions taken by economic agents affect the economic system as a whole. **CO4-** On successful completion, a student shall: **a.** show a systematic knowledge and critical awareness of economic theory **b.** apply a range of economic techniques to solve business problems **c.** Understand the links between economic theory and its application in business. **d.** Apply basic microeconomic and macroeconomic theory to business problems.

Taxation	**CO1-** The objective of the course is to impart basic knowledge of the provisions of Income tax laws in India. **CO2-** Course offers a strong base in the field of taxation, accounting and finance. The course provides an overview of the concepts of financial structure and microeconomic theory, together with a particular focus on tax evaluation. **CO3-** With the help of course a student can file the return easily. Master's courses in the field of taxation enable the applicants to develop a successful career in the field of banking and financial services. **CO4-** Students who have successfully completed the master's course can work in a wide variety field such as Marketing, Foreign Trade, and Public Accounting or may even work in government jobs.

Name of Programme: B.A.B.Ed.

Programme Outcomes	**PO1-** To get promote capabilities for inculcating national values and goals. **PO2-** Act as agent of modernization and social change. **PO3 -** Acquire competencies and skills needed for teacher.
Name of Course	**Outcomes**
Human Development	**CO-** Discuss characteristics and features of each stage.
School Community Participation	**CO-** Discuss, meaning, concepts and its significance.
Health And Yoga Education	**CO-** Need and scope of yoga education.
School Management	**CO-** Identify the need scope of educational planning.
Guidance And Counseling	**CO-** Describe various guidance and counselling services
Curriculum Development	**CO**- Explain the various foundations and components of curriculum.
Research And Statistics	**CO-** Develop the skills to carry out research.
Value Education	**CO-** Describe the concept and value system.

Name of Programme: B.P.Ed

Programme Outcome	**PO-** Define learning outcomes for Bachelor Physical Education which Encourages a holistic approach based on a socio-ecological perspective. promote greater integration and balance between the social and physical sciences . contextualize physical education with a set of attitudes and values that signify the importance of movement as a valued human practice . centralize and acknowledge that the individual, in his /her search for personal meaning, once Educated in Health and Physical Education, would be able to make positive contributions to the Enhancement of Society .Promote the learning of new skills . Enhance, extend, inform and critique the deliberate use of exercise, play, sport and other forms of physical activity within and individual and societal context.
Name of Course	**Outcomes**
Anatomy & Physiology	**Students know about:-** **CO1-** The anatomy, physiology and functions of various Tissues and cell, organization of cellular system. **CO2-** Classify different types of tissue and explain anatomy and physiology of skeletal system and joints **CO3-** Haemopoetic and lymphatic system homeostatic and its altered physiology **CO4-** The Anatomy and Physiology of cardiovascular and respiratory system and its disorders **CO5-** Anatomy and Physiology of digestive ,nervous, urinary and reproductive system and its disorders **CO6-** Anatomy and Physiology of endocrine system and sense organs and its disorders **CO7-** Physiology of muscle contraction and its disorders **CO8-** Sport physiology , drugs and athletics
Educational Technology and Methods of Teaching in Physical Education	**CO-** To provide opportunity to faculty and students of the department for their self-evaluations, accountability, autonomy and innovations in the area of physical education and sports.
Officiating and Coaching	**CO-** To generate employment in the fields of Health Fitness and Gym-Management, Physiotherapy, Journalism, Aquatics and Yoga.
Swimming, Gymnastics	**CO1-** Improve general and swimming fitness levels for maintaining lifelong health fitness. **CO2-** Develop apply and improve swimming skills and techniques for life long enjoyment of swimming. **CO3-** Apply knowledge and respect for universal water safety and rules around the pool environment. **CO4-** Students learn about practices foundation positions **CO5-** Students also learn about practices line exercise and walking exercise.
Track and Field (Sprints,	**CO1-** To provide opportunity to talented students to excel in sports

Shot-Put, Long Jump, Relays)	and become outstanding **CO2-** Sports persons. **CO3-** Explain running variations and motion skills.
Basketball, Football, Kabaddi, Kho-Kho	**CO1-** Understand basic basketball rules, terminology and safety concerns. **CO2-** Demonstrate the six basic basketball skills of Running, Jumping, Passing, Catching, Dribbling and shooting. **CO3-** Students Will be able to explain the basic features of soccer sport branch. **CO4-** Student will be able to explain the definition of football sports **CO5-** Student will be able to examine the development of football sport in Turkey. **CO6-** Student will be able to describe the development of football sport in the world. **CO7-** Kabbadi Course will helps players to enhance their pro activeness, presence of mind, multi-tasking skills, team spirit and crisis management. **CO8-** Kho -Kho Course will help to Students to gain requires endurance and speed. **CO9-** It's most important skill used in running. **CO10-** Dodging is given by jerky movement of the body.
Yoga Education	**Yoga education helps in self -discipline and self-control, leading to immense amount of awareness, concentration and higher level of consciousness. Briefly the aims and objectives of Yoga education are:** **CO1-** To enable the student to have good health. **CO2-** To practice mental hygiene. **CO3-** To possess emotional stability. **CO4-** To integrate moral values. **CO5-** To attain higher level of consciousness.
Health Education and Environmental Studies	**After studying this course, you should be able to**: **CO1-** Define and use, or recognize definitions and applications of, each of the terms in bold in the text **CO2-**Uunderstand the complexity of the interdependence between organisms and their environment **CO3**- Describe some of the consequences for health of pollution **CO4-** Explain why it is difficult to gain international agreements to secure biodiversity and reduce pollution.
Sports Nutrition and Weight Management	**Students will learn:** **CO1-** What's new regarding sports nutrition and training information **CO2-** .How to understand the interactions between nutrition and exercise training **CO3-** Practical counseling tips you can immediately put into practice **CO4-** Insights into how to coach clients on weight and body image issues **CO5-** How to improve your business and professional activities

Name of Programme: B.Sc. Medical, B.Sc. Non-Medical, B.Sc. Biotech (Hons.)

B.Sc. : Medical	
Programme Outcome	**PO1-** To give basic knowledge of biological science i.e. life in animals & plants. **PO2-** This is turn is aimed of producing scientist in the field of basic biological sciences. **PO3-** This course forms the basis of science and comprises of the subjects like physics, chemistry, biology, zoology and mathematics. **PO4-** It helps to develop scientific temper and thus can prove to be more beneficial for the society as the scientific developments can make a nation or society to grow at a rapid pace. **PO5-** After the completion of this course students have the option to go for higher studies i.e. M.Sc. and then do some research for the welfare of mankind. **PO6-** After higher studies students can join as scientist and can even look for professional job oriented courses. **PO7-** This course also offers opportunities for serving in Indian Army, Indian Navy, Indian Air Force as officers. **PO8-** Students after this course have the option to join Indian Civil Services as IAS, IFS etc. **PO9-** Science graduates can go to serve in industries or may opt for establishing their own industrial unit.
Course Name	**Outcomes**
Zoology	**CO1-** To enhance the analytical approach and environmental awareness. The study of ecology helps the students in understanding and sustaining environment. **CO2-** After completely post-graduation students can go for teaching is schools & colleges can pursue their career in research diagnostic and clinical laboratories / institute.
Cell Biology	**CO1-**Apply a basic core of scientific and quantitative Knowledge **CO2-**To enhance understanding of cell structure and function at the molecular level **CO3-**Develop and maintain a notebook of laboratory records. **CO4-**Utilize laboratory skills to enhance understanding of cell structure

	and function while participating in a group environment**.**
Biodiversity -1	**CO1-** Student should be able to describe unique characters of protozoa, porifera, coelenterate and helminthes. annelids **CO2-** To recognize the ecological role of phylum protozoa to annelids **CO3-** Student should be able to recognize life functions of protozoa to annelids. **CO4-** To recognize the diversity from protozoa to annelids**.**
Ecology	**CO1-** Students are able to describe the relation between abiotic and biotic factors. **CO2-** Students are able to describe various biological interactions **CO3-** Students are able to understand how changes in population affect the ecosystem.
Biodiversity -11	**CO1-** Student should be able to describe unique characters of arthropods, mollusks, echinoderms and hemichordates. **CO2-** To recognize the ecological role of phylum from arthropods to hemichordate. **CO3-** Student should be able to recognize life functions of arthropods, mollusk, echinoderms and hemichordates. **CO4-** To recognize the diversity from arthropods to hemichordate
Evolution	**CO1-** Have an enhanced knowledge and appreciation of evolutionary biology and behaviour. **CO2-** Be able to develop cogent and critical arguments based on the course material. **CO3-** Be able to perform, analyse and report on experiments and observations in whole-organism biology. **CO4**- Be able to integrate related topics from separate parts of the course
Biodiversity -111	**CO1-** Student should be able to describe unique characters of Urochordates, Cephalochordates, Cyclostomata, Pisces, amphibians, reptiles, aves and mammals **CO2-** To understand the ecological role of different classes of vertebrates

	CO3- Student should be able to recognize life functions of Urochordates to Mammals
DEVELOPMENTAL BIOLOGY	Students will **CO1.** Be able to list the types of characteristics that make an organism ideal for the study of developmental biology. **CO2.** Be familiar with the events that lead up to fertilization. **CO3.** Be able to describe the first four rounds of cell division in different groups. **CO4**. Be able to describe the stages and cellular mechanisms for gastrulation. **CO5.** Able to understand difference between specification and determination
Biochemistry & Animal Physiology	**CO1-** Student should be able to demonstrate an understanding of fundamental biochemical principles, such as the structure/function of biomolecules, metabolic pathways, and the regulation of biological/biochemical processes. **CO2-** Student gained proficiency in basic laboratory techniques in both chemistry and biology. **CO3-** Students have an enhanced knowledge and appreciation of animal physiology. **CO4-** Students are able to understand the functions of important physiological systems including the digestion, cardio-respiratory, renal, nervous, endocrine, muscular and metabolic systems **CO5-** Students are able to learn about the physiology of behavior.
GENETICS	**CO1-**Comprehensive and detailed understanding of the chemical basis of heredity. **CO2-** Understanding about the role of genetics in evolution. **CO3-** The ability to evaluate conclusions that are based on genetic data.
Botany	**CO1-** To pursue scientific aptitude among students. **CO2-** To inculcate reasoning ability. **CO3-** To make them aware about surrounding plants and their dole in daily life. **CO4-**Plants are the main source of food, They help to maintain our environment. So it's very imp. To know about anatomy and physiology of plants. **CO5-** Students get to know about plants. **CO6-** College industry like mushroom cultivation may also be taken as small scale

	business industry. **CO7-** Student may pursue their career in teaching school / college teacher. **CO8-** They may find researcher in medical labs.
1.Plant Diversity	**CO1-** The students Will have overview and understanding about the structure and relationship of various forms of cryptogams**.** **CO2-** will understand the reproductive cycle of non flowering plants **CO3-** will understand evolutionary trends among non flowering plants
2.Cell Biology	**CO1-**To enhance understanding of cell structure and function at the molecular level **CO2-**Develop and maintain a notebook of laboratory records. **CO3-**Utilize laboratory skills to enhance understanding of cell structure and function while participating in a group environment
Genetics	**CO1-**Learn about Mendelian principles **CO2-**Know about gene mapping methods & Extra chromosomal inheritance **CO3-**Familiarize about Evolution & Emergence of evolutionary thoughts
3.Plant physiology	Upon completion of this course, the students will be able to: **CO1-**Impart an insight into the various plant water relations. **CO2-**Take students to higher levels of learning about the mineral nutrition in plants. **CO3-** Understand the mechanism of various metabolic processes in plants. CO4- Acquire basic knowledge about growth and development in plants.
4.Plant Ecology	The students will be learning **CO1-** They will be understand the cosept, types, development and functions of various ecosystems and their communication. **CO2-** The various environmental factors governing these ecosystems are also clearly understood.
5. Economic Botany	On completion of this course, the students will be able to: **CO1-** Understand core concepts of Economic Botany and relate with environment,

	populations, communities, and ecosystems **CO2-** Develop critical understanding on the evolution of concept of organization of apex new crops/varieties, importance of germplasm diversity, issues related to access and ownership
Chemistry	**CO1-**The objective of the programme in chemistry is to educate students who are able to work independently with chemistry at a high level. **CO2-** The students will learn lab. Skills, safety conduct and interpret chemical research. **CO3-** The students will understand the interdisciplinary nature of chemistry.
1. INORGANIC CHEMISTRY	**CO1-**Acquire knowledge and understanding of essential facts, concepts, principles and theories relating to the Inorganic Chemistry. **CO2-** To develop skills to evaluate, analyze and solve problems competently. **CO3-** The students will be able to pursue their career objectives in higher education, scientific research and teaching.
2. ORGANIC CHEMISTRY	**CO1-**This course will equip the students with the necessary chemical knowledge concerning the fundamentals in the basic areas of Organic chemistry. **CO2-** To develop skills to evaluate, analyze and solve problems competently. **CO3-** The students will be able to pursue their career objectives in higher education, scientific research and teaching.
3. Physical CHEMISTRY	CO1-This course will equip the students with the necessary chemical knowledge concerning the fundamentals in the basic areas of Physical chemistry**.** **CO2-** To develop skills to evaluate, analyze and solve problems competently. **CO3-**The students will be able to pursue their career objectives in higher education, scientific research and teaching
Computer Application	
Fundamental of Information Technology (CA01)	**CO1-**Students can learn basic functionality of input output devices. **CO2-**Students can learn difference between command based interface and graphical user interface. **CO3-**It helps the students to know about various memories like RAM and ROM. **CO4-**It helps the students to know about the various applications of computer

Application Software (CA02)	**CO1-**Students can learn various features of MS-Word like mail merge, macro, word formatting, margins, indentation, auto correct. **CO2-**Students can make presentations using MS-PowerPoint. They can also learn to apply animations to the slide. **CO3-**Students can learn various features of MS-EXCEL like creating charts, using formulas, autosum, macro. **CO4-**Students can learn to create database using MS-ACCESS
Practical based on (CA01) ,(CA02) – PCA01	**CO1-**Students can get practical knowledge of ms word, ms excel, ms powerpoint, ms access. They can use these skill in various day to day operations.
C programming Language (CA03)	**CO1-**Illustrate the flowchart and design an algorithm for given problem and to develop c programs. **CO2-**Read, compile and trace the execution of programs written in C language. **CO3-**Develop program using operators,arrays and functions. **CO4-**Exercise user defined data types including structures and unions to solve problems. **CO5-**Develop file concepts to show input and output of files in C programs.
Operating system Concepts (CA04)	**CO1-**Ability to Describe and explain the fundamental components of a computer operating system. **CO2-**Ability to Define, restate, discuss, and explain the policies for scheduling, deadlocks, memory management, synchronization, system calls, and file systems **CO3-**Ability to Design and construct the following OS components: System calls, Schedulers, Memory management systems, Virtual Memory and Paging system
Practical based on CA03 PCA02	**CO1-**Students will able to learn array, functions, structures and file handling.
Programming in C++ CA05	**CO1-**Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects. **CO2-**Describe the concept of function overloading, operator overloading, virtual functions and polymorphism. **CO3-**Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.

Web Designing CA06	**CO1-**Explain the history of the internet and related internet concepts that are vital in understanding web development. **CO2-**Discuss the insights of internet programming and implement complete application over the web. **CO3-**Demonstrate the important HTML tags for designing static pages and separate design from content using Cascading Style sheet. **CO4-**Utilize the concepts of JavaScript.
Practical based on CA05 and CA06 PCA03	**CO1-**Students will get hand-held experience to implement various Object Oriented Concepts using C++. **CO2-**Students will learn to implement websites in HTML. **CO3-**To style the websites students will learn CSS. **CO4-**To make the websites interactive students will learn javascript programming.
Data Structure CA07	**CO1-**Understand the concept of Dynamic memory management, data types, algorithms, Big O notation. **CO2-**Understand basic data structures such as arrays, linked lists, stacks and queues. **CO3-**Solve problem involving graphs, trees Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data.
Java Programming CA08	**CO1-**Knowledge of the structure and model of the Java programming language. **CO2-**Use the Java programming language for various programming technologies. **CO3-**Develop software in the Java programming language.
Practical based on CA07, CA08 PCA04	**CO1-**Students will learn to implement various data structure in C++. **CO2-**Students will implement various OOP based concepts like class, inheritance, interfaces in Java. **CO3-**Students will learn to implement GUI based applications using Java Applets.
Programming with VB.Net CA09	**CO1-**Familiar with Visual Studio .NET IDE and their different component. **CO2-**Work with window forms, events and different controls of toolbox. **CO3-**Implement basic application using VB.net Programming.

	CO4-Design input box, message box,dialog box and menus contols. Work with data and ADO.Net
Database Management using Oracle CA10	**CO1-**Explain the features of database management systems and Relational database. **CO2-**Create and manipulate Oracle database using SQL Queries. **CO3-**Create and populate a RDBMS for a real life application, with constraints and keys,using SQL. **CO4-**Retrieve any type of information from a data base by formulating SQL queries. **CO5-**Differentiate SQL and PL/SQL.
Practical Based on CA09, CA10 PCA05	**CO1-Use Controls to create User Interface with VB.Net** **CO2-**Implement Array, Strings, Procedures, Functions, loops and events in VB.net Programming. **CO3-**DDL Commands: Create, Rename, Alter, delete Tables, views. **CO4-**DML Commands: All variations of Select, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table. **CO5-**Functions: Character, Date and Group Functions. **CO6-**COMMIT and ROLLBACK,Grant and Revoke Command.
Computer Networks CA11	**CO1-**Describe the functions of each layer in OSI and TCP/IP model. **CO2-**Explain the types of transmission media with real time applications. **CO3-**Describe the functions of data link layer and explain the protocols. **CO4-**Classify the routing algorithms and congestion algorithms. **CO5-**Explain the functions of Application layer and Protocols.
Working with Linux CA12	**CO1-**Identify the basic Linux general purpose commands. **CO2-**Apply and change the ownership and file or directory permissions using advance Linux commands. **CO3-**Use the vi editor with different modes.

	CO4-Implement shell Programming. **CO5-**Apply System administrative commands.
Practical based on CA12 PCA06	**CO1-**Manage processes using commands ps,nice,kill,top etc **CO2-**Manage files and directories using ls,mkdir,rm, etc. **CO3-**Create and configure user account using commands useradd, usermod,userdel etc. **CO4-**Use of disk management commands df,du,disk etc **CO5-**Write shell programming **CO6-**Use of Vi editor.
B.Sc. : Non-Medical	
Programme Outcomes	**PO1-** Students become eligible to join as Quality Control Manager in private Sector (Industries) as well as government sector. **PO2-** Students can join as Medical Representative. **PO3-** Students can join M.Sc. in Physics, Chemistry, Mathematics, Information Technology and Nuclear Medicines **PO4-** To study in basic sciences. **PO5-**Teaching in School / colleges, Banking Insurance Sector.
Course Name	**Course Outcomes**
Math	**CO1-** This Programme involves specialized study of subjects and aims at creating quality professionals. **CO2-**The main objective is to provide first-hand knowledge of advanced Mathematics and its applications **CO3-**This program prepares students for higher studies and job opportunities in various field.
Calculus and Differential equations II	**CO1-**Write the definition of indefinite and definite integrals. **CO2-**Define the integral of the inverse trigonometric and hyperbolic functions. **CO3-**State the Fundamental theorem of calculus **CO4-**Find general solutions to first order, second order and higher order homogeneous and nonhomogenous differential equations with constant and variable coefficients. **CO5-**find the series solution of differential eq

Chemistry **(a) Inorganic Chemistry** **(b) Organic Chemistry**	**CO1-** The objective of the programme in chemistry is to educate students who are able to work independently with chemistry at a high level. **CO2-** The students will learn lab. Skills, safety conduct and interpret chemical research. **CO3-** The students will understand the interdisciplinary nature of chemistry. **CO4-** Acquire knowledge and understanding of essential facts, concepts, principles and theories relating to the Inorganic Chemistry. **CO5-** To develop skills to evaluate, analyze and solve problems competently. **CO6-**The students will be able to pursue their career objectives in higher education, scientific research and teaching **CO1-** This course will equip the students with the necessary chemical knowledge concerning the fundamentals in the basic areas of Organic chemistry. **CO2-**To develop skills to evaluate, analyze and solve problems competently. **CO3-** The students will be able to pursue their career objectives in higher education, scientific research and teaching.
Electricity and Magnetism	Students will: **CO1-** Know how to define a various branches of Electricity and Magnetism. **CO2-** Understand and explain the basic concepts associated with the electric and magnetic field (e.g. Boit Savort Law, Implications of Maxwell equations, Gauss Law andnother important laws of Electricity and Magnetism) **CO3-** Students will be able to understand basis of electricity and how does the things change in different situations.
Mechanics	Students will **CO1-** Understand basics formalism of Mechanics and its implications. **CO2-** Understand Fouacult's Pendulum and motion of rigid bodies. **CO3-** Students will be able to understand motion of centre of mass.
Vibrations and Waves	Students will: **CO1-**Know how to define various branches of Vibration and Waves. **CO2-** Understand and explain the basic concepts associated with Oscillation, simple harmonic oscillation, damped oscillations energy of oscillor(Mechanical and electrical), Waves.

	CO3- Students will understand and able to describe Oscillations and simple harmonic motion , and waves and standing waves.
Relativity and Electromagnetism	Students will: **CO1-** Know how to define a various branches of Relativity And Electromagnetism. **CO2-** Understand and explain the basic concepts associated with the electric and magnetic field (eg. Boit Savart Law and Ampere's Law and their applications) **CO3-**Students will understand and able to describe the difference between the particles travelling with speed f light and with velocity very smaller than the speed of light
Statistical Physics and Thermodynamics	The Students : **CO1-** Achieved the ability to explain the various statistical physics and their properties. **CO2-**Explain the various laws of thermodynamics and all the thermo dynamical processes along with their essential variables. **CO3-** Acquires knowledge of properties of carnot heat engine. **CO4-** Acquires knowledge of all quantum states and phase space.. **CO5-** Describe the role of Bose Einstein Condensation and their all concepts in brief. **CO6-** read, understand and explain scholarly journal articles in statistical physics
Optics	The Students **CO1-** Achieved the ability to explain the various optical phenomenons. **CO2-** Explain the various laws of Optics and all processes along with their essential variables. **CO3-** Read, understand and explain scholarly journal articles in Optics
Quantum Mechanics	Students will: **CO1-** Know how to define a various branches of Quantum Physics (eg. high energy physics, high particle physics, Molecular Physics). **CO2-** Understand and explain the basic concepts associated with the quantum physics (eg.Uncertanity principle, Normalization, Operators) **CO3-** Students will understand and able to describe the difference between classical (old) and quantum (new) physics.
Atomic Spectra & Lasers	The Students

	CO1- Achieved the ability to explain the various atomic spectra phenomenons. **CO2-** Explain the various laws of Lasers and all processes along with their essential variables. **CO3-** Read, understand and explain scholarly journal articles in Laser Spectra
Condensed Matter Physics	Students will **CO1-** Have a basic knowledge of crystal structure and symmetry operations. Understand the concept of reciprocal lattice and be able to use it as a tool . **CO2-**Know the significance of grain boundaries . **CO3-** Know the fundamental principles of Fermi levels and band gap in semiconductors
Electronics	Students will **CO1-** have a basic knowledge of how semi conductor electronics works.. **CO2-** know the significance of Amplitude gain . **CO3-** know the fundamental principles of oscillators.
Nuclear Physics	Students will **CO1-** have a basic knowledge of how nuclear forces work.. **CO2-** know the significance of radioactive decay. **CO3-**know the fundamental principles of Nuclear Reactions
Radiation and Particle Physics	Students will **CO1-** have a basic knowledge of nuclear radiation and its properties. **CO2-** know the significance of accelerators. **CO3-** know the fundamental properties of elementary particles.
Computer Science	**CO1-** Students can learn basic functionality of input output devices. **CO2-** Students can learn difference between command based interface and graphical user interface. **CO3-** It helps the students to know about various memories like RAM and ROM. **CO4-** It helps the students to know about the various applications of computer. Students can learn various features of MS-Word like mail merge, macro, word formatting,

	margins, indentation, auto correct. **CO5-** Students can make presentations using MS-PowerPoint. They can also learn to apply animations to the slide. **CO6-** Students can learn various features of MS-EXCEL like creating charts, using formulas, autosum, macro
1.Computer Fundamental (CS01)	**CO1-**Students can learn basic functionality of input output devices. **CO2-**Students can learn difference between command based interface and graphical user interface. **CO3-**It helps the students to know about various memories like RAM and ROM. **CO4-**It helps the students to know about the various applications of computer.
2.PC Software (CS02)	**CO1-**Students can learn various features of MS-Word like mail merge, macro ,word formatting, margins, indentation, auto correct. **CO2-**Students can make presentations using MS-PowerPoint. They can also learn to apply animations to the slide. **CO3-**Students can learn various features of MS-EXCEL like creating charts, using formulas, autosum, macro.
3.Practical based on (CS01) - (PCS01)	**CO1-**Students can get practical knowledge of ms word, ms excel, ms powerpoint. They can use these skill in various day to day operations.
3.Operating System Concepts (CS03)	**CO1-**Describe the important computer system resources and the role of operating system in resource management. **CO2-**Understand the process management policies and scheduling of processes by CPU. **CO3-**Evaluate the requirement for process synchronization and coordination handled by operating system. **CO4-**Describe and analyze the memory management and its allocation policies. **CO5-**Identify and evaluate the storage management policies with respect to different storage management technologies.
4.C Programming (CS04)	**CO1-**Illustrate the flowchart and design an algorithm for given problem and

	to develop c programs. **CO2-**Read, compile and trace the execution of programs written in C language. **CO3-**Develop program using operators,arrays and functions. **CO4-**Exercise user defined data types including structures and unions to solve problems. **CO5-**Develop file concepts to show input and output of files in C programs.
5.Practical based on (CS04) – (PCS02)	**CO1-**Students will learn to implement basic programs in C, compile and execution. **CO2-**Students will learn to implement Arrays and flow control of code. **CO3-**Students will learn to use and implement function in C. **CO4-**Students will learn to implement file reading and writing programs.
6.Computer Organization (CS05)	**CO1-**An ability to learn knowledge of number systems,error detections and corrections methods **CO2-**An ability to understand combinatorial and sequential building blocks **CO3-**An ability to understand the instruction cycle and formats **CO4-**An ability to learn concept of microprocessor & role of assembly language **CO5-**A knowledge of system maintenance and harm to computer by viruses
7.Object Oriented Programming using C++ (CS06)	**CO1-**Students can differentiate the languages like procedure oriented and object oriented languages. **CO2-**Students will be able learn classes and objects. **CO3-**Students will be able to understand different role of function in c++. **CO4-**Student will get knowledge of constructor, destructor, polymorphism and inheritance.
8.Practical Based on (CS06) – (PCS03)	**CO1-**Students are able to create simple programs in C++. **CO2-**Students are expected to create programs using control statements, looping statements in C++. **CO3-**Students are expected to create programs using class, objects in C++. **CO4-**Students are able to implement concepts of data hiding, function overloading and operator overloading

	CO5-Students are able to implement concepts of constructors, and destructors to create the programs. **CO6-**Students are able to implement the concepts of inheritance, polymorphism.
9.Database Concepts (CS07)	**CO1-**Students will be able to understand the basics of Data base & implications of Database. **CO2-**Students will get the idea regarding Relational data model and their comparison. **CO3-**Students will be able to learn about Relational Algebra and Calculus. **CO4-**Students will able to understand the normalization, concurrency & recovery in database.
10.Data Structure (CS08)	**CO1-**Students will be able to understand the data structures i.e arrays, link lists. **CO2-**Students will get the idea regarding the sorting & searching of data using various algorithms. **CO3-**With the help of Non Linear Data Structures like Trees students can perform alternate operations for same data structure. **CO4-**Students will be able to correlate the algorithms with real life problems.
11.Practical based on (CS08) – PCS04	**CO1-**Students will be able to implement of various operations of data structures like arrays Stacks, Queues and Linked lists. **CO2-**Students are supposed to implement various searching algorithms. **CO3-**Understanding of various sorting algorithms like Merge Sort, Quick Sort, Insertion Sort and their implementation.
12.Project Management (CS09)	**CO1-**Students will be able to understand project planning and implementation. **CO2-**Understanding of Project Life Cycle, Risk factors and achieving the deadlines.
13.Relational Database Management System (CS10)	**CO1-**Describe DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models. **CO2-**Identify basic database storage structures and access techniques such as file organizations, indexing methods including B-tree, and hashing. **CO3-**Learn and apply Structured query language (SQL) and PL/SQL for database definition and database manipulation.
14.Practical based on (CS10) – (PCS05)	**CO1-**Implement Basic DDL, DML and DCL commands.

	CO2-Understand Data selection and operators used in queries and restrict data retrieval and control the display order. **CO3-**Write sub queries and understand their purpose. **CO4-**Understand the PL/SQL architecture and write PL/SQL code for procedures, triggers, cursors, exception handling etc. **CO5-**Join multiple tables using different types of joins
15.E-Commerce (CS11)	**CO1-**Demonstrate an understanding of the foundations and importance of E-commerce. **CO2-**Demonstrate an understanding of retailing in E-commerce **CO3-**Analyze the impact of E-commerce on business models and strategy. **CO4-**Discuss legal issues and privacy in E-Commerce. **CO5-**Describe Internet trading relationships including Business to Consumer, Business-to-Business, Intra-organizational. **CO6-**Describe the infrastructure for E-commerce
16.Web Programming (CS12)	**CO1-**Students are able understand the webpage, website, web server & browser. **CO2-**Students are expected to learn the various tags of HTML. **CO3-**Students are expected to get knowledge of linking documents and cascading style sheets. **CO4-**Students are able to learn the java script and PHP language.
17.Practical based on (CS12) – PCS06	**CO1-**Students are able to implement the tags of HTML. **CO2-**Students are expected to implement the programmes of DHTML. **CO3-**Students are expected to implement the various concepts of Java script language. **CO4-**Students are able to work with PHP programmes & their implementation.
B.Sc. Biotech (Hons.)	
Programme Outcome	**PO1-** After completion of Biochemistry program students will able to get exposed to strong theoretical and practical background in fundamental concepts.

	PO2- To get insights of multiple important technical areas of Biochemistry. **PO3-** To apply contextual knowledge and modern tools of biochemical research for solving problems. **PO4-** To make them able to express ideas persuasively in written and oral form to develop their leadership qualities. **PO5-** To demonstrate professional and ethical attitude with enormous responsibility to serve the society.
Course Name	**Course Outcomes**
General Microbiology	**CO1-** The course provide and introduction to the scientific principles and theory of various techniques indispensable for experimentations concentrating on Microbiology. It explores the various techniques that had played tremendous role in visualization, cultivation of different types of microorganisms under lab conditions. The course conceptualizes the various phenomenon's helpful in scientific innovation and discoveries. The course is backbone for the students interested in Microbiology and those who want to develop carrier in Microbiology at industrial level. Further the students will be deliberated upon the staining techniques, and various methods to classify microbes etc. **CO2-** Basic understanding about concept of Principles of Microbiology and its types. **CO3-** Understanding the necessary concept coupled with classification of bacteria. **CO4-** Students will be developing basic understanding about general features of bacteria, fungi and viruses. **CO5-** Students will learn the basic concept of mechanism of bacterial nutrition, culture collection and its preservation
Bio-Chemistry	**Knowledge and understanding:** **CO1-** Basic understanding about significance of water **CO2-** Students will go through various classes of carbohydrates. **CO3-** Students will learn about glycoproteins and glycolipids. **CO4-**Students will understand the basics of nucleic acid structure and chemistry. **Intellectual (Cognitive/Analytical) skills:** **CO1-**Understanding the importance of biomolecules in structure and physiology. Nutritional aspects of biomolecules
Cell Biology	**CO1-**Detailed understanding about cellular organelles and their functions Students will learn the biological processes within cell.

	CO2-Students will learn about various stages of cell cycle and cell division. **CO3-**Students will gain knowledge in areas of cellular locomotion and interaction. **CO4-** Basic techniques essential for studying cell **CO5-**Cellular function and core study
Genetics	**CO1-** Comprehensive and detailed understanding of the chemical basis of heredity. **CO2-** Understanding about the role of genetics in evolution. **CO3-** The ability to evaluate conclusions that are based on genetic data. **CO4-** The ability to understand results of genetic experimentation in animals.
Immunology	**CO1-** Basic understanding about concepts of immunology. CO2- Students will learn the basic techniques essential in immunological experimentation **CO3**- Basics of students will be build up in understanding the mechanism of the body behind fighting a particular disease
Plant Biotechnology	**CO1-** Student will know about concept of disease, causal agents of plant diseases, identification methods and management of crop diseases. **CO2-** Students will be able to identify different plant diseases of the local area and analyse the requisites for minimizing the disease occurrence in the area.
Molecular Biology	**CO1-** Understand the concept and methods of inheritance. **CO2-** Know the mechanism of transcription and translation. **CO3-** Understand the recombination and molecular mechanisms. **CO4-** Understand structure of prokaryotic and eukaryotic genes.
Enzymology	**CO1-** Basic understanding about enzymes. **CO2-** Students will learn about the structure and function of a protein so that they can relate this to how an enzyme operates. **CO3-** Students would be familiar with factors such as temperature and pH that can affect biological systems, specifically, how they affect protein. **CO4-** .Students will gain knowledge in areas relating to enzymology. **CO5-** Use of enzymes to raise economic value Industrial applications
Plant Tissue Culture	**CO1-** Distinguish between growth and development and various factors including growth hormones and their chemical analogues. **CO2-** Biosynthesis of various plant growth hormones and their enzymology, their role in

	growth and development **CO3-** Basic of cellular totipotency and its role in plant tissue culture, various factors affecting the totipotency , cyto-differentiation. **CO4-** Elaborate upon the plant – explant – plant concept and will be able to answer what is explant, and how differentiation – dedifferentiation – re-differentiation plays a role.
Animal Cell Culture	**CO1-** Basic understanding about concepts of animal cell culture. **CO2-** Students will learn the basic techniques essential in experimentation **CO3-** Basics of students will be build up in understanding the applications and availability of animal products
Bio-process Engineering	**CO1-** Basic understanding about concept of chemical and biochemical engineering. **CO2-** Understanding the necessary concept coupled with Molecular Diffusion and role of diffusion in bioprocessing. **CO3-** Students will be developing basic understanding about Microbial Growth Kinetics along with metabolic and biomass productivities. **CO4-**Students will learn the basic concept of mechanism of sterilization and design of batch and continuous sterilization process.
Biophysic and Biochemical Techniques	**CO1-** Basic understanding about Centrifugation and Chromatography. **CO2-** Understanding the basic concept associated with separation of molecule based upon their size, shape and information. **CO3-** Students will be develop basic understanding about Visible/UV spectrometry and be able to describe the separation using spectrophotometer. **CO4-** Analyse the biomolecule on the basis of their, size, shape, conformation and mass. **CO5-** Master the Centrifugation and Chromatography techniques and various factors effecting the separation of molecules **CO6-** Understanding spectrophotometer and its basic operation
Animal Biotechnology	**CO1-** Basic understanding about concepts of animal tissue culture. **CO2-** Students will learn the basic techniques essential in experimentation **CO3-** Basics of students will be build up in understanding the applications and availability of animal products **CO4-** Use of simple techniques in animal tissue culture **CO5-** In research and development areas
Bio-Process Engineering	**CO1-** Understand the different types of fermenters design.

	CO2-Comprehend and distinguish different components of fermenter. **CO3-** Differentiate various physical and chemical methods for cell disruption at industrial scale. - **CO4-** Elaborate on the use of various downstream processes for their application in the areas of product recovery
Biophysical and Biochemical Techniques	**CO1-** Basic understanding about electrophoresis **CO2-** Understanding the basic concept associated with separation of molecule based upon their size, shape and Charge **CO3-** Students will be develop basic understanding about Mass spectrometry and be able to describe the separation using mass spectrometer. **CO4-**Students will learn the basic concept of radioisotope and be able to describe their application in various techniques **CO5-** Analyse the biomolecule on the basis of their, size, shape, charge and mass. **CO6-** Master the electrophoresis techniques and various factors effecting the electrophoresis

Programme Name : B.C.A(Bachelor of Compute Applications)	
Programme Outcomes	**Student will be able to:** **PO1**- Pursue further studies to get specialization in computer. **PO2-** Work in the IT Sector as Software Engineer. **PO3-** To work in public sector undertaking. **PO4-** For teaching in schools
Course Name	**Course Outcomes**
Fundamentals Mathematical Statistics	**CO-** Students will be able to solve various Financial, Scientific and Engineering field's problems.
Computer Fundamentals and Computer Software	**CO-** Students will be able to understand the basic concepts of computer.
Problem Solving Through C	**CO-** Student is expected to analyze the real-life problem and write programs in 'C' language to solve problems. The main emphasis of the course is on problem solving aspect.
Computer Organization	**CO-** Students will be able to understand the basic organization of computer system.
Fundamentals of Web programming	**CO-** Students will be able to design web sites using HTML, DHML, CSS, JavaScript and Dreamweaver.
Object Oriented Programming using C++	**CO-** Students will be able to write C++ programs using the more esoteric language features, utilize Object Oriented techniques to design C++ programs, use the standard C++ library, and explore advanced C++ techniques.
Information System Design and Implementation	**CO-** Students will be able to be analyze and design information systems.
Computer Oriented Numerical Methods	**CO-** Students will be able to solve various Scientific and Engineering field's problems.
Data Structures	**CO-** Student will have complete knowledge of data structures, thus will be able to use them for solving real world problems.
Software Project Management	**CO-** Student will be able to apply software project management techniques to manage a software project.
Operating System Concepts and Linux	**CO-** Students will be able to use LINUX operating system.
Database Management System	**CO-** Students will be able to understand database concepts and can handle database software.
Computer Networks	**CO1-** Students will be able to understand computer networks including transmission media, hardware and software required for computer network.

	CO2- They will also learn about various security techniques used in computer networks.

Name of Programme : B.Voc. MLT

Programme Outcome	**PO1:** Apply knowledge and technical skills associated with medical laboratory technology for delivering quality clinical investigations support. **PO2:** Perform routine clinical laboratory procedures within acceptable quality control parameters in Hematology , biochemistry, immunohematology and microbiology. **PO3:** Demonstrate technical skills, social behaviour and professional awareness for functioning effectively as a laboratory technician. **PO4:** Apply problem solving techniques in identification and correction of pre analytical, post analytical & analytical variables. **PO5:** Operate and maintain laboratory equipment's utilizing appropriate quality control and safety procedures. **PO6:** Recognize the impact of laboratory tests in a global and environmental context. **PO7:** Communicate effectively by oral, written and graphical means. **PO8:** Function as a leader / team member in diverse professional and industrial research areas. **PO9:** Apply the fundamentals of research process to complete and present research studies that enrich the field of physical therapy. **PO10:** Function in an ethical and professional manner without bias against any ethnicity, race, religion, caste or gender. **PO11:** Practice professional and ethical responsibilities with high degree of credibility, integrity and social concern
Name of Course	**Outcomes**
Communication Skills	**CO1-** Students will be able to understand the research methods associated with the study of human communication, and apply at least one of those approaches to the analysis and evaluation of human communication. **CO2**- Students will be able to find, use, and evaluate primary academic writing associated with the communication discipline. **CO3**- Students will be able to understand and apply knowledge of human communication and language processes as they occur across various contexts
Fundamentals of Information Technology	At the end of this course, student should be able to **CO1-**Understand basic concepts and terminology of information technology. **CO2-** Have a basic understanding of personal computers and their operations. **CO3-** Be able to identify issues related to information security.
Basics Of Human Anatomy	**CO1-** Basic understanding of organization of body cells, tissues, organs, organ systems, and glands in human body **CO2-**Define the main structures composing human body. **CO3-**Identify and locate structures of the body.

	CO4-Identify organs and tissues under microscope.
Introduction To Laboratory Equipments	**CO1-** To gain broad understanding of care of laboratory glassware, equipment and instrument **CO2**- To gain broad understanding of setting up, calibrating, operating, cleaning, maintaining, troubleshooting of laboratory equipment used in quantitative or qualitative analysis **CO3**- To Calibrate and Validate the Clinical Laboratory instruments and glass wares **CO4**- To understand Microscopy, working principle, maintenance and applications of various types of microscopes
Introduction To Hematology	**CO**-To gain understanding of blood and components of blood To gain knowledge of hematological Diseases and hematological Investigations.
Soft Skills and Personality Development	On completion of the course, student will be able to– **CO1-**Effectively communicate through verbal/oral communication and improve the listening Skills **CO2-**Write precise briefs or reports and technical documents **CO3-**Actively participate in group discussion / meetings / interviews and prepare & deliver presentations **CO4-**Become more effective individual through goal/target setting, self motivation and practicing creative thinking. **CO5-**Function effectively in multi-disciplinary and heterogeneous teams through the knowledge of team work, Inter-personal relationships, conflict management and leadership quality.
Introduction To Medical Technology Healthcare Systems	**CO1-** To Understand about Healthcare Service Providers **CO2**- To develop broad understanding of the Role of MLT **CO3-** To Understand Patient's Rights &Responsibilities
Basics Of Phsiology	**CO1**- Basic understanding of physiology of different organ system of body **CO2-**Understand the interrelationships and interactions among various organs and systems for maintaining homeostasis. **CO3-**Assess the relative contribution of each organ systems towards the maintenance of constant internal environment **CO4-**Understand physiological basis of pathogenesis and treatment of diseases and disorders.
Elementary Knowledge Of Biochemistry	**CO1-** To gain elementary knowledge of Biochemistry **CO2-** Know the responsibility of health care personals and hazards faced in the clinical laboratory. **CO3-** Describe the different types, use, care and maintenance of the laboratory apparatus and instruments. **CO4-** Explain chemistry and metabolism of carbohydrates, proteins, lipids, nucleic acids, enzymes and vitamins.

	CO5- Describe the fundamental chemistry and knowledge of different solutions. **CO6-**Define acid, bases, salts, indicators and also explain about acid base balance. **CO7-** Explain the management of biomedical waste.
Analytical Laboratory Testing Process-I	**CO1-** To gain broad understanding of chemicals/reagents useful in sample analysis. **CO2-** To gain broad knowledge of Routine Hematological Tests and Urine tests , Stool tests, Semen tests and sputum tests
Value Education and Human Rights	**CO1:** Understand the very fact human rights system. **CO2:** Understand the gender equity. **CO3:** Understand the human rights advocacy**.** **CO4:** Understand the concepts of womens' status in India **CO5:** To explain about, what is environmental studies . **CO6:** Know the values of natural resources**.**
Safe Laboratory Practices	**CO1**-To develop understanding and precautions to ensure Patient's Safety **CO2-** Describe basics of first aid **CO3**- To develop understanding and precautions to ensure self-safety. **CO4**-To gain understanding of importance of proper and safe disposal of bio-medical waste & treatment **CO5**-To gain Elementary knowledge on Good Clinical Laboratory Practices
Introduction To Parasitology And Medical Entomology	**CO1-** To Understand the role of parasites and vectors in disease transmission, and the most appropriate control strategies. **CO2-**Distinguish the individual parasitic infectious diseases. **CO3-**Recognize the protozoan infectious diseases. **CO4-**Explain the methods used for diagnosis and treatment of protozoan infectious diseases. **CO5-**Recognize the protozoan infectious agents of individual flora regions of human body. **CO6-**Distinguish the individual helminthic infectious diseases. **CO7-**Recognize the helminths agents. **CO8-**explain the methods used for diagnosis and treatment of helminths infectious diseases. **CO9-**Recognize the trematode agents. **CO10-**Explain the methods used for diagnosis and treatment of trematodal infectious diseases. **CO11-**Recognize the nematode agents.
Fundamentals Of Microbiology	**CO1-** To give an overview of various aspects of General microbiology , Describe the structure, classification, growth and identification of various microorganisms including bacteria, fungi, parasite and virus. **CO2:** Describe the various disease producing organisms that includes bacteria,

	fungi, parasite and virus. **CO3:** Describe the different methods of infection control and practices in laboratory and their role in hospital infection control program **CO4:** Describe the various diagnostic tests employed in the laboratory diagnosis of diseases. **CO5:** Describe the concepts and principles of Antibiotic sensitivity testing and their role in drug resistance in bacteria. **CO6:** Explain the concepts and principles of immunity, hypersensitivity, Autoimmunity , and immunization.
-Bacteriology, Mycology And Virology	**CO1-** To learn the techniques of collection of samples, their processing and the identifications of the various pathogens, like bacteria, parasites, viruses, using different techniques. **CO2**- To provide vigorous training in the use of standard safety measures while handing highly infected material. **CO3-** To provide basic knowledge of the different diseases caused by various microorganisms is also imparted.
Environmental Studies	**CO1-**Understand core concepts and methods from ecological and physical sciences and their application in environmental problem-solving. **CO2-**Appreciate key concepts from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions. **CO3-**Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems. **CO4-**Appreciate that one can apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes. **CO5-**Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.
Clinical Laboratory Management	**CO1-** To Understand the importance and method of Observing and reporting while dealing with patients **CO2-** To Understand Guidelines for Collecting documentation **CO3-** To maintain restful environment
Introduction To Histopathology	**CO1**- Elementary knowledge of specimen collection. **CO2-** Elementary knowledge of tissue fixative. **CO3-** Elementary knowledge of tissue Processing .
Introduction To Cytopathology	**CO1**- To collect exfoliative cytology smears, contact smears and perform applications for cytological examination (under supervision) and carry out routine and special training procedure on cytology smears. **CO2-** To organize the histopathology laboratory of the above services and provide basic equipment maintenance

Critical Thinking and Elementary Statistic	Students will be able to: **CO1-** Identify a problem **CO2-** Analyze the elements/facts of a specific situation/problem **CO3-** Communicate the important elements/issues **CO4-** Gather relevant situational information **CO5-** Interpret information effectively relative to the problem **CO6-** Establish relevant criteria and standards for acceptable solutions
Introduction To Biochemical Techniques	**CO-** To get basic knowledge of Spectroscopic, Electrophoretic, Chromatographic and Radio Isotopic Techniques Instructions:
Introduction To Immunology	**CO1**- To gain elementary knowledge about Immunology **CO2-** To understand the basics of Humoral Immunity, Cell Mediated Immunity and Antigen-Antibody Interaction.
Serology : Introduction & Serological Lab Procedures	**CO-**To provide basic knowledge of serology, Serological techniques and Serological tests.
Entrepreneurship Development Programme	**CO1-**demonstrate a fundamental comprehension of business opportunity evaluation, from the perspective of a prospective investor. Program Outcome **CO2-**identify the most recognized sources of potential funding and financing for business start-ups and/or expansion. Program Outcome **CO3-**demonstrate basic computer proficiency, including the use of word processing, presentation, and spreadsheet software packages, as well as a basic facility with the internet and other research tools. Program Outcome **CO4-**demonstrate extemporaneous speaking skills developed through in-class discussion of text materials, case study analyses, and current entrepreneurship-related issues.
Sensitization To Blood Banking And Infection Control	**CO1-** To understand blood transfusion reactions **CO2-**To understand the importance and methodology of cleanliness, and hygiene environment **CO3-** To understand the practices to curb infection
Clinical Biochemistry-II	Student able to – **CO1-**Understand the Basics of Biochemistry and Chemistry of biomolecules and their significance. **CO2-** Understand the Protein structure i.e. Primary, Secondary, Tertiary and Quaternary. **CO3-** Understand the chemistry of hormones.

	CO4 -Understand the structure and properties of the enzymes as well as its activity. **CO5-** Understand the process of Lipid, Proteins and Carbohydrate metabolism.

Name of Programme: B.Voc. FPQM

Programme Outcomes	**PO1-** Students know about the scientific method to food science problems **PO2-** Know about quantitative reasoning skills to food science data **PO3-** Apply critical thinking and analytical evaluation to contemporary food science information and literature **PO4-** Apply principles from general chemistry, biology, physics, statistics and mathematics to food science problems.
Name of Course	**Outcomes**
Introduction to Bakery and Confectionery	**CO1**- To understand the role of different ingredients used in Baking Industry. **CO2-** To know the general methods of processing and preservation of foods. **CO3**- To identify the microorganisms that can otherwise spoil bakery products.
Dairy Technology	**CO1-** To develop knowledge among students about various aspects of dairy industry. **CO2-** To study quality standards and production of various types of milk and milk products. **CO3-** To study the role of dairy farming in Indian economy
Food Quality Control	**CO1-** To understand the different principles and functions of food quality control department. **CO2-** To understand various food laws and regulations
Food Packaging	**CO1-** To enable the students to understand about packaging and packaging materials, compatibility of various food items with packaging materials
Industrial Safety, Hazards & Prevention	**CO1-** To create awareness about health hazards of industrial substances. **CO2-** To evaluate the threshold value of industrial hygiene and safety.
Food Plant Layout And Waste Disposal	**CO1-**Introduction of the basic setup of a food processing industry. **CO2-**To make them conversant with the machinery and equipments used in different types of food industry.
Technology Of Fruit And Vegetable Processing	**CO1-** To know technical details of processing of different fruits and vegetables in accordance with their composition. **CO2-** To understand various aspects of fruit and vegetable preservation.
Egg, Poultry, Meat & Fish Processing	**CO1**-To enable the students to understand the various aspects of egg, meat and fish products and their preparation. **CO2-**To gain knowledge on processing of meat and fish.
Principles Of Food Processing And Preservation	**CO1-** To understand the basic principles & objectives of food processing. **CO2-**To study different means of food preservation and their subsequent utilization
Technology Of Oils And Fats Processing	**CO1-** To understand the basic properties of oils and fats. **CO2-**To know their nutritional importance and extraction of oils

Technology Of Spices & Flavors	**CO1-** To know various types pf spices and flavours. **CO2-** To understand the techniques of processing spices.
Seminars	**CO1-** To make the student conversant with latest happening in the field of food processing and preservation and to improve their communication skills
Food Analysis	**CO1-**To impart the skills of handling the different instruments used in food analysis. **CO2-** To study the various techniques in the analysis of food samples.
Unit Operations In Food Engineering	**CO1-**To create awareness about the unit operations involved in food processing industry. **CO2-**To explain the principles of methods used for preservation of food. **CO3-** To study different types of equipment used in the food processing industry
Food Safety And Food Laws	**CO1-** To understand the importance of food safety. **CO2-** To study implementation of food safety systems. **CO3-** To study national and international food standard and laws.
Food Microbiology	**CO1-** To understand the isolation methodology of microorganisms **CO2-**To identify the microorganisms of food products of plant and animal origin. **CO3-**To learn about Food borne diseases and microorganisms.
Food Additives	**CO1-**To give the knowledge of various additives in food products, and their functions. **CO2-** To study the properties of various food additives, their hazards and limits prescribed under food safety regulations.
Technology Of Fermented Foods	**CO-** To understand the different types of fermentation techniques used in the production of fermented food products.

Programme Name: M.Com

Programme Outcomes	**PO1-** The students will develop an ability to apply knowledge acquired in problem solving. **PO2-** Ability to work in teams with enhanced communication and inter-personal skills. **PO3-** This Program is to train the student to develop conceptual, applied and research skills as well as competencies required for effective problem solving and right decision making in routine and special activities relevant to financial management and Banking Transactions of a business. **PO4-**The students will be ready for employment in functional areas like Accounting, Taxation, Banking, Insurance and Corporate Law. **PO5-**Ability to start entrepreneurial activities. **PO6-** To inculcate ethical values, team work, leadership and managerial skills. **PO7-** Students will exhibit inclination towards pursuing professional courses such as CA/ CS/ CMA/CFA etc.
Course Name	**Course Outcomes**
Managerial Economics	**After the completion of this course, Students will be able to** - **CO1-** Be able to acquaint themselves with the theories of Managerial Economics. **CO2-** Understand the law of demand and elasticity of demand **CO3-** Know about the Production Function. **CO4-** Analyze the various theories of marginal economics and theory of Costs. **CO5-**Understand the intricacies of National Income, method of measurement and its limitations. **CO6-** Determine the relevance of Consumption Function and its Propensity to Consume.
Financial Management & Policy	**After the completion of the Course , Students will be able to :-** **CO1-** Know the various sources of finance. **CO2-** Understand the various uses for finance. **CO3-** Familiarize oneself with the techniques used in financial management. **CO4-** Know the functions of finance. **CO5-** Identify the different types of finance. **CO6-** Describe this relationship between finance with other allied disciplines. **CO7-** Understand the meaning of Capital budgeting. **CO8-** Know about capital expenditure. **CO9-** Point out the significance of capital budgeting. **CO10-** Describe the capital budgeting process. **CO11-** Spell out the factors influencing investment decisions. **CO12**- Describe the kinds of capital budgeting decisions. **CO13-** Analyze the combined effects of financial and operating leverages.

	CO14- Understand capital structure and value of a company and their relationship. **CO15-**Explain the goals and functions of financial management. **CO16-** Prepare and present Cash Flow statements.
Research Methodology in Commerce	**After the completion of the topics, Students will be able to :-** **CO1-** Students understand basics of research methodology. **CO2-** Students know various techniques of sampling. **CO3-** Students also know advanced statistical techniques like Discriminant Analysis, Logistic Analysis and Factor Analysis. **CO4-** Students will be able to handle different types of data. **CO5-** It enabled the students to use suitable statistical techniques in research. **CO6-** It enabled the students to interpret the results obtained. **CO7-** It helps the students in prediction and testing the hypothesis. **CO8-** Students learn how to collect sample by different sampling methods. . **CO9-** Students will learn how to tabulate the data. **CO10-** They learn to handle qualitative as well as quantitative data. **CO11-** Understand the effect of different policies made by government **CO12-** They can draw conclusions about the population on the basis of sample.
Marketing Management	**After the completion of the topics, Students will be able to :-** **CO1-** Know the importance of marketing management. **CO2-** Learn the process of conducting marketing research. **CO3-**Get information regarding components of marketing mix. **CO4-** Realize the benefits of online marketing methods. **CO5-** State the role and functions of marketing within a range of organizations. **CO6-** Describe key marketing concepts, theories and techniques for analyzing a variety of marketing situations. **CO7-** Learn to prepare marketing research reports. **CO8-**Analyse the relevance of marketing concepts and theories in evaluating the impacts of environmental changes on marketing planning, strategies and practices. **CO9-** Demonstrate the ability to carry out a research project that explores marketing planning and strategies for a specific marketing situation. **CO10-**Identify and demonstrate the dynamic nature of the environment in which marketing decisions are taken. **CO11-** Conduct marketing research in order to check needs, preferences and habits of customers. **CO12-** Segment markets on the basis of preferences of customers and sell their products as per requirement of specific segment. **CO13-** Use E-Commerce marketing practices to increase sale of their products.
Quantitative methods for Business	**CO-** Course is to acquaint students with some of the important statistical techniques for managerial decision making. The emphasis will be on their applications to business and economic situations

Name of Programme: M.P.Ed

Programme Outcome	**PO1-**Students will be highly skilled scholars in the field of Physical Education. **PO2-** Students will master the competencies and skills needed to become professional Physical Education and sport resource person. **PO3-** Students will be sensitive about emerging issues in Physical Education & sports. **PO4-**Students will develop reasoning, rational thinking, critical thinking in the problems & issues relating to the field. **PO5-**Students will be creative, self-expressive & continue their pursuit towards professional growth**.**
Name of Course	**Course Outcome**
Exercise Physiology	**CO1-**Students will understand the physiological effect of Exercise on different system on the body as a whole. **CO2-**Students will understand bioenergetics & role of energy systems in sports activities. **CO3-**Students will understand the role of nutrition & its relevance in energy production.
Scientific Principles of Sports Training	**CO1-**Students will understand the scientific sports training process & principles. **CO2-**Students will develop attitudes and skills in designing sports training programs. **CO3-**Students will be a good sports trainer.
Sports Psychology	**CO1-**Students will get acquainted with the meaning, nature and scope of sports Psychology. **CO2-** Students will know & prepare psychological profiles of sportsmen. **CO3-** Students will understand the role of sports psychology in the performance. **CO4-** Students will know various psychological problems and its coping techniques for better sports performance. **CO5-** Students will know the role of leaders, counselors, and social psyche in the performance enhancement. **CO6**-Students will know about Psychological Tests and be able to conduct these tests on subjects.
Sports Medicine	**CO1-**Students will know the historical background & development of sports medicine **CO2-**Students will know common injuries and healing process **CO3-**Students will get acquainted with injury management of common injuries **CO4-** Students will know various modalities & its uses
Professional Preparation and curriculum designs in physical education	**CO1**-Students will know the foundation of profession, its criteria. **CO2-**Students will understand the various perspectives of profession. **CO3-**Students will understand the principles & process of professional development.
Yoga Science	**CO1-**Students will understand the foundation & background of Yoga. **CO2**-Students will know stages Students will & importance of practicing yoga. **CO3-**Students will understand the benefits & effects of Kriyas, Bandhas, Pranayama. **CO4-**Students will understand relation of yoga, health & mental health. **CO5-** Students will know the researches in yoga and its contributions.

Measurement & Evaluation in Physical Education	**CO1-**Students will understand how to conduct various measurement techniques. **CO2-**Students will assess an individual, athlete, special person, etc. using appropriate tests. **CO3-**Students will develop ability to measure accurately.
Basketball	**CO1-**Understand basic basketball rules, terminology and safety concerns. **CO2**-Demonstrate the six basic basketball skills of Running, Jumping, Passing, Catching, Dribbling and shooting. **CO3-**Students Will be able to explain the basic features of soccer sport branch
Health , Physical Fitness, Wellness & Sports Nutrition	**CO1**-Students will understand the concept & importance and determinants of health. **CO2-**Students will understand the changing concept of health education, need of a comprehensive health education program and approaches to health education. **CO3-**Students will understand reasons, effects & preventive ways of substance use & abuse. **CO4-**Students will get acquainted with the meaning and science of sports nutrition. **CO5-**Students will know about body fuels and its role. **CO6-**Students will know various nutrients and their effects on Sports performance. **CO7-**Students will understand know about caloric values of Foods. **CO8-**Students will know about different loading procedures pre-during-post competition. **CO9-**Students will be able to prepare Diet for players Students will know the energy system and its role in nutrition **CO10-**Students will understand the role of sports nutrition for performance. **CO11-**Students will know about nutritional assessment.

Programme : M.Sc Chemistry

Programme Outcome	**PO1:** Demonstrate and apply the fundamental knowledge of the basic principles in various fields of Chemistry **PO2:** Create awareness and sense of responsibilities towards environment and apply knowledge to solve the issues related to Environmental pollution. **PO3:** Apply knowledge to build up small scale industry for developing endogenous product. **PO4:** Apply various aspects of chemistry in natural products isolations, pharmaceuticals, dyes, textiles, polymers, petroleum products, forensic etc. and also to develop interdisciplinary approach of the subject.
Course Name	**Course Outcome**
Chemistry	**CO1**-To provide students with the skills required to succeed in teaching industry and to gain professionalism. **CO2**-The students will acquire a knowledge of chemistry in depth and interpret the chemical literature. **CO3**-The students will acquire ability to work in teams with scientific attitude and problem solving aptitude.
Inorganic chemistry	**CO1**-Students will be able to analyze the relation between oxidation state of metals and their biological behaviour. **CO2-** Students will be able to understand the role of metals and chemicals in biological systems.
Biology for Chemists	**CO1**-Student will know about Whittaker system of classification, plant and animal tissue systems, genetic principles, structure and functional aspects of biomolecules. **CO2**-To study the structure and organization of cell membrane and cell wall, process of membrane transport and membrane models. **CO3-** To understand the DNA structural organization and biochemical composition of genetic material. **CO4**-To understand the vascular tissues, structure of woods and anomalous secondary growth, anatomical variations and tissue systems in plant shoot system. **CO5**-To know various tissue systems and understand the normal and anomalous secondary growth in plants
Mathematics for Chemists	**CO1**-Students will be able to know -Matrix and its types, Determinant and its properties. **CO2**-Define the derivative and integral of the trigonometric, logarithmic and inverse trigonometric and rational functions **CO3**-Recognize the different techniques of integration (by parts, trigonometric integrals, partial fractions). definite integrals

Physical Chemistry	**CO1-**The aim is to help the students to revise the basic principles of quantum mechanics. Introduction to new operators such as Hermitian and Hamiltonian and their use in the solution of Hydrogen and Hydrogen like atoms. **CO2-**Students will also be able to apply quantum postulates in solution of particles in one, two and three dimensional boxes
Computer for Chemists	**CO1-**Basic understanding about Computer Understanding the basic concept associated with C- Language and program designing **CO2-**Students will develop different programs, Run and Retrieve results.

Name of Programme: M.Sc. (Information Technology)

Programme Outcome	**PO1-** Students will be able to: **PO2-** Pursue research in the field of computer science and applications. **PO3-** Work in the IT Sector as Software Engineer. **PO4-** To work effectively in public sector undertaking. **PO5-** For teaching in schools and colleges**.**
Name of Course	**Course Outcomes**
Linux System Administration and Programming	**CO1**-Student will be able to: **CO2**-Work in the Linux environment for Linux server administration **CO3**-Write the shell programs, PERL programs and C-program with system calls
Software Engineering	**CO1**-Student will be able to: **CO2**-Use principals, concepts, methods, and techniques of the software engineering approach to produce quality software. **CO3**-Apply software engineering principles and practices in the planning and development of an actual software product.
Computer Algorithm	**CO1**-Students will be able to understand algorithms and give theoretical estimates for the resources needed by any algorithm. **CO2**- Know about Analyze Algorithms **CO3**-They have an empirical approach to gauge the comparative performance of a given set of algorithm.
Operating System Concepts	**CO1**- Student will be able to Manage various processes and use the scheduling algorithms. **CO2**- Handle the deadlock conditions. **CO3**-Manage the files on the disk with effective outcome.
Advance Java and Network Programming	**CO1**-Student will be able to Create enterprise and standard applications Java. **CO2**-Develop web applications with database support. **CO3**-Develop client server based application.
E-Commerce and Emerging Trends	**CO**-Students will be able to understand the concepts of E-commerce and Emerging Technologies such as Parallel Computing, Grid Computing, Mobile Computing and Concept of Big Data.
Advanced Database Programming & MySQL	**CO**-Students will be able to understand the advanced concepts of DBMS and work as Database Administrator.

Artificial Intelligence	**CO1-**Student will be able to Apply standard Al techniques to solve problems **CO2-**Characterize the knowledge Acquisition **CO3-**Differentiate various expert systems **CO4-**Write programs of Al using LISP
NET FRAMEWORK AND C#	**CO-**Students will be able to understand and develop software projects in C# on NET platform
Theory of Computation	**CO-**Students will be able to understand and reproduce the abstract concepts of Theory of Computer Science
Computer Graphics	**CO1-**Student will be able to Implement the principals and commonly used paradigms and techniques of computer graphics. **CO2-**Use OpenGL proficiently using C/C++
Systems Approach to Management and Optimization Techniques	**CO-**Students will be able to develop optimization techniques in the field of computer science and applications

Programme Name : M.Sc Physics

Programme Outcomes	**PO1-** This able to understand Data of Sciences to develop research skills that include numerical techniques, advanced laboratory techniques, electronics, and semiconductor services. **PO2-** To study Basic Science, Master's in Physics. To develop Analytical ability logical ability, Data efficiency. **PO3-** To develop research skills that include numerical techniques, advanced laboratory techniques, electronics, semi-conductor devices. **PO4-** In hospital, MRI & Endoscopy. In the research field at scientists physicists, Data Analysts. **PO5-**Teaching in School / colleges, Banking Insurance Sector.
Course Name	**Course Outcomes**
Classical Mechanics	**The Students will able :** **CO1-** Langrangian and its applications in all cases. **CO2-** The difference between classical and quantum physics. **CO3-** Hamiltonian and its applications in all cases. **CO4-** Kepler's law and its applications in various orbital aspects. **CO5-**Think critically about the theories of physics. **CO6-** Think critically about the contribution of various scientists in the classical world. **CO7-** Think critically about the contribution of Newton's laws in our day to day life. **CO8-**Think critically about the contribution of Euler's Equation in solving various problems. **CO9-** Think critically about the use of physics in our daily life
Electrodynamics	**Students will:** **CO1-** Know how to define Electrostatics and Electrodynamics. **CO2-** Understand Maxwell equations and their importance. **CO3-** Properties of electromagnetic waves.
Quantum Mechanics	**Students will come to know about:** **CO1-** Dirac notation and its advantage above other notations. **CO2-** The difference between classical and quantum physics. **CO3-** How to handle algebra of orbital angular momentum.
Statistical Mechanics	**Students will able to :** **CO1-** Achieved the ability to explain the various ensembles and their properties. **CO2-**Explain the various laws of thermodynamics and all the thermo

	dynamical processes along with their essential variables. **CO3-** Have a basic knowledge of energy fluctuations in canonical ensemble. **CO4-** Acquires knowledge of properties of all types of magnetic substances like paramagnetic, diamagnetic and their properties and susceptibility. **CO5-** Acquires knowledge of all quantum states and phase space. **CO6-** Describe the role of Bose Einstein Condensation and their all concepts in brief. read, understand and explain scholarly journal articles in statistical physics
Electronics	**CO1-** Basics of Semiconductor Physics. **CO2-** Basics of Diode, Transistor, Op-Amp, Micro-Processor. **CO3-** Theory of Digital Circuits. **CO4-** A/D and D/A converter.
Condensed Matter Physics	**Students will -** **CO1-** have a basic knowledge of lattice specific heat and elastic constants. **CO2-** understand the concept of point defects and be able to use it as a tool. **CO3-** know the significance of grain boundaries. **CO4-** know the fundamental principles of mean free path in metals and qualitative discussion of the features of resistivity. **CO5-** know basic models of dipole theory and thermodynamics of ferroelectric transitions.
Particle physics	**Students will -** **CO1-** understand the elementary particles and their classification. **CO2-** will be able to determine of mass, life time, decay mode, spin and parity of various sub atomic particles. **CO3-** know about the symmetries and conservation laws involving high energy particles. **CO4-** know about weak interactions, their classification and theories involving these decays such as Fermi theory and Cabibbo's theory **CO5-** learn about field equations for scalar, spinor , vector fields **CO6-** gain information about Standard Model
Computational Physics	**CO1-** Basics of MATLAB. **CO2-** Basics of Interpolation Techniques. **CO3-** Techniques to solve differential equations. **CO4-** Methods to solve roots of the equation.
Mathematical Physics	**Students will be able to:** **CO1-** Think critically about the theories of physics. **CO2-** Think critically about the contribution of various scientists in the mathematical world. **CO3-** Think critically about the contribution of Euler's Equation in solving various problems. **CO4-** Think critically about the use of physics in our daily life.

Programme Name: M.Sc. Mathematics

Programme Outcomes	**PO1-** Demonstrate an advanced knowledge and fundamental understanding of a number of specialist mathematical topics, including the ability to solve problems related to those topics using appropriate techniques. **PO2-** Motivate for research in Mathematical sciences and to apply rigorous, analytic, highly numerate approach to analyze, execute tasks and solve problems in daily life and at work. **PO3-** Provide a systematic understanding of core Mathematical concepts, Principles and theories along with their applications. **PO4-** It evaluates how the various sub-disciplines are inter related, the ability to use techniques from different areas and in-depth knowledge about chosen topics. **PO5-** Communicate clearly in writing and orally knowledge, ideas and conclusions about mathematics including formulating complex mathematical arguments using abstract mathematical thinking synthesizing intuition about mathematical ideas and their applications. **PO6-**To be able to independently read mathematical and statistical literature of various types including survey articles, scholarly books and online e-resources.
Course Name	**Course Outcome**
Real Analysis	**Students will be able to -** **CO1-** Recognize the contribution and impacts of real analysis in different areas of science. **CO2-** Identify the steps required to carry out a piece of research on a topic within real analysis. **CO3-** The theories and concepts used in the real analysis. **CO4-** Demonstrate an understanding of limits and how they are used in sequences, series, differentiation and integration.
Complex Analysis	**Student will able to** **CO1-** Understand the complex numbers provide a satisfying extension of the real numbers. Determine whether a given function is differentiable and if so find its derivative. **CO2-** Use Power series and line integral to construct differentiable functions. **CO3-** Use residue theorem to compute several kinds of real integrals. **CO4-** Construct conformal mappings between many kinds of domain
Algebra	**CO1-** Students will gain experience and confidence in proving theorems. **CO2-**A blended teaching method will be used requiring the students to prove theorems give the student the experience and knowledge. **CO3-**Students will be introduced to and have knowledge of many mathematical concepts studied in abstract mathematics such as permutation groups, factor

	groups and Abelian groups. **CO4-** Students will see and understand the connection and transition between previously studied mathematics and more advanced mathematics. **CO5-** The students will actively participate in the transition of important concepts such homeomorphisms & isomorphisms from discrete mathematics to advanced abstract mathematics.
Differential Equations	**Students will know:-** **CO1-** Explore the methods of solutions of boundary value problems. Investigate systems of ordinary differential equations. Model with first-order differential equations (DE) and identify initial value problem. **CO2-** Calculate both real and complex forms of the Fourier series for standard periodic waveforms and convert from real-form Fourier series to complex-form and vice-versa. **CO3-** Develop essential methods of obtaining solutions of classical partial differential equations.
Differential Geometry	**Student will know :-** **CO1-** Scalar and cross product of vectors in 2 and 3 dimensions represented as differential forms or tensors. **CO2-** The vector-valued functions of a real variable and their curves and in turn the geometry of such curves including curvature, torsion and the Serret-Frenet frame and intrinsic geometry, **CO3-** Scalar and vector valued functions of 2 and 3 variables and surfaces, and in turn the geometry of surfaces
Functional Analysis	**CO1-** Identify the steps required to carry out a piece of research on a topic within functional analysis. **CO2-** Summarize the theories and concepts used in the functional analysis. **CO3-**Demonstrate a reasoned argument to the solution of familiar and unfamiliar problems relevant to functional analysis.
Topology	**CO1-** Know how the topology on a space is determined by the collection of open sets, by the collection of closed sets, or by a basis of neighborhoods at each point, and you know what it means for a function to be continuous **CO2-** Identify the steps required to carry out a piece of research on a topic within Mathematical Logic and Topology. **CO3-**Recognize the contribution and impacts of Mathematical Logic and Topology in real life problem **CO4-** Apply appropriate theories, principles and concepts relevant to the Topology. - Formulate a reasoned argument from a variety of sources. **CO5-**Analyze and interpret information from a variety of sources relevant to Mathematical Logic and Topology. **CO6-** Select a reasoned argument to the solution of familiar and unfamiliar problems relevant to Topology.

Integral Transforms and Their Applications	**On completion of this course, the learner will be able to:** - **CO1-**Calculate the Laplace transform of standard functions both from the definition and by using tables. **CO2-** Demonstrate their understanding of the Dirichlet conditions by using them to evaluate infinite series. **CO3-**Compute the Z transform of elementary sequences both from the definition and by using tables and use the appropriate theorems to calculate Z transforms and inverse Z transforms.
Functional Analysis	**CO1-**Summarize the theories and concepts used in the functional analysis. **CO2-** Identify the steps required to carry out a piece of research on a topic within functional analysis. **CO3-** Recognize the contribution and impacts of functional analysis in applied science. **CO4-**Apply appropriate theories, principles and concepts relevant to the functional analysis. **CO5-**Demonstrate a reasoned argument to the solution of familiar and unfamiliar problems relevant to functional analysis. **CO6-** Assess and evaluate the literature within functional analysis

Programme Name : M.A.(English)	
Programme Outcomes	**PO1-**To develop languages kills. **PO2-**To familiarize. **PO3-** Students with English language literature and different culture and hand views. **PO4-** Teaching **PO5-** Journalism **PO6-** Competitive Exam **PO7-** Creative Writing.
Course Name	**Course Outcomes**
Approaches to Literary Criticism	**At the end of the course students should be able to achieve following outcomes:** **CO1-** Identify major theoretical/critical movements and theorists, as well as primary concepts with which they are associated **CO2-** Define and apply specific theoretical concepts, theories, and terms to literary and cultural texts **CO3-** Demonstrate an understanding of important theoretical methodologies by summarizing key concepts or arguments **CO4-** Apply these concepts or arguments successfully in a close reading of a literary text. **CO5-** Use online databases to define key terms and trace implications in source texts. **CO6-** Evaluate and analyze strengths and limitations of critical/theoretical arguments. **CO7-** Examine historical contexts for the development of contemporary theory and criticism. **CO8-** Strengthen and deepen critical reading, writing, and interpretive practices.
American Literature	**CO1-** Knowledge and understanding; To orient the study to the genres of poetry, novel and drama in American literature. **CO2-** Intellectual cognitive/ analytic skills: Critical analysis of the texts prescribed and historical, social, cultural and psychological insights into them. **CO3-**Practical skills: Narrative, descriptive and analytical skills related to the various genres under study. **CO4-**Transferable skills: Analysis of life and literature.
Post Colonial Literature	**CO-** Reading of the prescribed texts will enable the students to understand many thematic concepts which are quite connected with both 'colonizer' and 'colonized'. Students will stand familiarized with the literature of resistance, critique, transformation and emancipation. As out of the four writers in the course, the three are women ones, the students will have an insight into

	postcolonial feminism.
Indian Writings in English	**Students will be able to :-** **CO1-** Critically analyse the prescribed texts. **CO2-** Draw upon varied and relevant sources to get an insightful understanding of the prescribed texts. **CO3-** Understand key issues and themes in Indian writing in English. **CO4-**Appreciate the structural and stylistic Innovations in Indian writing in English. **CO5-** Have an insight into feminism in Indian writing in English as three out of five writers prescribed in the course are woman writers.
Language and Linguistics	**Students will** **CO1-** know how to define the various branches of linguistics (e.g., phonetics, phonology, morphology). **CO2-** understand and explain the basic concepts associated with the different branches of linguistics (e.g., dialect in sociolinguistics, morpheme in morphology, parts of speech in syntax),and **CO3-** Students will understand and be able to describe the differences between the various linguistic levels

Programme Name :M.A.(History)

Programme Outcomes	**PO1-**To develop in the students the skill of enquiry, analysis and evaluations of past. **PO2-** School teaching, tourism, Competition Exams **PO3-** Research **PO4-** Teaching **PO5-** Competitive Exam **PO6-** Archaeologist
Course Name	**Course Outcomes**
The Punjab (Mid fifteenth to seventeenth centuries)	**Students able to understand:-** **CO1-** The politico-administrative, social and religious milieu of Guru Nanak in order to understand his response to the contemporary environment and the foundation of Sikh movement. **CO2-** It also deals with growth of Sikh movement under his first four successors, the phase of confrontation with Mughal state and its culmination under Guru Gobind Singh. **CO3-** It also attempts to discuss the administrative structure, agrarian and urban economy of the Punjab under the Mughals.
Ancient India: An Overview	CO1- Building upon a prior basic knowledge of the history of ancient India, this course introduces the student to the major currents in the study of that history. **CO2-** It focusses on the the political processes that underlay the structures of the state and society but also takes the student into the details of social and cultural history.
Modern India :Political Processes	**Students Know about -** **CO1-** British colonialism in which India can be studied as a classic case of British Imperialism. **CO2-** The historical context has been undertaken with a holistic interpretation of different approaches and interpretations such as Colonialist, Nationalist, Marxist, Subaltern, and Gandhian. **CO3-** The construction of the colonial state in north and south India followed constitutional changes which further enhanced to establish British control. **CO4-** Indian nationalism responded starting with peasant and tribal revolts, mutiny of 1857, emergence of Indian National Congress, militant movements, Subhas Bose, feminist movements.
Punjab in the Eighteenth Century	**Students Know about:-** **CO1-** Challenges the notion of the eighteenth century as a 'dark period' in the Indian history andbrings out the political process by which over a hundred new centres of power and not only the 'twelve misaldars' came

	up in the Punjab after the decline of the Mughal Empire. **CO2-** It deals with all the new rulers, Sikh as well as non-Sikh, in terms of their political organization, administrative arrangements, patterns of state patronage and the main features of urban as well as agrarian economy.
Punjab in the Ninteeth Century	**CO-** Understand about British policy and programme in Punjab and study the construction of State. It critically examines and evaluates administrative, social, cultural, economic developments as well as socio-religious resurgence in the province between 1849-1901.
Medieval India:Political Processes	**Students will Able to -** **CO1-**know about the political processes during ancient period. **CO2-** know the difference between monarchies and republics. **CO3-** know the difference between northern political systems and southern political systems. **CO4-** understand the nature of sovereignty.
Punjab in the Twentieth Century	**CO-**Students know about the history of Punjab from 1901 to 1966 focusing on how the agrarian policies and legislations passed by the British Raj in these years affected the Punjab Peasantry. How the discontentment led the Peasantry to join the National Movement which Gandhi spearheaded. Punjab's participation in the various phases is discussed particularly the phase of partition and how the province was further bifurcated in 1966.
Religious Developments In Medieval India	**CO1-**The aim of this paper is to examine the developments in different religious systems during the medieval period of Indian history. **CO2-** It focuses on the continuity and change within Shaiva, Shakta and Vaishnava systems. **CO3-**It also deals with Krishna bhakti and its regional manifestations in Maharashtra, Bengla, Assam, Rajasthan and Gujarat. **CO4-**This paper is also to discuss Islam in its various forms and monotheistic movement started by kabir, Ravidas, Dadu and Guru Nanak.
Agrarian Economy Of Medieval India	**CO1-**This Course aims at a multi-dimensional picture of the historical changes that occurred in the agrarian economy during the medieval period. For the sake of clarity and convenience, it is divided into two chronological phases, the Delhi Sultanate and Mughal Empire. It seeks to make an in-depth analysis of the social structure, with particular reference to the various classes of peasantry as well as the intermediaries. **CO2-**It pays adequate attention to the technological aspects of agriculture and irrigation, besides the land rights and agrarian revolts. **CO3-**It also examines the mechanism evolved by the state to extract the social surplus.

Rise And Growth Of Colonialism In India	**CO-**This course aims to introduce the student to the broad trends in the rise and growth of colonialism and its specific form in India in modern times.
U.S.A.(1820-1973)	**CO1-**The emergence of America as a world leader was substantially based on the transformations taking place in that country as it tries to adjust itself to the post-Napoleonic world order of the nineteenth century. **CO2-** This course traces the main currents in American history to find an understanding of that transformation.
Medieval Indian Art And Monuments	**CO1-**The aim of this course is to acquaint the students with architectural monuments constructed during themedieval period. In fact, each of the Muslim dynasties which established itself in the Indian subcontinent created its own architectural style and bequeathed a wealth of outstanding secular and religious buildings, **CO2-** studies the main features of these buildings. It also discusses the developments in painting, dance & music.
National Movement In India 1858-1947	**CO-**The course aims to trace the Indian National Movement from 1858 to 1947 focusing on how different historiographic schools view Indian Nationalism. Emphasis of the course is on the role played by INC from 1885 to 1947 and Gandhi in leading the country to freedom in 1947. The other strands of the National Movement particularly the Revolutionary and Left wing and youth organizations along with the communal strands are highlighted.
History And Historical Method	**CO-**This paper provides an understanding of the meaning and nature of history and emphasizes on the value of interpretation in history. In a critical and comprehensive manner, it analyses the various trends in Indian historiography and underlines the changes in the stance of historians through times as well as their impact on history writing.
Peasant Movements In Modern India	**CO-**This course introduces the student to the complex issue of peasant movements in India in the twentieth century.
China And Japan (1840-1950)	**CO-**This courses aims to trace the various phases of history of China and Japan in modern times in context of their struggle against invasion of west. The present course seeks to evaluate the internal struggle as well as various efforts made within these nations which were directed towards the quest of their identities as important powers of the world.

Programme Name : M.A. Punjabi

Programme Outcomes		**1**. Access a rich and diverse cultural tradition developed over a long period of time. This tradition includes Poetry, Prose, traditional folk dance, philosophy, film, music and meditation. 2. Understand and appreciate the cultural tradition includes Poetry, prose, traditional folk dance, Philosophy, film, music and meditation. 3. Punjabi Course helps them understand society and make them aware of their rights and duties. 4. The Course enhances their critical thinking. 5. Apply Punjabi to work, further study, translator job and also so many opportunities. Knowledge of modern standard Punjabi provides foundation for understanding the innumerable regional variants and various style of spoken Punjabi, which are found both within and outside the subcontinent. 6. Use Punjabi to communicate with others. 7. Understand their own culture through the study of other culture. 8. Express needs, desires, or emotions properly. 9. Understand and appreciate the cultural contexts in which Punjabi is used. 10.Students learn the history of Punjabi Literature and various genres like poetry, fiction and drama. It develops an analytical and critical point of view among students. 11. Students come to know about emergence of different genres in different time periods and it helps in understanding our culture and folklore.
ਲੜੀ ਨੰ.	**ਕੋਰਸ**	**ਪ੍ਰਾਪਤੀਆਂ**
1	ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ	ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਮਹਾਨ ਵਿਰਸੇ; ਸੂਫੀ ਕਾਵਿ, ਗੁਰਮਤਿ ਕਾਵਿ ਅਤੇ ਕਿੱਸਾ ਕਾਵਿ ਬਾਰੇ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਸਮਝ ਵਧੇਰੇ ਡੂੰਘੀ ਅਤੇ ਤਰਕਮਈ ਬਣਦੀ ਹੈ। ਇਸ ਨਾਲ ਵਿਦਿਆਰਥੀ ਉਪਰੋਕਤ ਸਾਹਿਤ ਦੇ ਸਮੁੱਚੇ ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਤੇ ਜਨ-ਜੀਵਨ ਉੱਤੇ ਪਏ ਡੂੰਘੇ ਪ੍ਰਭਾਵ ਬਾਰੇ ਜਾਣਕਾਰੀ ਪ੍ਰਾਪਤ ਕਰਦੇ ਹਨ।

2	ਸਾਹਿਤ ਸਿਧਾਂਤ, ਸਨਾਤਨੀ ਕਾਵਿ-ਸ਼ਾਸ਼ਤਰ ਅਤੇ ਪੰਜਾਬੀ ਆਲੋਚਨਾ	ਭਾਰਤੀ ਤੇ ਪੱਛਮੀਂ ਸਾਹਿਤ ਸਿਧਾਂਤਾਂ ਦੀ ਸਮਝ ਵਿਕਸਤ ਹੁੰਦੀ ਹੈ ਅਤੇ ਵਿਦਿਆਰਥੀ ਸਾਹਿਤ ਦੀ ਪ੍ਰਕਿਰਤੀ ਨੂੰ ਸਮਝਣ ਅਤੇ ਉਸਦਾ ਮੰਥਨ ਕਰਨ ਦੇ ਸਮਰੱਥ ਬਣਦੇ ਹਨ।
3	ਗੁਰਮਤਿ ਅਤੇ ਸੂਫੀ ਕਾਵਿ	ਵਿਦਿਆਰਥੀ ਪੰਜਾਬ ਦੇ ਮਹਾਨ ਅਧਿਆਤਮਕ ਵਿਰਸੇ ਬਾਰੇ ਗਿਆਨ ਅਤੇ ਨੈਤਿਕਤਾ ਦਾ ਪਾਠ ਗ੍ਰਹਿਣ ਕਰਦੇ ਹਨ। ਗੁਰਮਤਿ ਅਤੇ ਸੂਫੀ ਕਾਵਿ ਦੇ ਦਾਰਸ਼ਨਿਕ ਪਹਿਲੂਆਂ ਬਾਰੇ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਸਮਝ ਵਧੇਰੇ ਵਿਕਸਿਤ ਹੁੰਦੀ ਹੈ।
4	ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ	ਵਿਦਿਆਰਥੀ ਨਾਵਲ ਵਰਗੀ ਵਿਸ਼ਾਲ ਬ੍ਰਿਤਾਂਤਕ ਵਿਧਾ ਨੂੰ ਸਮਝਣ ਦੇ ਸਮਰੱਥ ਹੁੰਦੇ ਹਨ। ਪੰਜਾਬੀ ਨਾਵਲ ਵਿਚ ਵੱਡੇ ਕੈਨਵਸ ਉੱਤੇ ਚਿਤਰਿਆ ਪੰਜਾਬੀ ਸੱਭਿਆਚਾਰ ਦਾ ਭੂ-ਦ੍ਰਿਸ਼ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਸੱਭਿਆਚਾਰਕ ਵਿਰਸੇ ਦੇ ਆਯਾਮ ਨਾਲ ਜੋੜਦਾ ਹੈ।
5	ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ	ਵਿਦਿਆਰਥੀ ਆਧੁਨਿਕ ਕਾਲ-ਖੰਡ ਵਿਚ ਰਚੇ ਗਏ ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਬਾਰੇ ਜਾਣਕਾਰੀ ਹਾਸਲ ਕਰਦੇ ਹਨ। ਆਧੁਨਿਕ ਅਤੇ ਮੱਧਕਾਲੀ ਸਾਹਿਤ ਦੇ ਅੰਤਰ-ਨਿਖੇੜ ਦੀ ਸਮਝ ਵੀ ਇਸ ਕੋਰਸ ਦਾ ਹਾਸਲ ਬਣਦਾ ਹੈ।
6	ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ ਸ਼ਾਸ਼ਤਰ ਅਤੇ ਵਿਹਾਰਕ ਅਲੋਚਨਾ	ਵਿਦਿਆਰਥੀ ਆਧੁਨਿਕ ਪੱਛਮੀ ਕਾਵਿ-ਸਿਧਾਂਤਾਂ ਨੂੰ ਸਮਝ ਕੇ ਸਾਹਿਤ ਅਤੇ ਪੰਜਾਬੀ ਸਾਹਿਤ ਨੂੰ ਸਮਝਣ ਅਤੇ ਉਸਦੀ ਵਿਹਾਰਕ ਆਲੋਚਨਾ ਕਰਨ ਦੇ ਸਮਰੱਥ ਬਣਦੇ ਹਨ।
7	ਮੱਧਕਾਲੀ ਪੰਜਾਬੀ ਕਾਵਿ-II	ਵਿਦਿਆਰਥੀ ਪੰਜਾਬੀ ਦੇ ਮੱਧਕਾਲੀ ਕਲਾਸੀਕਲ ਸਾਹਿਤ; ਗੁਰਮਤਿ ਕਾਵਿ, ਸੂਫੀ ਕਾਵਿ ਤੇ ਕਿੱਸਾ ਕਾਵਿ ਦੇ ਵਿਚਾਰਧਾਰਾਈ, ਦਾਰਸ਼ਨਿਕ ਅਤੇ ਕਾਵਿਕ ਆਧਾਰਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਗ੍ਰਹਿਣ ਕਰਦੇ ਹਨ।
8	ਪੰਜਾਬੀ ਨਾਵਲ ਦਾ ਅਧਿਐਨ	ਵਿਦਿਆਰਥੀ ਨਾਵਲ ਵਰਗੀ ਵਿਸ਼ਾਲ ਬ੍ਰਿਤਾਂਤਕ ਵਿਧਾ ਨੂੰ ਸਮਝਣ ਦੇ ਸਮਰੱਥ ਹੁੰਦੇ ਹਨ। ਪੰਜਾਬੀ ਨਾਵਲ ਵਿਚ ਵੱਡੇ ਕੈਨਵਸ ਉੱਤੇ ਚਿਤਰਿਆ ਪੰਜਾਬੀ ਸੱਭਿਆਚਾਰ ਦਾ ਭੂ-ਦ੍ਰਿਸ਼ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਸੱਭਿਆਚਾਰਕ ਵਿਰਸੇ ਦੇ ਆਯਾਮ ਨਾਲ ਜੋੜਦਾ ਹੈ।
9	ਭਾਸ਼ਾਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ	ਵਿਦਿਆਰਥੀ ਭਾਸ਼ਾ ਦੀ ਪ੍ਰਕਿਰਤੀ ਅਤੇ ਭਾਸ਼ਾਵਿਗਿਆਨਕ ਸਿਧਾਂਤਾਂ ਨੂੰ ਸਮਝਦੇ ਹੋਏ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੇ ਸੰਰਚਨਾਤਮਕ ਢਾਂਚੇ ਦੀ ਜਾਣਕਾਰੀ ਗ੍ਰਹਿਣ ਕਰਨ ਅਤੇ ਇਸਦੀ ਵਰਤੋਂ ਕਰਨ ਦੇ ਸਮਰੱਥ ਬਣਦੇ ਹਨ।
10	ਸੱਭਿਆਚਾਰ, ਲੋਕਧਾਰਾ ਅਤੇ ਪੰਜਾਬੀ ਸੱਭਿਆਚਾਰ	ਇਸ ਕੋਰਸ ਦੇ ਮਾਧਿਅਮ ਰਾਹੀਂ ਵਿਦਿਆਰਥੀ ਆਪਣੇ ਲੋਕ-ਧਾਰਾਈ ਸੱਭਿਆਚਾਰਕ ਵਿਰਸੇ ਦੇ ਰੂ-ਬ-ਰੂ ਹੁੰਦੇ ਹਨ।
11	ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ-I	ਇਹ ਕੋਰਸ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਸੰਬੰਧੀ ਜਾਣਕਾਰੀ ਅਤੇ ਡੂੰਘੀ ਸਮਝ ਪ੍ਰਦਾਨ ਕਰਦਾ ਹੈ।
12	ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ-I	ਇਸ ਕੋਰਸ ਦੀ ਮਾਰਫਤ ਵਿਦਿਆਰਥੀ ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦੀਆਂ ਇਤਿਹਾਸਕ ਅਤੇ ਸਮਕਾਲੀ ਗਤੀਵਿਧੀਆਂ ਦੀ ਜਾਣਕਾਰੀ ਹਾਸਲ ਕਰਦੇ ਹਨ ਅਤੇ ਪ੍ਰਫਾਰਮਿੰਗ ਆਰਟ ਦੇ ਜ਼ਰੀਏ ਥੀਏਟਰ, ਟੈਲੀਵਿਯਨ ਅਤੇ ਫਿਲਮ ਨਿਰਮਾਣਕਾਰੀ ਦੇ ਤੱਤਾਂ ਬਾਰੇ ਵੀ ਗਿਆਨ ਹਾਸਲ ਕਰਦੇ ਹਨ।
13	ਭਾਸ਼ਾਵਿਗਿਆਨ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ	ਇਸ ਕੋਰਸ ਵਿਚ ਵਿਦਿਆਰਥੀ ਭਾਰਤੀ ਤੇ ਪੱਛਮੀ ਭਾਸ਼ਾਵਿਗਿਆਨਕ ਸਿਧਾਂਤਾਂ ਨੂੰ ਸਮਝਣ ਸਮੇਤ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੇ ਸੰਰਚਨਾਤਮਕ ਅਤੇ ਇਤਿਹਾਸਕ ਪਹਿਲੂਆਂ ਤੋਂ ਜਾਣੂੰ ਹੁੰਦੇ ਹਨ।
14	ਪੰਜਾਬੀ ਲੋਕਧਾਰਾ ਅਤੇ ਲੋਕ ਸਾਹਿਤ	ਇਸ ਕੋਰਸ ਦੇ ਮਾਧਿਅਮ ਰਾਹੀਂ ਵਿਦਿਆਰਥੀ ਆਪਣੇ ਲੋਕ-ਧਾਰਾਈ ਸੱਭਿਆਚਾਰਕ ਵਿਰਸੇ ਦੇ ਰੂ-ਬ-ਰੂ ਹੁੰਦੇ ਹਨ।
15	ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ-II	ਇਹ ਕੋਰਸ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਸੰਬੰਧੀ ਜਾਣਕਾਰੀ ਅਤੇ ਡੂੰਘੀ ਸਮਝ ਪ੍ਰਦਾਨ ਕਰਦਾ ਹੈ।
16	ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦਾ ਅਧਿਐਨ-II	ਇਸ ਕੋਰਸ ਦੀ ਮਾਰਫਤ ਵਿਦਿਆਰਥੀ ਪੰਜਾਬੀ ਨਾਟਕ ਅਤੇ ਰੰਗਮੰਚ ਦੀਆਂ ਇਤਿਹਾਸਕ ਅਤੇ ਸਮਕਾਲੀ ਗਤੀਵਿਧੀਆਂ ਦੀ ਜਾਣਕਾਰੀ ਹਾਸਲ ਕਰਦੇ ਹਨ ਅਤੇ ਪ੍ਰਫਾਰਮਿੰਗ ਆਰਟ ਦੇ ਜ਼ਰੀਏ ਥੀਏਟਰ, ਟੈਲੀਵਿਯਨ ਅਤੇ ਫਿਲਮ ਨਿਰਮਾਣਕਾਰੀ ਦੇ ਤੱਤਾਂ ਬਾਰੇ ਵੀ ਗਿਆਨ ਹਾਸਲ ਕਰਦੇ ਹਨ।

Name of Programme: Post Graduate Diploma in Computer Applications

Programme Outcomes	The programme prepares the students to undertake Master Programme and designing small business application software as per the need of industry and real world.
Name of Course	**Course Outcomes**
Computer Fundamentals	**CO-**Students will be able to understand the basic concepts of computer
Computer Programming using C	**CO-**Student is expected to analyze the real-life problem and write programs in 'C' language to solve problems
Database Management System	**CO-**Students will be able to understand database concepts and can handle database software
Data communication and Networks	**CO-**Students will be able to understand computer networks including transmission media, hardware and software required for computer network.
Object Oriented Concepts using JAVA	**CO-**Students will be able to understand and develop JAVA programs
Web Technologies	**CO-** Students will be able to design web-based applications using HTML, CSS, Java Script and PHP.
690-oftware Engineering	**CO-**Student will be able to understand and demonstrate the concepts of Software Engineering and to develop quality software.
Computer Based Accounting	**CO-**Students will be able to work with computerized accounting.